SASSIN

Better Electric, Better Life

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SASSIN

V 27.1

PRODUCT CATALOG

SASSIN

Super Series





Company Profile

As one of the leading enterprises in the low voltage electrics field in China, Sassin International Electric Shanghai Co., Ltd is committed to offering professional solutions of low voltage electric and smart electricity for different fields customers from the countries and regions around the world, to satisfy worldwide customers' requirements on utilizing energy more safely and conveniently, help customers to constantly improve efficiency of production and energy, and reducing their impact on the environment.

Sassin focuses on the global market, driving the company development with technical R&D. Sassin is committed to researching and developing different low electric products to satisfy the different requirements from customers all over the world. With the trend of intelligent electricity, Sassin has developed the smart electric devices and Smart Power Management System - SPMS to protect the safety of life and property, make the electricity management easily and remotely in any time at any place, and improve the power efficiency. In order to achieve the quick R&D, Sassin has set up the Test Center including a 10kA Short Circuit Breaking Laboratory, the Test Center has been certified by the CNAS (China National Accreditation Service for Conformity Assessment).

Quality is company's life. Sassin is always sparing no effort to promote the construction of quality management system and improve it. For this purpose, Sassin implemented the Total Quality Management System, and oriented by market and customers, to drive the employees and suppliers focusing on the continuous improvement of product quality. Sassin has been certified by the ISO9001 Quality Management System and ISO14001 Environment Management System.

Corporate Culture - Value System

Vision

Better Electric, Better Life.

Mission

Make electric safe, simple and efficient.

Value

Confidence, Faith, Credit.

Catalog Classification

V 27.1 Super Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.2 Pro Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.3 Echo Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.4 Switches and Relays

- Load Break Switches
- Fuse Combination Switches
- Fuse Disconnector Switches
- Low Voltage Fuses
- Rotary Change-over Cam Switches
- Pushbutton Switches
- Switches
- Relays



V 27.5 Power Sources

- Automatic Voltage Stabilizers
- Voltage Regulators
- Compensated Voltage Stabilizers
- Pure Sine Wave Inverters
- Back Up UPS
- Switching Power Supplies
- Control Transformers



V 27.6 Meters & Electrical Accessories

- Electronic Kilowatt Hour Meters
- Power Capacitors
- Analogue Panel Meters
- Digital Panel Meters
- Current Transformers
- Metal Boxes
- Terminal Blocks
- PC Plug Socket Couplings
- Electric Bell & Buzzers



Catalog USB Memory Stick

All products in these catalogs listed above are available in USB memory stick.



Catalog PDF

www.sassin.com

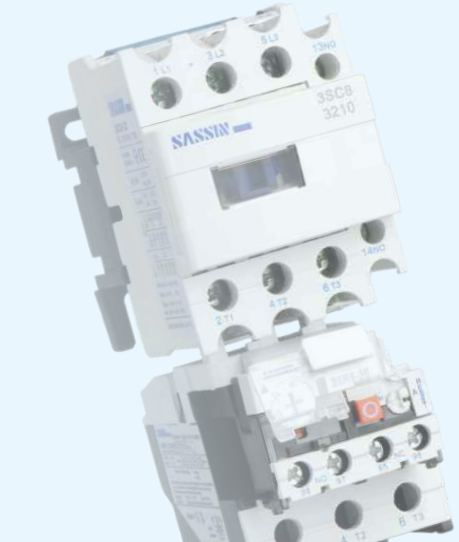
All catalogs can be downloaded as PDF files from SASSIN website.











Super Series

Power Distribution Electrics

Air Circuit Breakers

P 1-87 3SW68

Moulded Case Circuit Breakers

P 88-101 3SM8N, MCCBs with thermal magnetic trip units
P 102-111 3SM8E, MCCBs with electronic trip units
P 112-115 3SM8D, MCCBs for DC applications
P 116-119 3SM8L, MCCBs with earth leakage protection
P 120-122 3SM8G, switch disconnctors

Automatic Transfer Switches

P 123-126 3SAQ1, CB class, up to 63 A
P 127-144 3SAQ2, CB class, up to 800 A
P 145-159 3SAQ3, PC class, up to 5000 A

Modular DIN Rail Devices

Miniature Circuit Breakers

P 160-166 3SB71-63, 16000 A & 10000 A
P 167-169 3SB71-125, high current, 10 kA
P 170-171 3SB66, 1P+N in 1 modular width
P 172-174 3SB71Z-63, for DC applications

Residual Current Devices

P 175-176 3SL71, RCCB, up to 100 A
P 177-179 3SL71N-40, RCBO, 1P+N, up to 40 A
P 180-183 3SB71LN-40, RCBO, up to 40 A
P 184-185 3SB71L-50, RCBO, integrated with earthing cable
P 186-188 3SB71LB, RCD blocks
P 189-191 **Additional Components For Mcbs**

Surge Protective Devices

P 192-194 3SU71, type 2

Switching Devices

P 195-197 3SB71G, switch disconnectors
P 198-201 3SCH8, modular contactors
P 202-203 3SB71P/3SB71D/3SB71PD, pushbuttons and indicators
P 204 Time switches
P 205 BT8, doorbell transformers
P 206 MS71, modular sockets

Distribution Boxes

P 207-211 3SD5/3SD6, plastic
P 212-213 3SD8, plastic
P 214 3SD5T, metal base
P 215 3SDTN2, metal
P 216-218 Accessories

Industrial Control And Protection

Contactors

P 219-221 3SC8-K, mini contactors, up to 5.5 kW
P 222-229 3SC8, contactors, up to 45 kW
P 230-234 3SC8-F, contactors, up to 400 kW
P 235-236 3SC19, contactors for capacitor switching

Thermal Overload Relays

P 237-238 3SR8-K, from 0.11 to 14 A
P 239-241 3SR8, from 0.1 to 93 A
P 242-243 3SR8-F, from 30 to 630 A

Starters

P 244-245 3SQ1, direct-on-line (DOL) starters
P 246 3SQ8, star-delta startors

Motor Protection Circuit Breakers

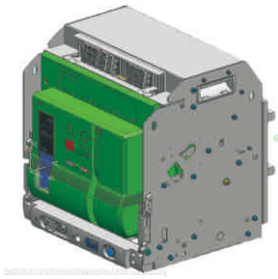
P 247-250 3SM18, from 0.1 to 80 A

P 251-276 **Index order code**

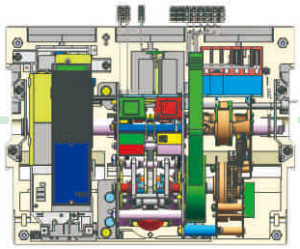
Contents

Overview

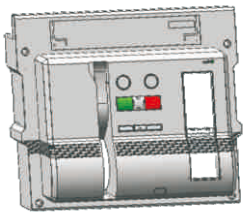
The 3SW68 air circuit breaker not only provides protections against overload, short circuit, undervoltage but also has a lot of advantages like optimized size, inner communication module and the function of measurement and management to just name a few.



Body 1



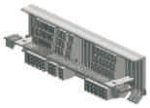
Body 2



Shell



Drawer base



Terminal block



Busbar



Back drawer base



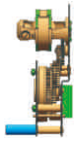
Arcing chamber



Auxiliary switch



Intelligent auxiliary switch



Motor



Current Transformer



Contact system



Release



Operating mechanism

Air Circuit Breakers
Series 3SW68

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Applications and functions

- Distributing electricity and protecting loads from overload, short circuit, undervoltage, and residual current
- Providing high reliability of power supply by smart and optional protection
- Used as an isolator
- Operating the motor directly for occasionally starting and stopping when the rated current of the breaker is not higher than 630A



Standards

- IEC60947-1: Low-voltage switchgear and controlgear - Part 1: General rules
- IEC60947-2: Low-voltage switchgear and controlgear - Part 2: Circuit-breaker
- IEC60947-4-1: Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters

Instruction of type code

W68 A F 3 N 1000 L3

Type of electronic trip unit

Size A:
AL3: Basic type LSI
AL4: Basic type LSIG
AM: Standard type LSIG, LCD display
AH: Communicate type LSIG, LCD display, Communication function

Size B, C, D:
BL3: Basic type LSI
BL4: Basic type LSIG
BM3: Basic type LSI, LCD display
BM4: Basic type LSIG, LCD display
BHP: Communicate type LSIG, LCD display
BHQ: Communicate type LSIG, LCD display, measurement function
BHG: Communicate type LSIG, LCD display, measurement function, motor protection function

Rated current

Size A:	Size B:	Size C:	Size D:
200	630	2000	4000
400	800	2500	5000
630	1000	2900	6300
800	1250	3200	
1000	1600	3600	
1250	2000	4000	
1600	2500		

Short circuit breaking capacity Icu (kA) (400 V AC)
N: Size A: 65; Size B: 70; Size C: 85; Size D: 100
H: Size A: 65; Size B: 85; Size C: 120; Size D: 120
S: Size D: 150

Poles: 3: 3-pole; 4: 4-pole

Installation type
F: Fixed type
D: Withdrawable type

Frame code
A: Size A, 3SW68-1600
B: Size B, 3SW68-2500
C: Size C, 3SW68-4000
D: Size D, 3SW68-6300

Series code

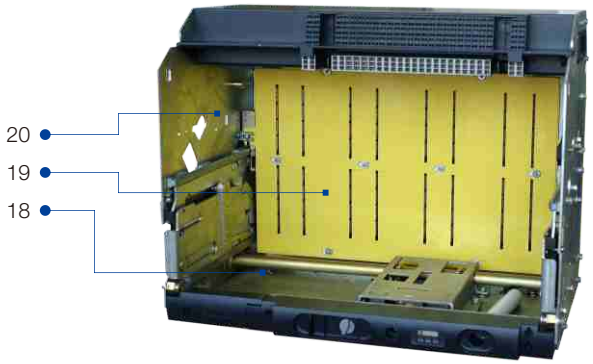
Characteristic

Structure of withdrawable type



Withdrawable type circuit breaker seat

Withdrawable type circuit breaker seat has block board for main circuit, so it can play the protective function when the breaker is removed.



1. Electronic trip unit
2. Stored energy release indicator
3. Switching-ON button
4. Lever to manually charge closing springs
5. Data label
6. Terminal of secondary circuit
7. Brand mark
8. Wiring diagram of secondary circuit
9. Signal for mechanical trip / Resetting button
10. Locking device of circuit breaker open (O)
11. Switching-OFF button
12. Indicator of circuit breaker closed (I) and open (O)
13. Safety padlock position
14. “Unlocking button” for the three positions (“separated”, “test” and “connected”)
15. Cranking bar operation hole
16. Positions indication of the three positions (“separated”, “test” and “connected”)
17. Cranking bar storage hole
18. Safety hole
19. Safety block board
20. Side board

Note:

1. “separated”: Indicating main circuit and secondary circuit are isolated;
2. “test”: Indicating main circuit is isolated, and secondary circuit is connected;
3. “connected”: Indicating both main circuit and secondary circuit are connected;
4. When the circuit breaker is set to the given positions (“separated” or “test” or “connected”), it will be locked automatically and can be unlocked by sliding the unlock button to the left.

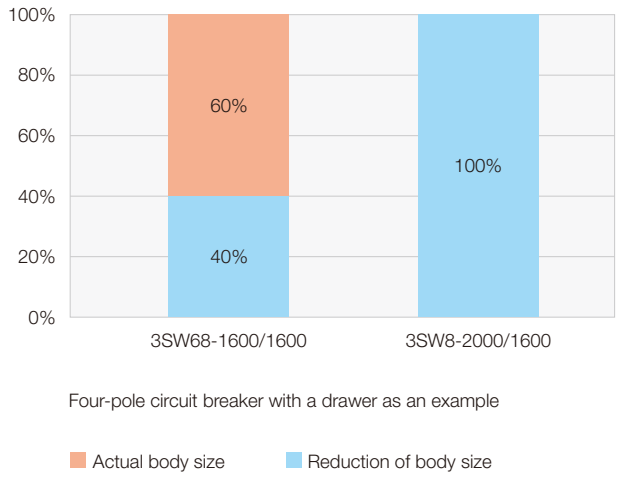
1

Features and benefits

Low space requirements

3SW68 devices are very compact require very little space for installation. Frame A devices (up to 1600 A) fit into a 400 mm wide switchgear panel.
Frame B, C, D devices (up to 6300 A) are the smallest of their kind and with their smallest construction width fit into a 800 mm wide switchgear panel.

Example of comparison with 3SW8 in measurement



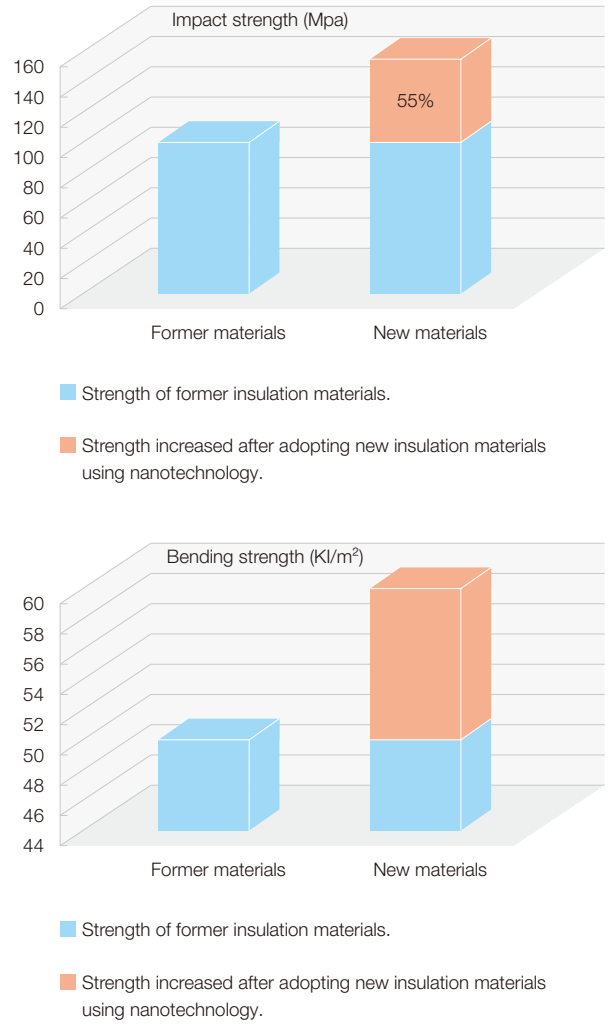
Modular design

Components like auxiliary, motorized operating mechanisms, electronic releases, current sensors, auxiliary circuit signaling switches, automatic reset devices, interlocks and engagement operating mechanisms can all be exchanged or retrofitted in the back-ground, thus allowing the circuit breaker to be adapted to new, changing required.

Communication

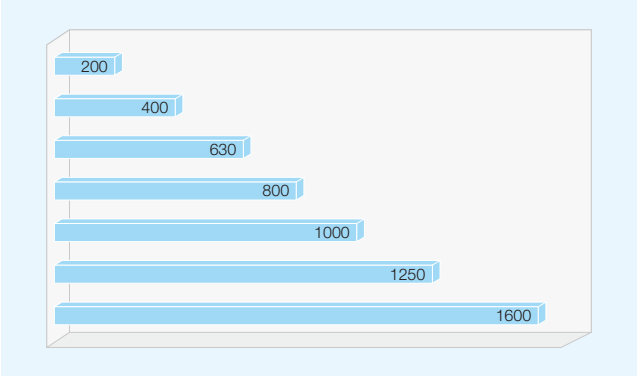
The use of modern communication capable circuit breakers opens up completely new possibilities in terms of start-up, parameterization, diagnostic, maintenance and operation. This allows varieties of ways to reduce costs and to improve productivity in industrial plants, buildings and infrastructure projects.

Strength of new material

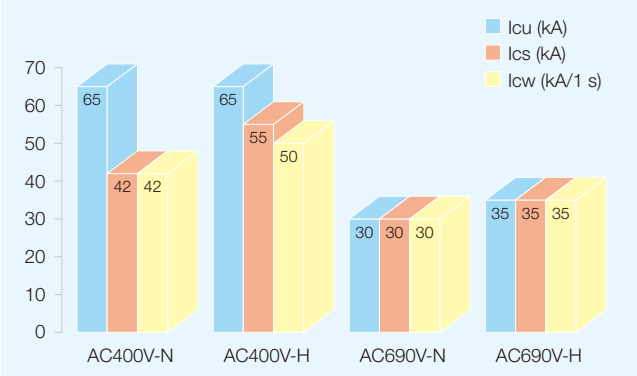


Complete current range and high breaking capacity

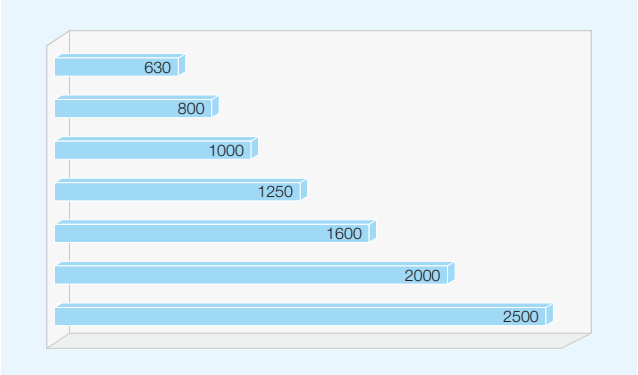
3SW68-1600 Rated current In (A)



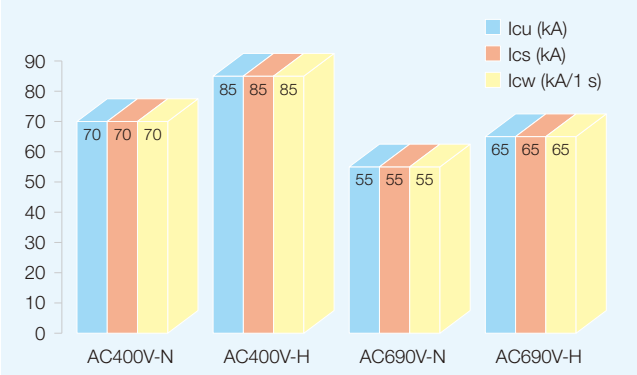
3SW68-1600 Breaking capacity



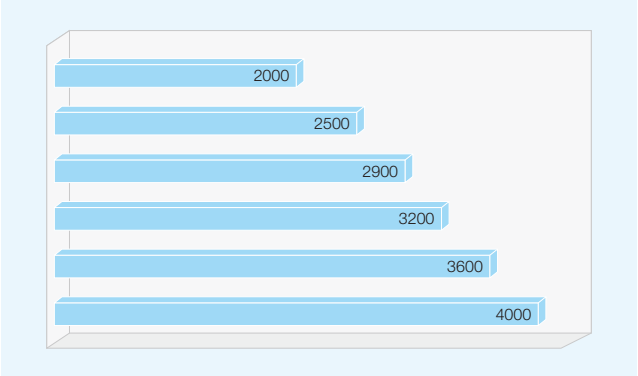
3SW68-2500 Rated current In (A)



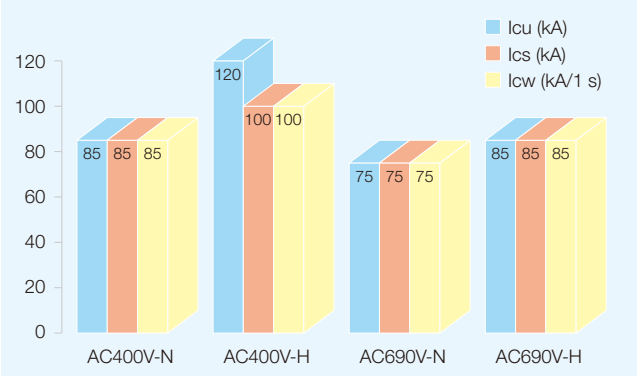
3SW68-2500 Breaking capacity



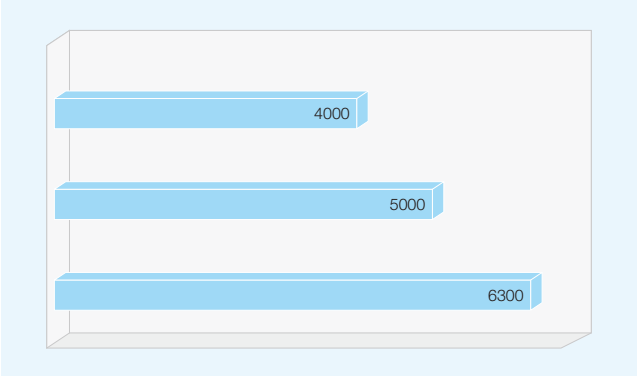
3SW68-4000 Rated current In (A)



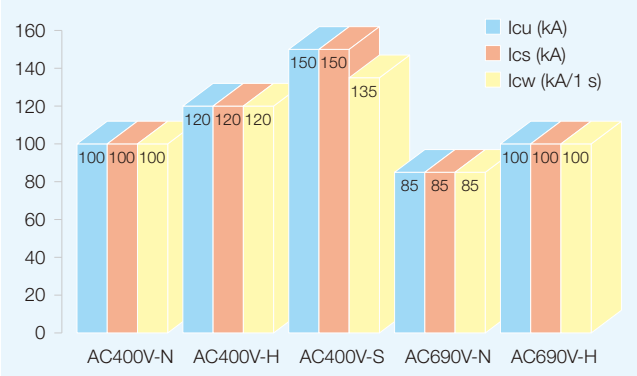
3SW68-4000 Breaking capacity



3SW68-6300 Rated current In (A)



3SW68-6300 Breaking capacity



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Technical specifications

Size			A		B		C		D		
Type			3SW68-1600		3SW68-2500		3SW68-4000		3SW68-6300		
Rated frame current Inm		A	1600		2500		4000		6300		
Rated current In		A	200, 400, 630, 800, 1000, 1250, 1600		630, 800, 1000, 1250, 1600, 2000, 2500		2000, 2500, 2900, 3200, 3600, 4000		4000, 5000, 6300		
Rated operational voltage Ue		V	400, 690		400, 690		400, 690		400, 690		
Rated insulating voltage Ui		V	1000		1000		1000		1000		
Rated impulsed withstand voltage Uimp		kV	12		12		12		12		
Power-frequency withstand voltage 1min		V	3500		3500		3500		3500		
Poles		P	3, 4		3, 4		3, 4		3, 4		
Neutral pole current-carrying capacity for 4-pole CBs			100 % In		100 % In		100 % In		100 % In		
Breaking capacity			N	H	N	H	N	H	N	H	S
Rated ultimate short-circuit breaking capacity Icu											
O-CO up to 400 V AC 50-60 Hz		kA	65	65	70	85	85	120	100	120	150
O-CO up to 690 V AC 50-60 Hz		kA	30	35	55	65	75	85	85	100	100
Rated operating short-circuit breaking capacity Ics											
O-CO-CO up to 400 V AC 50-60 Hz		kA	42	55	70	85	85	100	100	120	150
O-CO-CO up to 690 V AC 50-60 Hz		kA	30	35	55	65	75	85	85	100	100
Rated short-circuit making capacity Icm											
up to 400 V AC 50-60 Hz		kA	143	143	154	187	187	264	220	264	330
up to 690 V AC 50-60 Hz		kA	63	73	121	143	165	187	187	220	220
Rated short-time withstand current for 1 s Icw											
up to 400 V AC 50-60 Hz		kA	42	50	70	85	85	100	100	120	135
up to 690 V AC 50-60 Hz		kA	30	35	55	65	65	85	85	100	100
Breaking time		ms	25-30		25-30		25-30		25-30		
Closing time (max.)		ms	70		70		70		70		
Electrical life											
400 V		cycles	6500		5000		2000		1000		
690 V		cycles	3000		2500		1500		800		
Mechanical life											
Without maintenance		cycles	15000		12500		10000		5000		
With maintenance		cycles	30000		25000		20000		10000		
Available terminal type			Horizontal Vertical Front		Horizontal Vertical Front		Horizontal Vertical Front (1)		Horizontal (2) Vertical		
Versions			Withdrawable Fixed		Withdrawable Fixed		Withdrawable Fixed		Withdrawable Fixed		
Dimensions											
Withdrawable type	3-pole / 4-pole	W	mm	248 / 318		347 / 442		440 / 566		818 / 1070	
		H	mm	360		450		450		490	
		D	mm	310		406.5		406.5		406.5	
Withdrawable type	3-pole / 4-pole	W	mm	254 / 324		368 / 463		461 / 587		839 / 1091	
		H	mm	328.5		415.5		415.5		415.5	
		D	mm	217.5		308		308		308	

1. Front terminal is available for fixed version only.
2. Horizontal terminal is not available for circuit breaker with rated current 6300 A.

Electronic trip unit

Functions

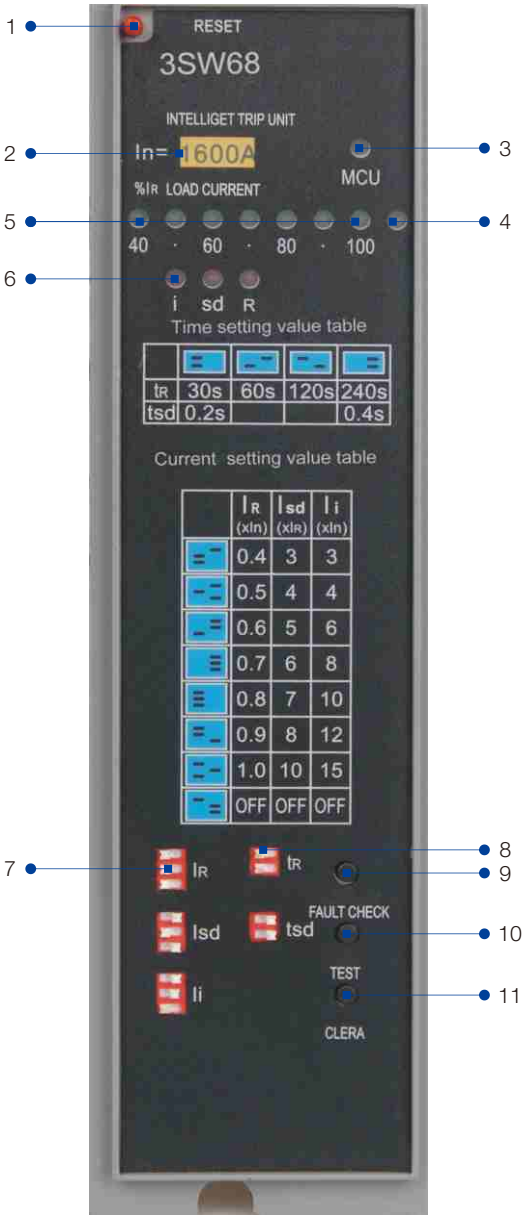
Suitable size	A					B, C, D						
	3SW68-AL3	3SW68-AL4	3SW68-AM3	3SW68-AM4	3SW68-AH	3SW68-BL3	3SW68-BL4	3SW68-BM3	3SW68-BM4	3SW68-BHP	3SW68-BHQ	3SW68-BHG
Protection and alarm												
Overload protection	●	●	●	●	●	●	●	●	●	●	●	●
Short-time delayed short-circuit protection	●	●	●	●	●	●	●	●	●	●	●	●
Instantaneous short-circuit protection	●	●	●	●	●	●	●	●	●	●	●	●
Earth fault protection	-	●	-	●	●	-	●	-	●	●	●	●
Current leakageprotection	-	-	○	○	○	-	-	-	-	○	○	○
Neutral pole protection	●	●	○	○	○	●	●	●	●	●	●	●
Thermal memory	●	●	●	●	●	●	●	●	●	●	●	●
Fault trip display	●	●	-	-	-	●	●	●	●	●	●	●
MCR &HSISC protection	○	○	●	●	●	○	○	○	○	○	○	○
Zone selective interlocking	-	-	○	○	○	-	-	○	○	○	○	○
Load monitoring display	○	○	●	●	●	○	○	○	○	○	○	○
Overload pre-alarm	-	-				-	-	○	○	○	○	○
Grounding alarm	-	-	●	●	●	-	-	-	-	○	○	○
Current imbalance protection	-	-	●	●	●	-	-	-	-	●	●	●
Required current protection	-	-	○	○	○	-	-	-	-	●	●	●
Phase loss protection	-	-	●	●	●	-	-	-	-	●	●	●
Undervoltage protection	-	-	○	○	○	-	-	-	-	○	○	○
Overvoltage protection	-	-	○	○	○	-	-	-	-	○	○	○
Voltage imbalance protection	-	-	○	○	○	-	-	-	-	○	○	○
Phase sequence protection	-	-	○	○	○	-	-	-	-	○	○	○
Under frequency protection	-	-	○	○	○	-	-	-	-	-	-	●
Over frequency protection	-	-	○	○	○	-	-	-	-	-	-	●
Inverse power protection	-	-	○	○	○	-	-	-	-	-	-	●
Measurement												
Current (three-phase, neutral, earth, current imbalance rate)	-	-	●	●	●	-	-	●	●	●	●	●
Voltage (line, phase, average, voltage imbalance rate)	-	-	○	○	○	-	-	-	-	●	●	●
power (active power, reactive power, power factors)	-	-	○	○	○	-	-	-	-	●	●	●
Frequency	-	-	○	○	○	-	-	-	-	●	●	●
Energy(active energy, reactive energy, apparent energy)	-	-	○	○	○	-	-	-	-	●	●	●
Heat capacity	-	-	●	●	●	-	-	-	-	●	●	●
Phase sequence	-	-	○	○	○	-	-	-	-	●	●	●
Required value (current, power)	-	-	○	○	○	-	-	-	-	●	●	●
Harmonic analysis	-	-	○	○	○	-	-	-	-	-	●	●
Waveform	-	-	-	-	-	-	-	-	-	-	●	●
Maintain												
Test function	●	●	-	-	-	●	●	●	●	●	●	●
Self-diagnostic function	●	●	●	●	●	●	●	●	●	●	●	●
Contact loss indicator	-	-	●	●	●	-	-	●	●	●	●	●
Operation times of trip unit on electricity	-	-	●	●	●	-	-	●	●	●	●	●
Remote reset	-	-	-	-	-	-	-	-	-	○	○	○
Historic record												
Historic fault record	●	●	●	●	●	●	●	●	●	●	●	●
Historic maximum current	-	-	●	●	●	-	-	●	●	●	●	●
Alarm record	-	-	●	●	●	-	-	-	-	●	●	●
Clock function (Y, M, D, h, m, s)	-	-	●	●	●	-	-	-	-	●	●	●
Communication												
Communication output	-	-	-	-	●	-	-	-	-	●	●	●
Modbus	-	-	-	-	-	-	-	-	-	○	○	○
Profibus	-	-	-	-	○	-	-	-	-	○	○	○
Devicenet	-	-	-	-	○	-	-	-	-	○	○	○

Series 3SW68 (Electronic trip unit 3SW68-AL)

Suitable for size A (3SW68-1600)

3SW68-AL electronic trip units are with LED displays, the protection value and delay time is set by dialing device.

- Type 3SW68-AL3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- Type 3SW68-AL4: provides additional selective earth fault protection and all protection functions of type 3SW68-AL3.



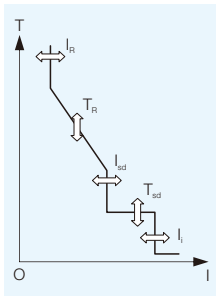
1. RESET button
   It pops up when fault tripping or test tripping. The circuit breaker can be switched on only when the button is pressed down, together with the fault indicator.
2. Indication of rated current (In)
3. MCU indicator
   It remains lit when the controller is under normal working.
4. Overvoltage indicator
   It lights up when current reaches 1.15 I_R.
5. Current bar indicator
   To display the real time current as the percentage of IR; 10% each step.
6. Fault type indicator
   To show the fault type after tripping occurs.
   - If power supply works normally, it will indicate the fault type after fault tripping. Press RESET to quit.
   - If power supply is lost, press FAULT CHECK key to show the type of last tripping when power recovers.
7. Current settings adjustor
8. Time settings adjustor
9. FAULT CHECK key
   Press the key to check fault status when the electronic trip unit is under normal working.
10. TEST key
    Press TEST key, the breaker trips immediately, but no fault recorded. Press RESET and CLEAR after test.
11. CLEAR key

Note: Parameter setting I_R < Isd < Ii

Characteristics

- Protection

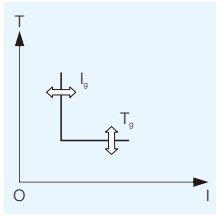
Type 3SW68-AL3, suitable for size A 3SW68-1600



Long-time delayed protection										
Current setting I_R (A)		I_R = In x …	0.4	0.5	0.6	0.7	0.8	0.9	1	OFF
Action characteristics			≤1.05 I_R, >2 h no action; >1.3 I_R (generator >1.2 I_R), <1 h action							
Time delay t_R (s)	Accuracy ±10% (Original difference ±40 ms)	Time setting t_R (s)	30		60		120		240	
$T_R = \frac{(1.5I_R)^2 \times t_R}{I^2}$		I = 1.5 x I_R	30		60		120		240	
		I = 2 x I_R	16.9		33.8		67.5		135	
		I = 6 x I_R	1.88		3.75		7.5		15	
I - overcurrent		I = 7.2 x I_R	1.3		2.6		5.2		10	
		I = 10 x I_R	0.68		1.35		2.7		5.4	
Thermal memory			10 min cold reset or remove after trip unit out of electricity							
Short-time delayed protection										
Current setting Isd (A)		Isd = I_R x …	3	4	5	6	7	8	10	OFF
Action characteristics			≤ 0.9 Isd no action; > 1.1 Isd action							
Time delay Tsd (s) (definite time protection)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	0.1		0.2		0.3		0.4	
		Return time (s)	0.06		0.14		0.23		0.35	
Instantaneous protection										
Current setting Ii (A)		Ii = In x …	3	4	6	8	10	12	15	OFF
Action characteristics			≤ 0.85 Ii no action; > 1.15 Ii action							
Action time delayed			< 30 ms							

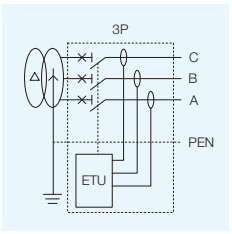
- Protection

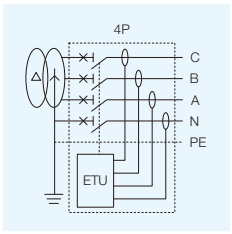
Type 3SW68-AL4, suitable for size A 3SW68-1600

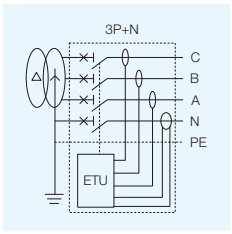


Long-time delayed protection: the same as type 3SW68-AL3										
Short-time delayed protection: the same as type 3SW68-AL3										
Instantaneous protection: the same as type 3SW68-AL3										
Earth fault protection										
Current setting Ig (A)		In ≤ 1250 A, Ig = In x …	0.4	0.5	0.6	0.65	0.7	0.75	0.8	OFF
		In > 1250 A, Ig = …	500	600	700	800	900	1000	1200	OFF
Action characteristics			≤ 0.9 Ig no action; > 1.1 Ig action							
Time delay Tg (s) (definite time protection)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	0.2		0.4		0.6		0.8	

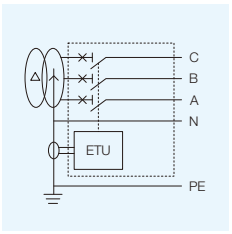
Differential protection (type T)







Source ground return (type W)



- Default settings

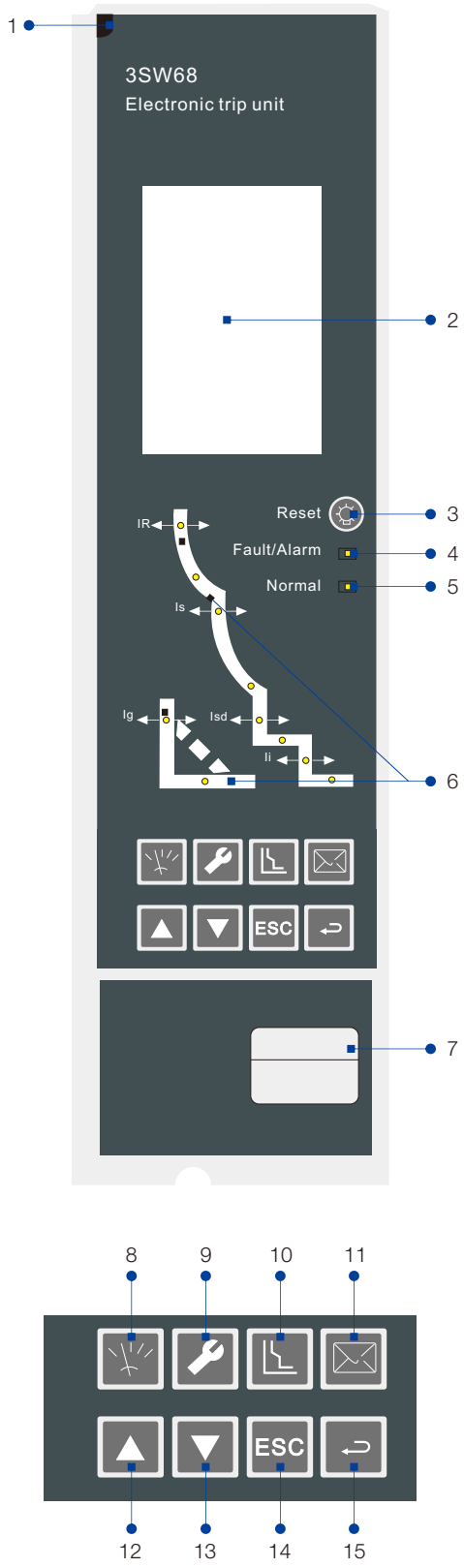
  I_R = 1.0 In, t_R = 15 s;
  Isd = 3.0 I_R, tsd = 0.4 s;
  Ii = 10 In;
  Ig = OFF, tg = 0.8 s.

1

Suitable for size A (3SW68-1600)

3SW68-AM and 3SW68-AH electronic trip unite quips with a LCD display, and all the operations can be conducted through function buttons.

- 3SW68-AM3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-AM4: provides additional selective earth fault protection and all protection functions of type 3SW68-AM3.
- 3SW68-AH: provides selective protections of long-time delayed protection, short-time delayed protection, instantaneous protection and earth fault protection, as well as the communication function to take remote measurement, control, setting and communication.



1. RESET button
   It pops up when fault tripping or test tripping. The circuit breaker can be switched on only when the button is pressed down, together with the fault indicator.
2. LCD display
3. Fault and alarm RESET key
4. FAULT/ALARM LED indicator
   The indicator is out when normal working; it flashes quickly when maintenance; it turns on in red when alarm.
5. NORMAL LED indicator
   It always flashes in green when the power is on and under normal working.
6. LED curve
   Red LED indicators are equipped in the curve.
   The corresponding indicator flashes to indicate the fault reason when fault tripping.
   The corresponding indicator remains lit to indicate the current setting when protection settings.
7. Test port
   A 16-pin test port is available on the bottom of front panel for plug-in portable power supply or inspection unit.

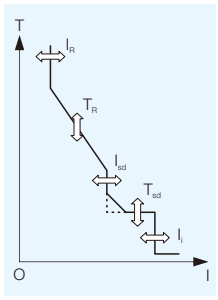
Keyboard

8. Measurement: For measuring (In password input interface, the LEFT key)
   Press to enter the measurement default menu to measure current “I”, voltage “U', frequency “F”, power “P”, energy “E”, and harmonic “H”.
9. Settings: For system parameter settings (In password input interface, the RIGHT key)
   Press to enter the setting default menu to set “Clock settings”, “Meter settings”, “Test & Lock”, “Communication settings”, “I/O settings”.
10. Protections: For protection parameter settings Press to set the parameters of “Current protection”, “Load monitor”, “Voltage protection”, and “Other protection”.
11. Information: For history record and maintenance Press to check “Current alarm”, “Operation times”, “Contact wear”, “Product information”, “Tripping record”, “Alarm record”, “Transposition record”.
12. UP - To move up or change the parameters upwards.
13. DOWN - To move down or change the parameters downwards.
14. Esc - To exit and return to previous menu or cancel the current setting selection.
15. ENTER - To enter the next menu, select the current parameter, or save the updates.

Characteristics

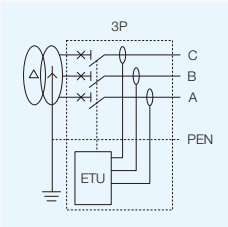
- Protection

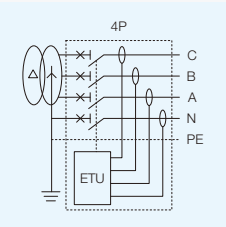
Type 3SW68-AM3, 3SW68-AM4, 3SW68-AH, suitable for size A 3SW68-1600

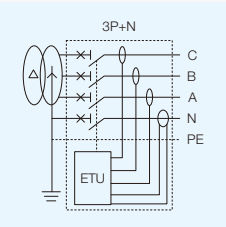


Long-time delayed protection			
Current setting I_R (A)		I_R = In x …	(0.4 ~ 1.0) + OFF, setting step: 1 A or 2 A
Action characteristics			< 1.05 I_R, > 2 h no action; ≥ 1.2 I_R, < 1 h action
Type of curves	SI: Standard Inverse curve VI: Very Inverse curve EI(G): Extremely Inverse curve (general power distribution) EI(M): Extremely Inverse curve (motor protection) HV: High-voltage fuse compatibility I2t: General inverse time protection		selectable in menu Default setting is I^2t, the same as 3SW68-AL.
Time delay t_R (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting t_R (s)	C1 ~ C16, selectable in menu
Thermal memory			(10, 20, 30, 45) min, (1, 2, 3) h reset or remove after trip unit out of electricity
Short-time delayed protection			
Current setting Isd (A)		Isd = I_R x …	(1.5 ~ 15) + OFF, setting step: 1 A or 2 A
Action characteristics			< 0.9 Isd no action; ≥ 1.1 Isd action
I^2t: (OFF) (definite time) Time delay Tsd (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	(0.1 ~ 0.4) s, setting step: 0.1 s
I2t: (ON) (Inverse time) Time delay T (s)	Accuracy within 10% (Original difference ±40 ms)		The same as long-time delayed protection, the delayed action time is 1/10 of that long-time delayed.
Thermal memory			5 min reset or remove after trip unit out of electricity
Instantaneous protection			
Current setting Ii (A)		Ii = In x …	(1.0 ~ 20) + OFF, setting step: 1 A or 2 A
Action characteristics			< 0.85 Ii no action; ≥ 1.15 Ii action
Action time delayed			< 30 ms
Earth fault protection			
Current setting Ig (A)		In ≤ 1250 A, Ig = In x … In > 1250 A, Ig = …	(0.4 ~ 0.8) + OFF, setting step: 1 A (500 A ~ 1200 A) + OFF, setting step: 2 A
Action characteristics			≤ 0.8 Ig no action; > 1.0 Ig action
Time delay Tg (s) (definite time protection)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	(0.1 ~ 1.0) s, setting step: 0.1 s

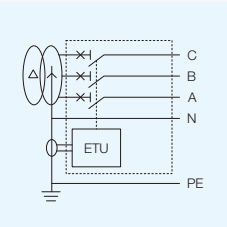
Differential protection (type T)







Source ground return (type W)



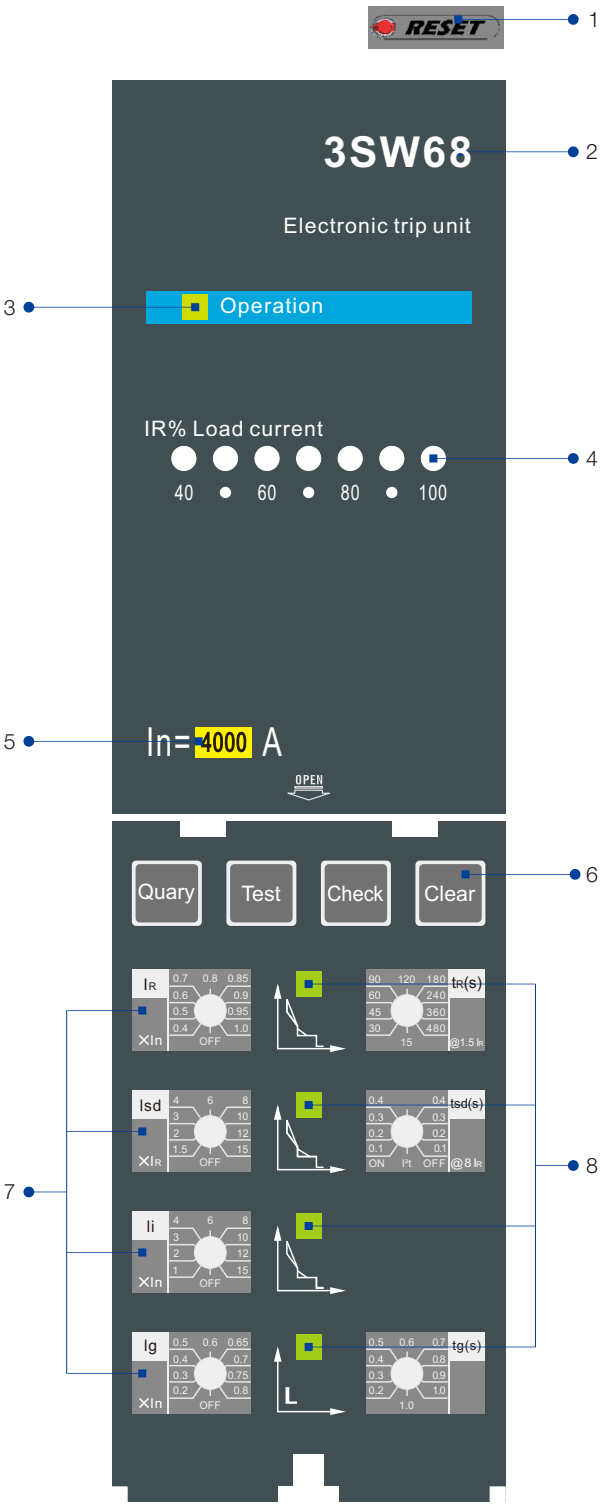
- Neutral pole protection
- Applications:
  When the neutral line is thin, half value will be applied.
  When the neutral line is the same as others, full value will be applied.
  When harmonic wave is heavy, double or 1.6 times value will be applied.
- Setting range:
  50 %, 100 %, 160 %, 200 %, OFF

Series 3SW68 (Electronic trip unit 3SW68-BL)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BL electronic trip unit equips with LED displays, the protection value and delay time is set by knobs.

- 3SW68-BL3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-BL4: provides additional selective earth fault protection and all protection functions of type 3SW68-BL3.

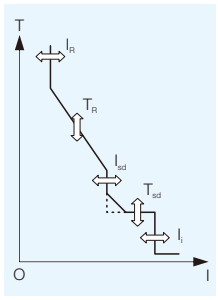


1. Mechanical RESET button
   It pops up after tripping. Manual reset is required.
2. Indication of electronic trip unit
3. Operation indicator
   It remains flashing when the electronic trip unit is under normal working.
4. I_R%
   40%~100% indicator:
   To display the real time current as the percentage of I_R.
5. Indication of rated current (In)
6. Simulation test area
   Query: check the last fault record (Record is shownas: one of the four fault indicators, IR, Isd, Ii, and Ig, becomes lighting. Press Clear button to clear indication).
   Test: When press Test Key under normal working status of controller, the breaker, commanded by thecontroller, trips instantaneously. Meanwhile, Ii faultindicator lights up, but no fault recorded.
   Check: self-diagnosis of inner working, each light will automatically scan, and will show a menu inone minute.
   Clear: clear the fault indicator.
7. Protect characteristic parameter setting area
   Default settings are as follows:
   I_R = 1.0 In, t_R =15 s
   Isd = 3 I_R, tsd = 0.4 s
   (ON: inverse time status, OFF: definite time status)
   Ii =10 In
   Ig = 0.8 In, tg = 0.4 s
8. Fault indicator: Lighting when fault occurs.

Characteristics

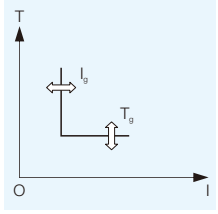
- Protection

Type 3SW68-BL3, suitable for size B/C/D 3SW68-2500/4000/6300



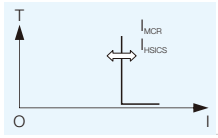
Long-time delayed protection											
Current setting I_R (A)		I_R = In x …	0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF
Action characteristics			≤1.05 I_R, >2 h no action; >1.3 I_R (generator >1.2 I_R), <1 h action									
Time delay t_R (s)	Accuracy ±10% (Original difference ±40 ms)	Time setting t_R (s)	15	30	45	60	90	120	180	240	360	480
$T_R = \frac{(1.5I_R)^2 \times t_R}{I^2}$		I = 1.5 x I_R	15	30	45	60	90	120	180	240	360	480
		I = 2 x I_R	8.4	16.9	25.3	33.8	50.6	67.5	101.2	135	203	270
		I = 6 x I_R	0.94	1.88	3.81	3.75	5.62	7.5	11.3	15	22.5	30
		I = 7.2 x I_R	0.65	1.3	1.95	2.6	3.9	5.2	7.74	10	15.62	21
I - overcurrent		I = 10 x I_R	0.34	0.68	1.01	1.35	2.03	2.7	4.05	5.4	8.1	10.8
Thermal memory			10 min cold reset or remove after trip unit out of electricity									
Short-time delayed protection												
Current setting Isd (A)		Isd = I_R x …	1.2	2	3	4	6	8	10	12	15	OFF
Action characteristics			≤ 0.9 Isd no action; > 1.1 Isd action									
I^2t (OFF) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	0.1			0.2		0.3			0.4	
Time delay Tsd (s)		Return time (s)	0.06			0.14		0.23			0.35	
I^2t (ON) I > 8 I_R (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	0.1			0.2		0.3			0.4	
Time delay Tsd (s)		Return time (s)	0.06			0.14		0.23			0.35	
I^2t (ON) I 8 I_R (Inverse time)	Accuracy within 10% (Original difference ±40 ms)	8 I_R tsd (s)	0.1			0.2		0.3			0.4	
Time delay T (s)		Time delay T = [(8 x I_R) / I] x [(8 x I_R) / I] x tsd										
Instantaneous protection												
Current setting Ii (A)	Size B/C	Ii = In x …	1	2	4	6	8	10	12	15	20	OFF
	Size D	Ii = In x …	1	2	3	4	6	8	10	12	15	OFF
Action characteristics			≤ 0.85 Ii no action; > 1.15 Ii action									
Action time delayed			< 30 ms									

Type 3SW68-BL4, suitable for size B/C/D 3SW68-2500/4000/6300



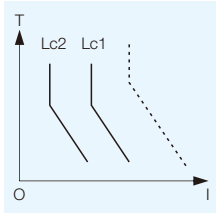
Long-time delayed protection: the same as type 3SW68-BL3											
Short-time delayed protection: the same as type 3SW68-BL3											
Instantaneous protection: the same as type 3SW68-BL3											
Earth fault protection											
Current setting Ig (A)		In ≤ 1250 A, Ig = In x …	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	OFF
		In > 1250 A, Ig = …	500	600	700	800	850	900	1000	1100	1200	OFF
Action characteristics			≤ 0.9 Ig no action; > 1.1 Ig action									
Time delay Tg (s) (definite time protection)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1

- MCR & HSISC (Trip beyond limit) protection (selection function)



MCR & HSISC			
Current setting IMCR (A)	IMCR = In x …	10 (Other settings depend on requirement)	OFF
Current setting IHSISC (A)	IHSISC = In x ...	15 (Other settings depend on requirement)	OFF
Action characteristics		MCR: ≤ 0.85 IMCR, no action; > 1.15 IMCR, action;	
		HSISC: ≤ 0.85 IHSISC, no action; > 1.15 IHSISC, action;	
Action time delayed		< 20 ms	

- Load monitoring (selection function)



Load monitoring (discharge current Lc1, discharge current Lc2)											
Current setting Ic1 (A)	Setting is unavailable, Ic1 depends on IR = In x …		0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF
Current setting Ic2 (A)	Setting is unavailable, Ic2 depends on IR= In x ...		0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF
Action characteristics Lc1			≤ 1.05 Ic1, > 2 h no pick-up > 1.3 Ic1(generator > 1.2 Ic1), < 1 h time delayed pick-up									
Action characteristics Lc2			≤ 1.05 Ic2, > 2 h no pick-up > 1.3 Ic2(generator > 1.2 Ic2), < 1 h time delayed pick-up									
Action time delayed			< 20 ms									
Time delay Tc1 (s) Tc1 = 50% t_R	Accuracy within 10% (Original difference ±40 ms)	Setting is unavailable, depends on t_R (s)	15	30	45	60	90	120	180	240	360	480
Time delay Tc2 (s) Tc2 = 25% t_R	Accuracy within 10% (Original difference ±40 ms)	Setting is unavailable, depends on t_R (s)	15	30	45	60	90	120	180	240	360	480

- Default settings

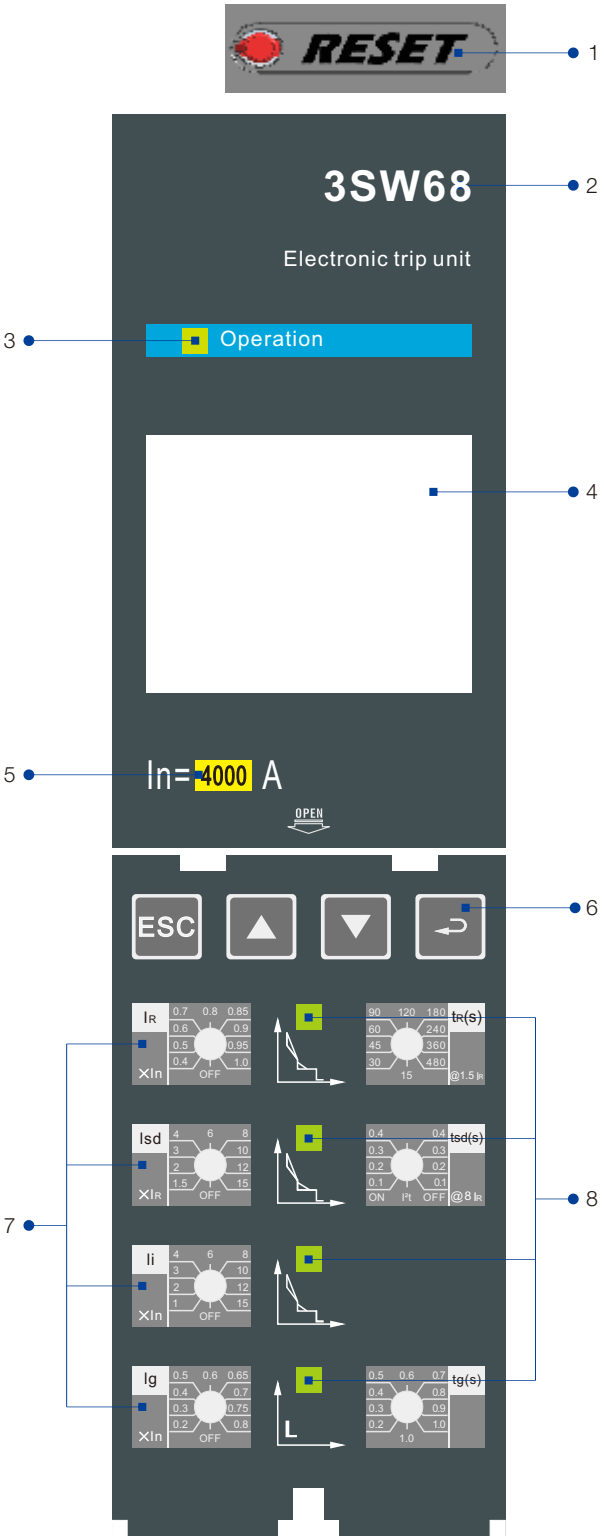
I_R = 1.0 In, t_R = 15 s; Isd = 3.0 I_R, tsd = 0.4 s; (I^2t = OFF) Ii = 10 In; Ig = OFF, tg = 0.8 s.

Series 3SW68 (Electronic trip unit 3SW68-BM)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BM electronic trip unit equips with a LCD displays, the protection value and delay time are set by knobs, some functions can be set by function keys.

- 3SW68-BM3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-BM4: provides additional selective earth fault protection and all protection functions of type 3SW68-BM3.



Function

Except the all functions of 3SW68-BL, 3SW68-BMis with additional or different functions as follows:

- Protection
  Protection value and delay time can be set by the knobs and be checked on the LCD display, some functions can be set by function keys.
- Fault trip display
  When circuit breaker trips due to any fault, the fault type is indicated by LED light accordingly, and the data is shown on the LCD display.
- Measure
  Current measurement.
- Without self- diagnosis
- Indicator of contact loss
  Show the percentage of the contact loss (based on breaking current equivalent and total life)
- Operation cycles when electronic trip unit on charge
  Record the total operation cycles
- Record of historical fault
  Check the latest 10 faults (display fault type and data)
- Historical maximum current
  Record the maximum current since running.
- Zone selective interlocking (ZSI) (selection function)
  ZSI connected with several breakers from upstream and downstream, to provides full selective protection of earth fault protection and short circuit protection, with instantaneous trip.
- Overload pre-alarm(selection function)
  When load current reach the overload setting values, the electronic trip unit give a DO alarm signal and indicate.

Characteristics

- Protection

Type 3SW68-BM3, suitable for size B/C/D 3SW68-2500/4000/6300

Long-time delayed protection: the same as type 3SW68-BL3
Short-time delayed protection: the same as type 3SW68-BL3
Instantaneous protection: the same as type 3SW68-BL3

- Protection

Type 3SW68-BM4, suitable for size B/C/D 3SW68-2500/4000/6300

Long-time delayed protection: the same as type 3SW68-BM3
Short-time delayed protection: the same as type 3SW68-BM3
Instantaneous protection: the same as type 3SW68-BM3
Earth fault protection: the same as type 3SW68-BL4

- Protection

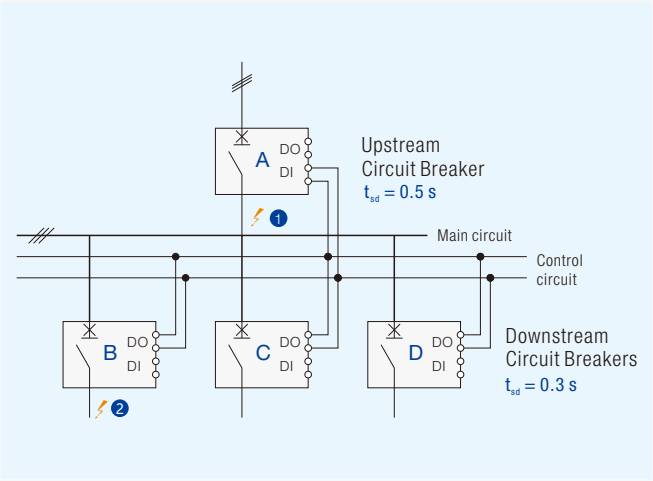
Type 3SW68-BM3, 3SW68-BM4, suitable for size B/C/D 3SW68-2500/4000/6300

Current (Continuous current measurement)		
Measurement parameters:	Measurement range:	Measurement accuracy:
I_A, I_B, I_C, I_g, I_N	I_A, I_B, I_C, I_N based on 25 In	≤ 2In: ± 1.5%; > 2 In: ± 5%

- MCR & HSISC (Trip beyond limit) protection (selection function) - the same as type 3SW68-BL.

- Protection

Type 3SW68-BL3, 3SW68-BL4, suitable for size B/C/D 3SW68-2500/4000/6300

Zone selective interlocking (ZSI) (selection function)	
Application: Used to reduce the electrodynamic forces exerted on installation by shortening the time required to clear faults, while maintaining time discrimination between the various devices. Including short-circuit interlocking and earth fault interlocking.	Settings requirements: At least 1 DI of upstream circuit breaker is set to detect and receive signal from zone interlocking circuit breakers; At least 1 DO of downstream circuit breaker is set to send signal upstream.
	Operating mode The electronic trip unit detecting a fault current sends a signal upstream and checks the signal arriving from downstream. If there is a signal from downstream, the circuit breaker remains closed for the full duration of its tripping-delay time. If there is no signal from downstream, the circuit breaker opens immediately, regardless of its tripping-delay setting. Example explaination Fault 1: Only circuit breaker A detect the fault. Because it does not receive signal from downstream, it opens immediately, regardless of its tripping-delay tsd set to 0.5 s. Fault 2: Both circuit breaks A and B detect the fault. Circuit breaker B does not receive a signal from downstream and opens immediately, in spite of its tripping-delay tsd set to 0.3 s, meanwhile sends a signal to upstream circuit breaker A. Circuit breaker A receives the signal and remains closed for the full duration of its tripping-delay tsd set to 0.5 s. If the fault current disappears within the duration 0.5 s, the circuit breaker A does not trip. If the fault current does not disappear within 0.5 s, the circuit breaker A trips also, to cut off the fault circuit.

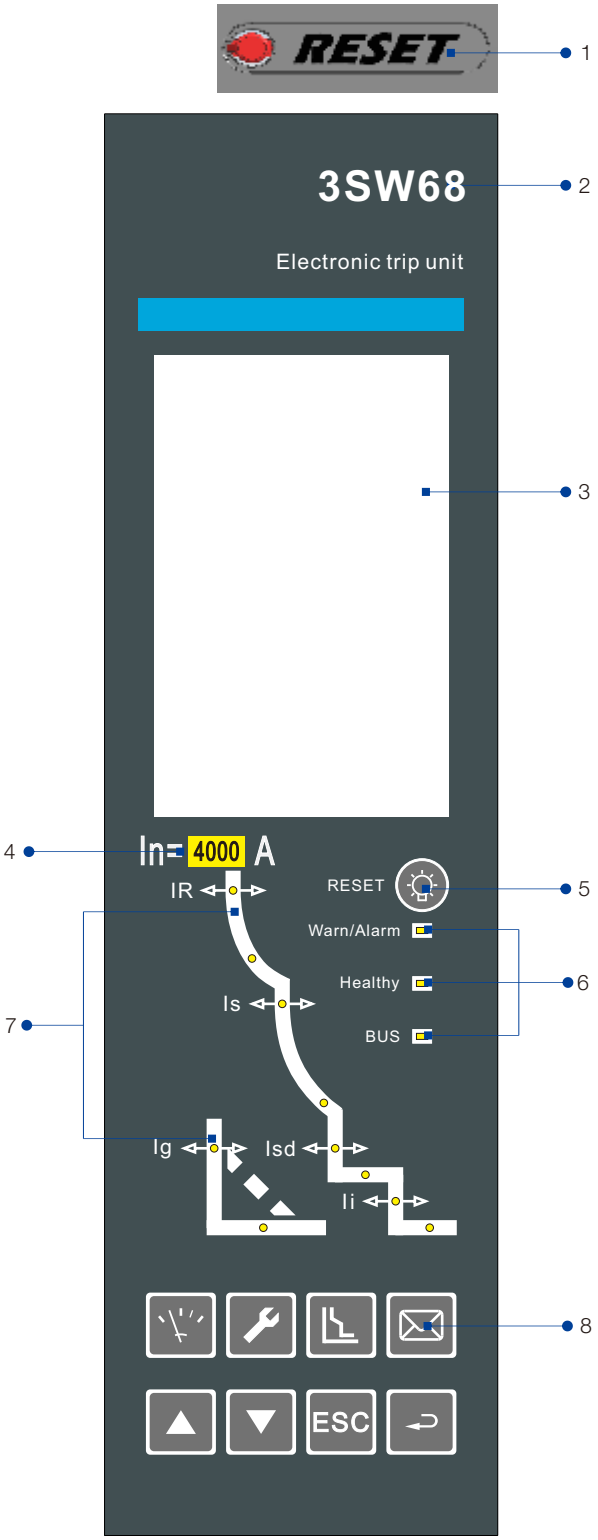
- Load monitoring (selection function) - the same as type 3SW68-BL.

- Default settings
  I_R = 1.0 In, t_R = 15 s;
  Isd = 3.0 IR, tsd = 0.4 s; (I^2t = OFF)
  Ii = 10 In;
  Ig = OFF, tg = 0.8 s.

Series 3SW68 (Electronic trip unit 3SW68-BH)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BH electronic trip unit equips with a LCD displays, the protection value and delay time are set by function keys.
Provides full selective protections of long-time delayed protection, short-time delayed protection, instantaneous protection and earth fault protection, as well as the communication function to take remote measurement, control, setting and communication.



lFunction

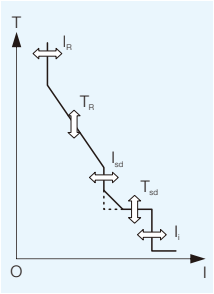
Except the allfunctions of 3SW68-BM, 3SW68-BM is with additional or different functions as follows:

- Protection
  Protection value and delay time are set and checked by function keys.
- Overload protection
  Based on true RMS and long-time delay multi-curve protection, can be switched OFF.
  Thermal memory: The heat accumulation before or after trip.
- Short-circuit protection
  Short-time delay (RMS) and instantaneous protection, can be switched OFF.
  Short-time delay I^2t can be switched ON or OFF by function keys.
- Earth fault protection
  Type T and type W both are available, type T is default setting, can be switched OFF.
  Time-delay characteristic I^2t (definite time protection), can be selected by function keys.
- Neutral protection
  Provide half, whole, 1.6 times and 2 times protection, can be switched ON or OFF.
- Current imbalance, current required, phase-loss protection
- Under frequency, over frequency, reverse frequency protection (only 3SW68-HG)
- Measurement
  Provide measurement of current, voltage, power, frequency, electricity, heat capacity, phase sequence, value required. And type 3W68-BHQ and 3SW68-BHG have additional functions of harmonic analyze and wave display.
- Alarm record
  Record the latest 10 alarms.
- Clock
  Setting date and time.
- Communication
  Provide outputs for communication functions.
- Residual current protection (selection function)
  Sampling by zero sequence current to get high accuracy and sensitivity, applied for protection of lower current.
- Load monitor (selection function)
  Can be used for pre-alarm, as well as the branch load control, act according to current and power.
- Earth alarm (selection function)
  Send alarm signal, can be switched OFF.
- Undervoltage, over voltage, voltage imbalance, phase sequence protection (selection function)
- Remote reset (selection function)
  Remote reset operational button, remove fault indication.
- Communicating (selection function)
  Software support for remote measurement, control, setting and communication.
  Modbus-RTU, Progibus-DP and Devicenet are available.

Characteristics

Protection

Type 3SW68-BH, suitable for size B/C/D 3SW68-2500/4000/6300

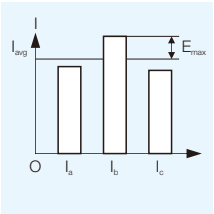


Long-time delayed protection			
Current setting I_R (A)		I_R = In x …	(0.4 ~ 1.0) + OFF, setting step: 1 A or 2 A
Action characteristics			<1.05 I_R, >2 h no action; ≥1.2 I_R, <1 h action
Type of curves	SI: Standard inverse time VI: Fast inverse time EI(G): Express inverse time (general power distribution) EI(M): Express inverse time (motor protection) HV: High-voltage fuse compatibility I^2t: General inverse time protection		selectable in menu Default setting is I^2t, the same as 3SW68-BL.
Time delay t_R (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting t_R (s)	C1 ~ C16, selectable in menu
Thermal memory			(10, 20, 30, 45) min, (1, 2, 3) h reset or remove after trip unit out of electricity
Short-time delayed protection			
Current setting Isd (A)		Isd = I_R x …	(1.5 ~ 15) + OFF, setting step: 1 A or 2 A
Action characteristics			< 0.9 Isd no action; ≥ 1.1 Isd action
I^2t: (OFF) (definite time) Time delay Tsd (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	(0.1 ~ 0.4) s, setting step: 0.1 s
I^2t: (ON) (Inverse time) Time delay T (s)	Accuracy within 10% (Original difference ±40 ms)		The same as long-time delayed protection, the delayed action time is 1/10 of that long-time delayed.
Thermal memory			5 min reset or remove after trip unit out of electricity
Instantaneous protection			
Current setting Ii (A)		Size B/C, Ii = In x …	(1.0 ~ 20) + OFF, setting step: 1 A or 2 A
		Size D, Ii = In x …	(1.0 ~ 15) + OFF, setting step: 2 A
Action characteristics			< 0.85 Ii no action; ≥ 1.15 Ii action
Action time delayed			< 30 ms
Earth fault protection			
Current setting Ig (A)		In ≤ 1250 A, Ig = In x …	(0.4 ~ 0.8) + OFF, setting step: 1 A
		In > 1250 A, Ig = …	(500 A ~ 1200 A) + OFF, setting step: 2 A
Action characteristics			≤ 0.8 Ig no action; > 1.0 Ig action
Time delay Tg (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	(0.1 ~ 1.0) s, setting step: 0.1 s

Neutral pole protection

Neutral pole protection	
Applications: When the neutral line is thin, half value will be applied. When the neutral line is the same as others, full value will be applied. When harmonic wave is heavy, double or 1.6 times value will be applied.	Setting range: 50 %, 100 %, 160 %, 200 %, OFF

Current imbalance protection



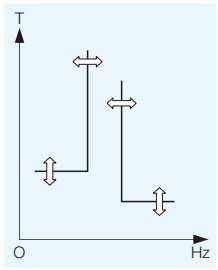
Current imbalance protection			
Current imbalance rate Iunbal setting for protection start-up			(5 ~ 60) %, setting step: 1 %
Action characteristics			< 0.9 I_{unbal} no action; ≥ 1.1 I_{unbal} action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(0.1 ~ 40) s, setting step: 0.1 s Definite time is the same as delay time.
Setting for protection return			5 % ~ start-up setting. Setting step: 1 % (available when ALARM mode only)
Return characteristics			>1.1 I_{unbal} no return; ≤ 0.9 I_{unbal} return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(10 ~ 200) s, setting step: 1 s (available when ALARM mode only); Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

Required current protection

Required current protection			
Setting for protection start-up			(0.2 ~ 1) In, setting step: 1 A or 2 A
Action characteristics			< 0.9 (I/setting) no action; ≥ 1.1 (I/setting) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(15 ~ 1500) s, setting step: 1 s Definite time is the same as delay time.
Setting for protection return			0.2 In ~ start-up setting. Setting step: 1 A or 2 A (available when ALARM mode only)
Return characteristics			>1.1 (I/setting) no return; ≤ 0.9 (I/setting) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(15 ~ 3000) s, setting step: 1 s (available when ALARM mode only); Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

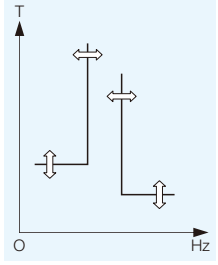
Characteristics

- Under frequency protection



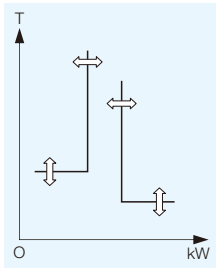
Under frequency protection			
Setting for protection start-up			45 Hz ~ setting, setting step: 0.5 Hz
Action characteristics			> setting +1 Hz no action; ≤ setting - 1 Hz action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(0.2 ~ 5.0) s, setting step: 1 s Definite time is the same as delay time.
Setting for protection return			Start-up setting ~ 65 Hz. Setting step: 0.5 Hz (available when ALARM mode only)
Return characteristics			< setting -1 Hz no return; ≥ setting + 1 Hz return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.2 ~ 36) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

- Over frequency protection



Over frequency protection			
Setting for protection start-up			Return setting ~ 65 Hz, setting step: 0.5 Hz
Action characteristics			< setting - 1 Hz no action; ≥ setting +1 Hz action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(0.2 ~ 5.0) s, setting step: 1 s Definite time is the same as delay time.
Setting for protection return			45 Hz ~ start-up setting. Setting step: 0.5 Hz (available when ALARM mode only)
Return characteristics			> setting + 1 Hz no return; ≤ setting -1 Hz return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.2 ~ 36) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

- Reverse power protection



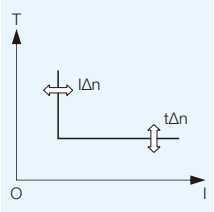
Reverse power protection			
Setting for protection start-up			5 ~ 50 kW, setting step: 1 kW
Action characteristics			< 0.9 (reverse power/setting) no action; ≥ 1.1 (reverse power/setting) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(0.2 ~ 20) s, setting step: 1 s Definite time is the same as delay time.
Setting for protection return			5 kW ~ start-up setting. Setting step: 1 kW (available when ALARM mode only)
Return characteristics			> 1.1 (reverse power/setting) no return ≤ 0.9 (reverse power/setting) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(1.0 ~ 360) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

Characteristics

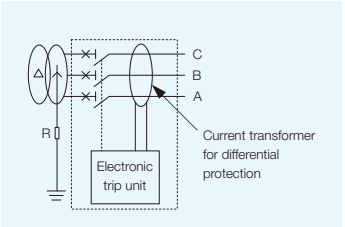
- Measurement

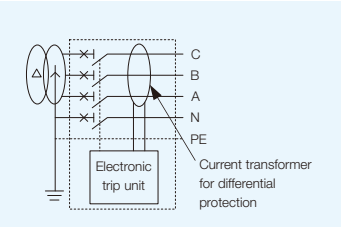
Current (Continuous current measurement, applied to power system with 50 Hz or 60 Hz)		
Content: I_A, I_B, I_C (three phase) I_N (netural pole), I_g (earth current) I_{umbal} (current imbalance rate)	Range: I_A, I_B, I_C, I_N : 25 In	Accuracy: ≤ 2 In: ± 1.5 % > 2 In: ± 5 %
Current (Continuous current measurement, applied to power system with 50 Hz or 60 Hz)		
Content: Line voltage, phase voltage, average voltage, phase sequence, voltage imbalance rate	Range: Line voltage: 0 ~ 1200 V phase voltage: 0 ~ 600 V display the phase sequence	Accuracy: ± 5 %
Power		
Content: Active power, reactive power, apparent power (not applied to three phase three line)	Range: Active power: - 32768 kW ~ + 32767 kW Reactive power: - 32768 kar ~ + 32767 kar Apparent power: 0 kVA ~ 65535 kVA	Accuracy: ± 2.5 %
Power factor		
Content: System power factor, phase power factor (not applied to three phase three line)	Range: - 1.00 ~ + 1.00	Accuracy: ± 0.02
Frequency		
Content: Frequency	Range: 40 Hz ~ 65 Hz	Accuracy: ± 0.05 Hz
Energy		
Content: Input (output) active energy Input (output) reactive energy Total active (reactive, apparent) energy	Range: Active: 0 ~ 4294967295 kWh Reactive: 0 ~ 4294967295 karh Apparent: 0 ~ 4294967295 kVAh	Accuracy: ± 2.5 %
Required value		
Content: Required current I_A, I_B, I_C, I_N Required power P, Q, S	Range: The same as real-time measured value of current and power	Accuracy: The same as accuracy of current and power
Harmonic wave (available for type 3SW68-BHQ and 3SW68-BHG)		
Fundamental wave of current, voltage; Total harmonic distortion of current, voltage THD and thd; Latest 31 odd harmonics amplitude Pope;		
Waveform (available for type 3SW68-BHQ and 3SW68-BHG)		
Capture waveform display: 4 current I_A, I_B, I_C, I_N; 3 phase voltage U_{AN}, U_{BN}, U_{CN}		

- Residual current protection (selection function)



Residual current protection													
Action current setting IΔn			0.5 ~ 30.0 A, setting step: 0.1 A										
Action characteristics			< 0.8 (I/IΔn) no action; ≥ 1.0 (I/IΔn) action										
Time delay tΔn (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting (s)	0.06	0.08	0.17	0.25	0.33	0.42	0.5	0.58	0.67	0.75	0.8.	instantaneous
		IΔn	0.36	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	0.04
		2 IΔn	0.18	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	0.04
		5 IΔn	0.07	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	0.04
		10 IΔn												
Mode			Trip / OFF											





- MCR & HSISC (Trip beyond limit) protection (selection function) - the same as type 3SW68-BL.
- Zone selective interlocking (ZSI) (selection function) - the same as type 3SW68-BL.

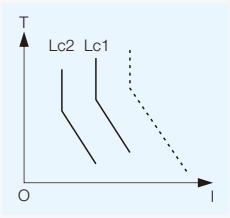
1

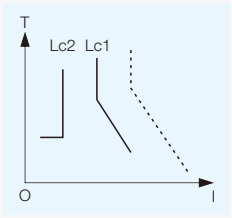
Characteristics

- Load monitoring (selection function)

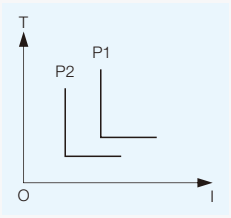
Load monitoring		
Action according to current or power	Mode 1: Control two loads independently, when actual value over setting value, load monitor DO action with time delay (DO function should be set accordingly), to break the branch load, ensure the main power supply.	Mode 2: Generally used for controlling one load, when value over setting start-up value, load monitor 1 DO action with time delay, open branch load; if actual values after breaking are lower than return value, after setting time delay, load monitor1 DO returns, load monitor 2 DO action. to close the circuit and recovery the supply power. Note: Load1 start-up value ≥ Load 2 return value

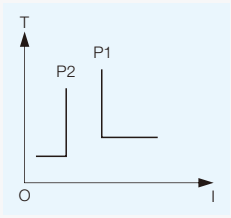
According to current:



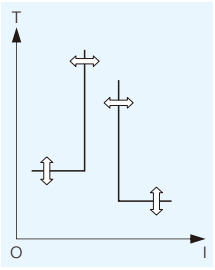


According to power:



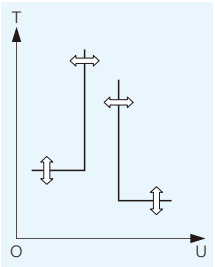


- Earth alarm (selection function)



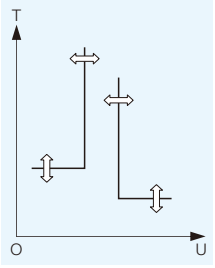
Earth alarm			
Current setting for alarm		In ≤ 1250 A	(0.4 ~ 0.8) x In + OFF, setting step: 1 A
		In > 1250 A	(500 A ~ 1200 A) + OFF, setting step: 2 A
Action characteristics			< 0.8 (I/setting value) no action; ≥ 1.0 (I/setting value) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delay time setting (s)	(0.1 ~ 1.0) s, setting step: 0.1 s Definite time is the same as delay time.
Current setting for alarm return (available when ALARM mode only)		In ≤ 1250 A	(0.4 ~ 0.8) x In, setting step: 0.1 s
		In > 1250 A	500 A ~ 1200 A, setting step: 2 A
Return characteristics			> 1.0 (I/setting value) no return; ≤ 0.9 (I/setting value) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.1 ~ 1.0) s, setting step: 0.1 s (available when ALARM mode only) Definite time is the same as delay time.
Mode			Alarm / OFF

- Under voltage protection (selection function)



Under voltage protection			
Setting for protection start-up			100 V ~ return value, setting step: 1 V
Action characteristics			> 1.1 (Umax/setting of action value) no action ≤ 0.9 (Umax/setting of action value) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delay time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s Definite time is the same as delay time.
Setting for protection return			start-up value ~ 1200 V, setting step: 1 V (available when ALARM mode only, setting value for return ≥ start-up value)
Return characteristics			< 0.9 (Umax/setting of return value) no return ≥ 1.1 (Umax/setting of return value) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s (available when ALARM mode only) Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

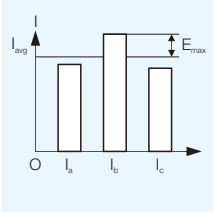
- Over voltage protection (selection function)



Over voltage protection (setting value for under votlage protection must less than that for over voltage protetion)			
Setting for protection start-up			Return value ~ 1200 V, setting step: 1 V
Action characteristics			< 0.9 (Umin/setting of action value) no action ≥ 1.1 (Umin/setting of action value) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delay time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s Definite time is the same as delay time.
Setting for protection return			100 V ~ start-up value, setting step: 1 V (available when ALARM mode only, setting value for start-up ≥ return value)
Return characteristics			≥ 1.1 (Umin/setting of return value) no return < 0.9 (Umin/setting of return value) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s (available when ALARM mode only) Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

Characteristics

- Voltage imbalance protection (selection function)



Voltage imbalance protection			
Voltage imbalance rate Uunbal setting for protection start-up			(2 ~ 30) %, setting step: 1 %
Action characteristics			< 0.9 (actual voltage imbalance rate/setting value) no action ≥ 1.1 (actual voltage imbalance rate/setting value) action
Time delay (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delay time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s Definite time is the same as delay time.
Setting for protection return			2 % ~ start-up value, setting step: 1 % (available when ALARM mode only, setting value for return ≥ start-up value)
Return characteristics			> 1.1 (actual voltage imbalance rate/setting value) no return ≤ 0.9 (actual voltage imbalance rate/setting value) return
Time delay return (s) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(0.2 ~ 60) s, setting step: 0.1 s (available when ALARM mode only) Definite time is the same as delay time.
Mode			Alarm / Trip / OFF

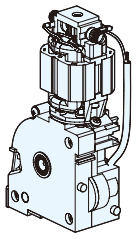
- Phase sequence protection (selection function)

Phase sequence protection	
Action phase sequence	Setting range: Δø: A, B, C / Δø: A, C, B
Mode	Alarm / Trip / OFF

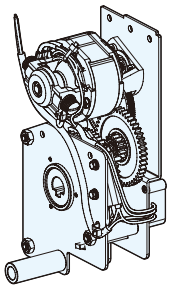
- Default settings

  I_R = 1.0 In, t_R = 15 s;
  Isd = 3.0 I_R, tsd = 0.4 s; (definite time)
  Ii = 10 In;
  Ig = OFF, tg = 0.8 s.

Accessories for circuit-breakers



for size A



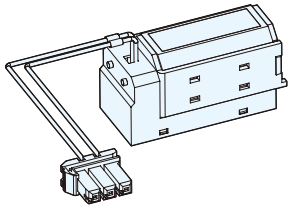
for size B/C/D

- Motorized operating mechanism - EM (Standard configuration)

The motorized operating mechanism can automatically charge and recharge the spring mechanism when the circuit breaker is closed, to ensure the instantaneous reclosing of the breaker after possible opening.
As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

Size	Size A	Size B/C	Size D
Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V		
Operating limits	85 % … 110 % Us		
Consumption	40 W	50 W	75 W
Charging time	< 5 s	< 7 s	< 7 s

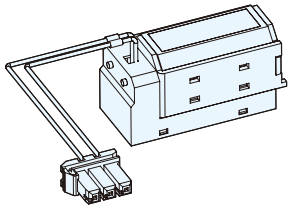


- Closing coil - CM (Standard configuration)

The closing coil can remotely close the circuit breaker if the spring mechanism is charged.
As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V
Operating limits	85 % … 110 % Us
Consumption	500 W
Closing time	≤ 100 ms

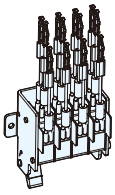


- Shunt release - SH (Standard configuration)

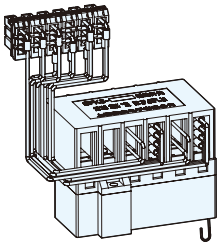
The shunt release can remotely open the circuit breaker instantaneously when energized.
As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V
Operating limits	70 % … 110 % Us
Consumption	500 W
Opening time	≤ 100 ms



for size A



for size B/C/D

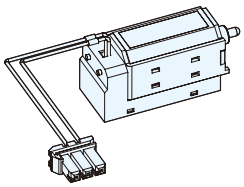
- Auxiliary contact - AU (Standard configuration)

The circuit breaker can be equipped with auxiliary contacts that signal the status of the circuit breaker.
The first block of contacts (4 convertible contact) is always configurated inside of the circuit breaker before delivery.
Special contacts as 4 NO + 4 NC or 6 NO + 6 NC are also available as optional applications.

General characteristics

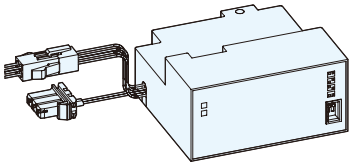
Size	Size A		Size B/C/D	
Type	4NO-C 4NO+4C 6NO+6NC		4NO-C 4NO+4C 6NO+6NC	
Power supply Us	AC 230 V AC 400 V	DC 110 V DC 220 V	AC 230 V AC 400 V AC 415 V	DC 110 V DC 220 V DC 250 V
Rated control capacity	300 VA	60 W	830 VA	75 W
Conventional thermal current	10			

Accessories for circuit-breakers



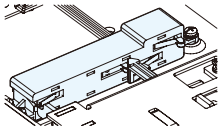
- Under-voltage release - UV (Optional configuration)

The under-voltage release can open the circuit breaker when the supply voltage drops to a value between 35% and 70% of its rated voltage or there is power supply failure. If there is no power supply on the release, it is impossible to close the circuit breaker, either manually or electrically. It can be used for safe remote tripping, for blocking unexpected closing or to control the voltage in the primary and secondary circuits.
Circuit breaker closing is enable again only when the supply voltage returns to 85% of its rated value.
It is an optional accessory which is configurated in circuit breaker before delivery unless there is request.

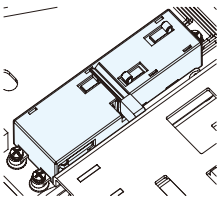


General characteristics

Power supply Us		AC 230 V , AC 400 V
Operating limits	Opening	35 % … 70 % Ue
	Closing	85 % … 110 % Ue
	Non-closing	≤ 25 % Ue
Consumption	Starting	500 W
	Holding	12 W
Opening time		≤100 ms
Time delay		0, 1, 2, 3 s



for size A



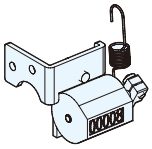
for size B/C/D

- Closing coil - CM (Standard configuration)

The closing coil can remotely close the circuit breaker if the spring mechanism is charged.
As a standard configuration, it is already equipped in circuit breaker before delivery.

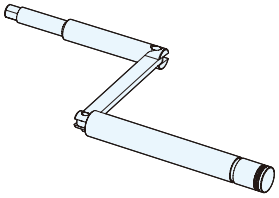
General characteristics

Size	Size A	Size B/C/D
Quantity of contact	1NO (separated), 1NO (test), 1NC (connected)	
Power supply Ue	AC 230 V, AC 400 V, AC 415 V, DC 110 V, DC 220 V, DC 250 V	
Rated control capacity	300 VA / 60 W	830 VA / 75 W
Conventional thermal current	10 A	



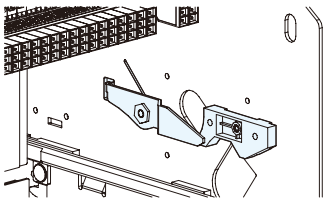
- Mechanical operation counter - MOC (Optional configuration)

The mechanical operation counter makes the number of mechanical operations visible on the front of the circuit-breaker, the user knows how many mechanical operations the circuit-breaker has performed and determines the frequency of ordinary maintenance operations.



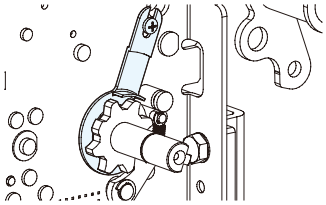
- Crank– CRK (Standard configuration)

The crank is used to rack in or out the mobile part.
It is for withdrawable circuit-breaker only.



- Opening protection for racking in / racking out– OPC (Standard configuration)

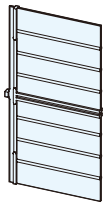
It can automatically open the circuit-breaker when the mobile part is racked out from the drawer base, and prohibit the racking in at closing condition.
It is for withdrawable circuit-breaker only.



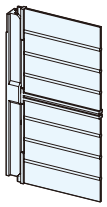
- Protection device for unexpected charging - PUC (Standard configuration)

This device is to separate the handle pawl and the mesh surface of the mechanism ratchet when spring charging, and prevent the unexpected charging during process flowing or maintaining. It is unlocked before delivery inspection.

Accessories for circuit-breakers

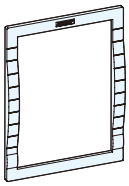


Withdrawable type

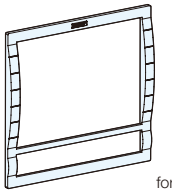


Fixed type

- Separators -PSB (Optional configuration)
  These protection devices increase the insulation distance between adjacent phases. They are available for all the sizes.
  Separators must be used if the operation voltage is higher than 500 V.

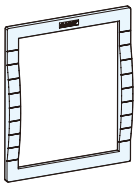


for withdrawable type for size A

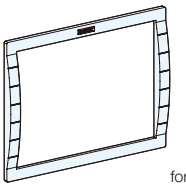


for size B/C/D

- Door frame (Optional configuration)
  The door frame is installed on the door of cabinet to achieve IP40 degree of protection on the front part of the circuit-breaker.



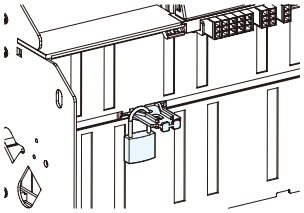
for fixed type for size A



for size B/C/D

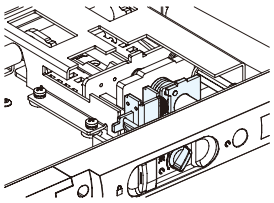


- Protection cover for secondary terminal (Optional configuration)
  It is equipped on the drawer base to prevent dust and touching to electrical parts of secondary terminal.
  It is available for withdrawable circuit-breaker only.

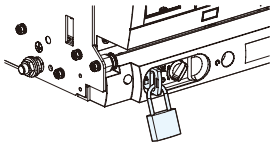


- Separate lock device (Optional configuration)
  To lock the safety board at OFF position (the lock should be prepared by user):
  - Prevent the mobile part connecting to the drawer base
  - Prevent touching the electrical parts in case of racking in or out the mobile part or taking maintenance.

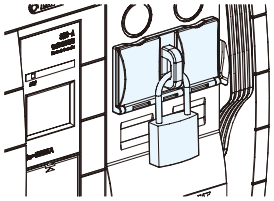
  It is available for withdrawable circuit-breaker only.



- 3-position locking device (Optional configuration)
  This device enables the mobile part to be locked in one of the three positions: separated, test and connected.
  It is available for withdrawable circuit-breaker only.

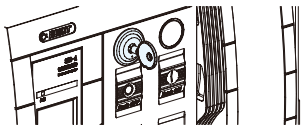


- Position locking device (Optional configuration)
  To prevent crank inserting in and make the circuit-breaker to be in the “separated” position.
  It is available for withdrawable circuit-breaker only.



- Protection device for opening and closing buttons (Optional configuration)
  This device enables it is possible to prevent any unexpected operation on both the openingand closing buttons (the lock should be prepared by user). The lock of opening button and closing button is independent, usually used for remote operation.

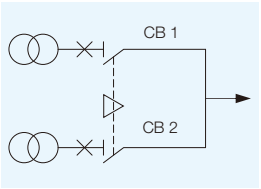
Accessories for circuit-breakers



● Key lock in open position (Optional configuration)
Keep the open button at pressed position by a lock which should be prepared by user, to lock the circuit-breaker in OFF position. It is possible to make interlock between different locks of serval circuit-breakers.

○ One key for one lock
One lock and one key for one circuit-breaker. The key could be pull out in locked position only, and the circuit-breaker can't be closed.

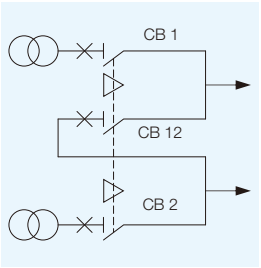
○ Two locks with one key
There are two same locks and one key for two circuit-breakers, to enable that only one circuit-breaker can be closed.



CB 1	CB 2
O	O
O	I
I	O

O: open I: close

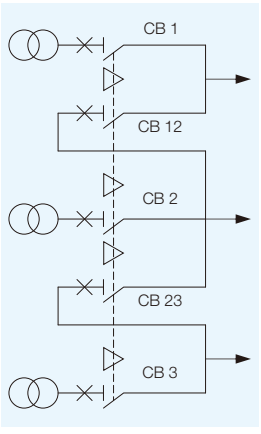
○ Three locks with two keys
There are three same locks and two keys for three circuit-breakers, to enable that only two circuit-breakers can be closed.



CB 1	CB 12	CB 2
O	O	O
I	O	O
O	I	O
O	O	I
I	I	O
O	I	I
I	O	I

O: open I: close

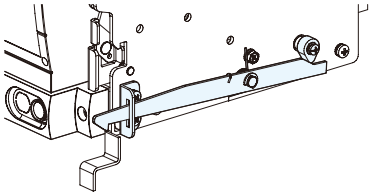
○ Five locks with three keys
Used in power distribution systems with three power supplies and two bus couples, and breakers are dispersedly installed.



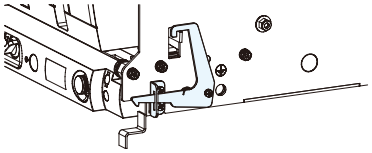
CB 1	CB 12	CB 2	CB 23	CB 3
O	O	O	O	O
I	O	O	O	O
O	I	O	O	O
O	O	I	O	O
O	O	O	I	O
O	O	O	O	I
I	I	O	O	O
I	O	I	O	O
I	O	O	I	O
I	O	O	O	I
O	I	I	O	O
O	I	O	I	O
O	I	O	O	I
O	O	I	I	O
O	O	I	O	I
O	O	O	I	I
I	I	O	I	O
I	I	O	O	I
I	O	I	O	I
I	O	O	I	I
O	I	I	I	O
O	I	O	I	I

O: open I: close

Accessories for circuit-breakers

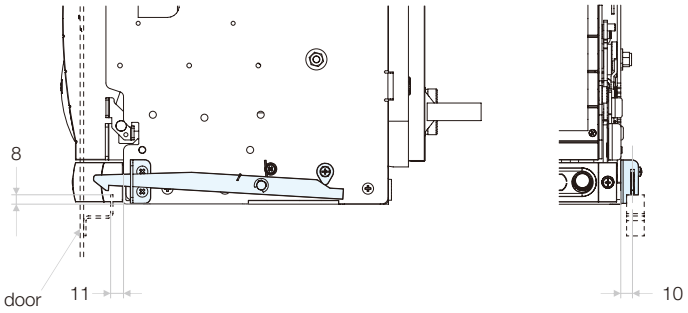


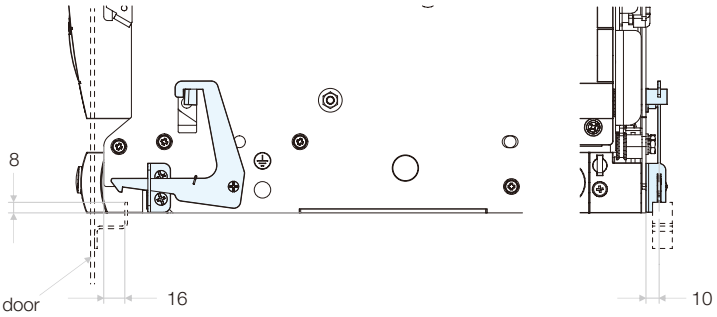
for size A

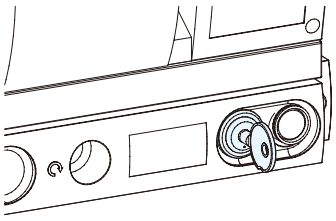


for size B/C/D

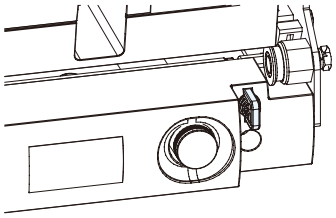
- Interlock for switchgear door (Optional configuration)
  This device can be Installed on either the left side or right side of the drawer base to prevent the switchgear door from being opened when the mobile part of the withdrawable version of circuit-breaker is in position of “test” or “connected”. If the switchgear door is open and circuit-breaker is in “connected” position, then it can be closed directly without opening the circuit-breaker.
  It is available for withdrawable circuit-breaker only.





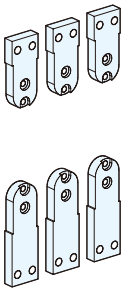


- Position key lock (Optional configuration)
  The same as position locking devices, this position key lock can lock the circuit-breaker in“separated” position.
  Besides, it is possible to install two same locks on two circuit-breakers with only one key, to achieve the interlock of “separated” position between these two circuit-breakers.
  It is available for size A (3SW68-1600) of withdrawable version of circuit-breaker.

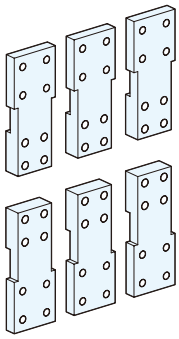


- Blocking device for inserting in crank when the door is open (Optional configuration)
  It is used to block the crank being inserted in and prevent the mobile part from being racked in or out when the switchgear door is open.
  It is available forsize B/C/D (3SW68-2500/4000/6300) of withdrawable version of circuit-breaker.

Accessories for circuit-breakers

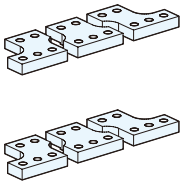


for size A of withdrawable type

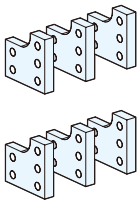


for size B/C/D

- Front terminals (Optional configuration)
  Used for circuit-breakers with rated current up to 4000A.

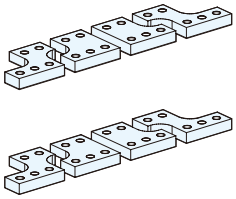


Horizontal

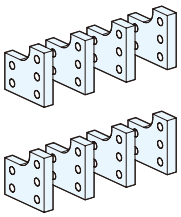


Vertical

- Spread terminals for 3-pole circuit-breakers (Optional configuration)
  The terminals are available for size A (3SW68-1600) of 3-pole circuit-breakers with purpose to enlarge the phase distances and ensure the electric safety by reducing the temperature rise.



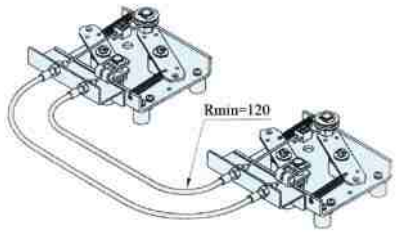
Horizontal



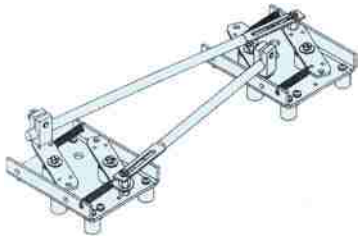
Vertical

- Spread terminals for 4-pole circuit-breakers (Optional configuration)
  The terminals are available for size A (3SW68-1600) of 4-pole circuit-breakers with purpose to enlarge the phase distances and ensure the electric safety by reducing the temperature rise.

Accessories for circuit-breakers



Cable type

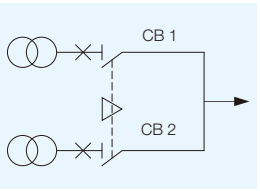
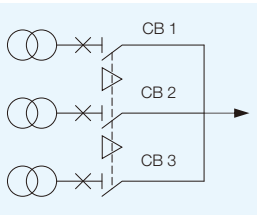
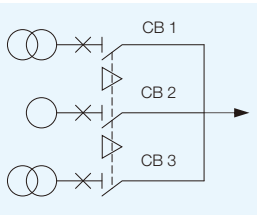
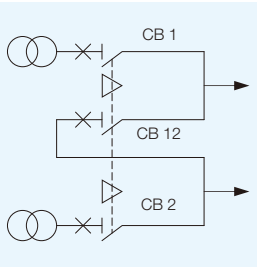


Connecting rod type

- Mechanical interlock (Optional configuration)
  It is installed on the right side of drawer base to enable various opening and closing configurations to be obtained between two or three circuit-breakers.
  The mechanical interlock is installed by user.

- Two types of mechanical interlock are available:
  - Cable type
  - Connecting rod type

- Four types of interlock configuration are available:

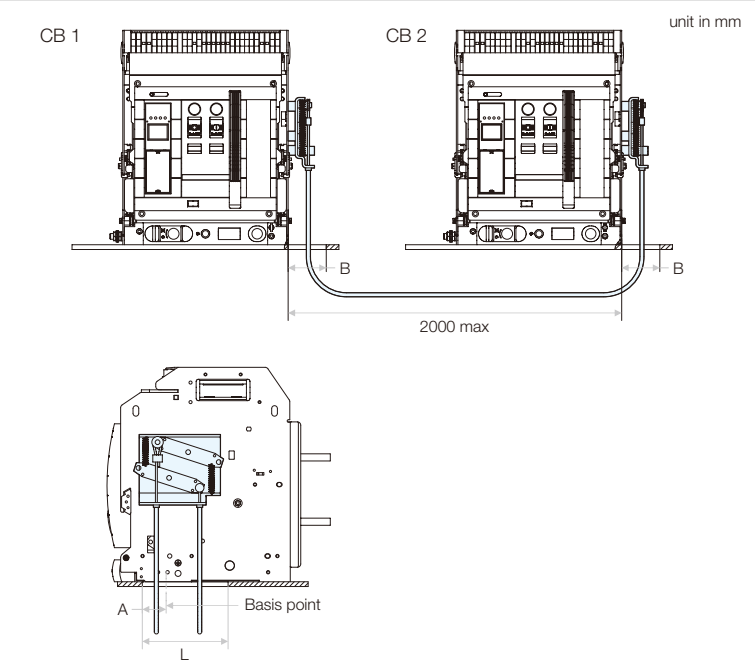
Possible running status			Typical application
Type A Two circuit-breakers can't be in closed position at the same time.			
CB 1	CB 2		
O	O		
O	I		
I	O		
Type B One out of three interlocked circuit-breakers can be closed.			
CB 1	CB 2	CB 2	
O	O	O	
I	O	O	
O	I	O	
O	O	I	
Type C Two circuit-breakers can be closed if the third is open. The latter can only be closed when the two circuit-breakers are open.			
CB 1	CB 2	CB 2	
O	O	O	
I	O	O	
O	I	O	
I	O	I	
O	O	I	
Type D Two out of three circuit-breakers can be closed at the same time.			
CB 1	CB 2	CB 2	
O	O	O	
I	O	O	
O	I	O	
O	O	I	
I	I	O	
O	I	I	
I	O	I	

Accessories for circuit-breakers

- Mechanical interlock (Optional configuration)

○ Cable type mechanical interlock for two horizontal installed circuit-breakers

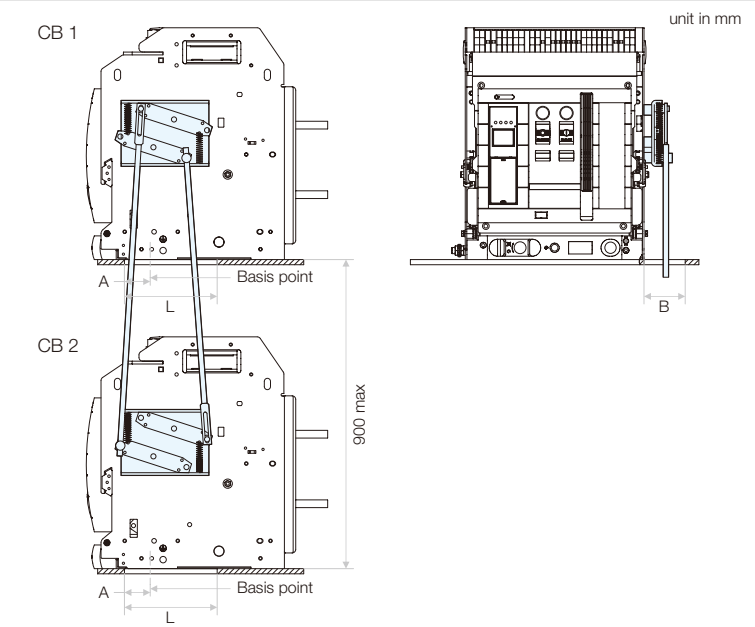
Dimensions



	Size A	Size B/C/D
B	50	80
A	40	50
L	120	180

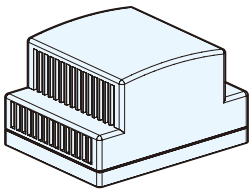
○ Connecting rod type mechanical interlock for two vertical installed circuit-breakers

Dimensions



	Size A	Size B/C/D
B	50	80
A	40	50
L	120	180

Accessories for electronic trip units

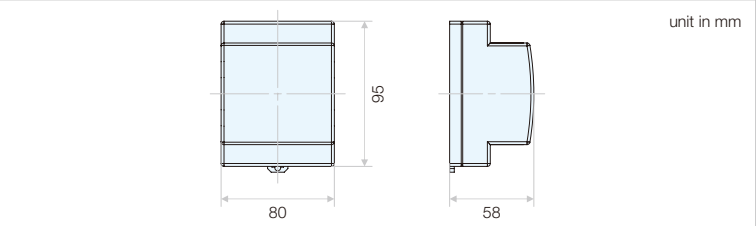


- DC power supply module (optional)

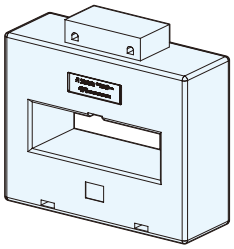
If the control voltage is DC 220 V or DC 110 V, a DC power supply module is necessary.
The DC power supply module can be installed on 35 mm DIN-rail.

Characteristics	
Input voltage	DC 220 V ± 15% or DC 110 V ± 15%
Output voltage	DC 24 V ± 5%
Output current	1.5 A

Dimensions



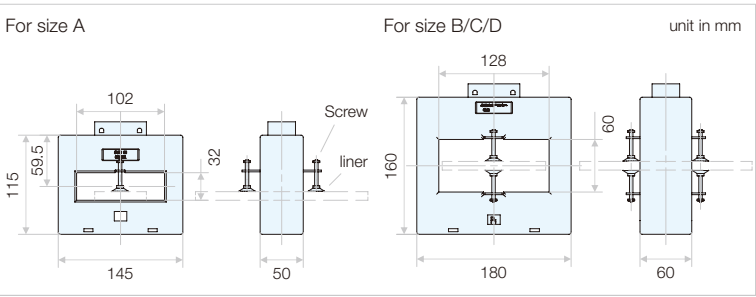
Electrical diagram reference: Wiring diagram

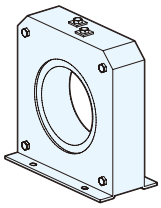


- External current transformer for neutral conductor

This is only for 3-pole circuit-breakers;
According to requirements of particular situations, connecting a current transformer to the electronic trip unit, to enable the protection of the neutral conductor. A different electronic trip unit is needed accordingly.
The distance between current transformer and circuit-breaker should be less than 2 meters.

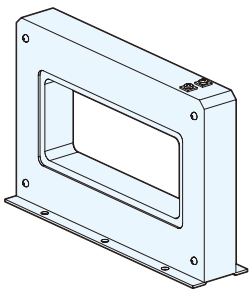
Dimensions:





- External current transformer for earth-fault protection

In the case of grounding connection named Source Ground Return (type W), the external current transformer can be used to check the current on the earthing cables and protect the circuits from both upstream and downstream from the earth-fault at the same time. The distance between current transformer and circuit-breaker should be less than10 meters.

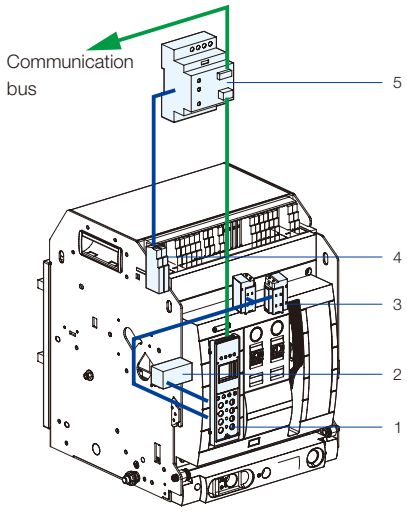


- External current transformer for differential protection

It is used in the case of grounding connection is with differential protection. The distance between current transformer and circuit-breakershould be less than 2 meters.

Accessories for communication

Including software, data transformer, communication module, data collector, relay module, power-supply module, and kinds of communication cables etc.



Structure and network

1. Internal communication module
2. Micro switch (Open/Close, fault trip, Ready to close, charged)
3. Coil of close and open
4. Signal of connected, test and separated
5. External communication module

- For fixed circuit-breakers, the communication COM option is made up of:
  an internal communication module installed behind the electronic trip unit and signals are given by auxiliary contacts (open/close, fault trip, ready to close, charged) which is connected to the communicating voltage release.

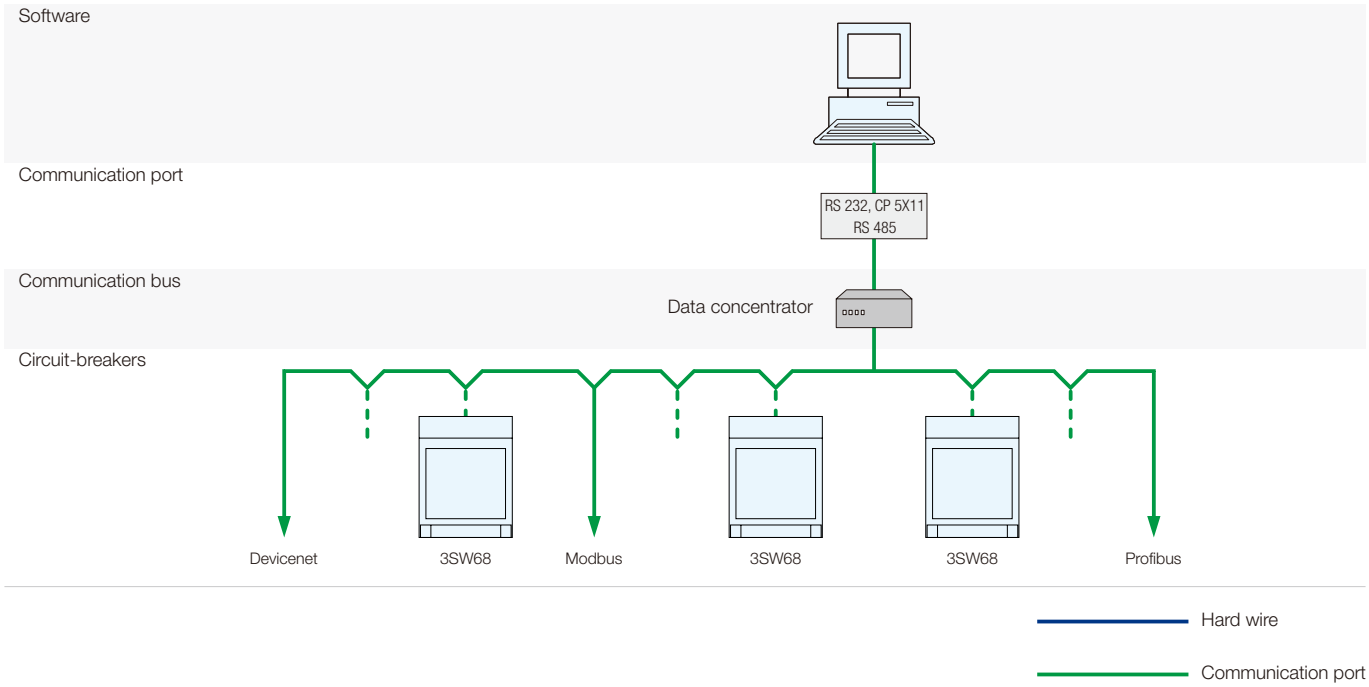
- For withdrawable circuit-breakers, the communication COM option is made up of:
  - an internal communication module installed behind the electronic trip unit and signals are given by auxiliary contacts (open/close, fault trip, ready to close, charged) which is connected to the communicating voltage release.
  - an external communication module with signals given by 3-positon micro switch (connected, test, separated).

- The status indication by the COM option is independent of the circuit-breaker indication contacts. These contacts remain available for conventional uses.

- Internal communication module
  This module is installed behind the electronic trip unit and is independent of the control unit. It receives and transmits information on the communicating network. An infra-red link transmits data between the control unit and the communication module.

- External communication module
  This module makes it possible to address the frame and to maintain the address when the circuit-breaker is in the separated position.
  A power-supply with DC 24 V is needed.

- Communication voltage release of open/close
  The communication voltage release of open/close is connected to the internal communication module.
  The remote-tripping function (the second voltage release of open or under voltage release) are independent of the communication option. They are not connected to the internal communication module.



Installation - Installation environment

- Utilization category (according to IEC 60947-2)
  Main circuit:
  - type A: withoutselective protection
  - type B: with selective protection
  - AC-3: motor protection
  Auxiliary circuit:
  - AC-15: for controlling the electromagnet load which capacity is higher than 72 VA
  - DC-13: for controlling the DC electromagnet load

- Electromagnetic compatibility (EMC)
  Applies to environment A: relates to low-voltage non-public or industrial networks/locations/installations including highly disturbing sources.

- Ambient temperature
  The circuit-breakers can operate in temperature range from -5 ºC to + 40 ºC, and the average temperature in 24 hours should below + 35 ºC. Under certain installation conditions, the circuit-breakers can operate at higher temperature than the reference temperature of + 40 ºC. In this case the current-carrying capacity of the circuit-breaker may be lower than the rated current-carrying capacity at the reference temperature, therefore the derating rated current shown in the table must be applied.

Size	Rated frame current Inm	Rated current	Maximum rated current under different ambient temperature		
			+ 40 ºC	+ 50 ºC	+ 60 ºC
	(A)	(A)	(A)		
A	1600	200	200	200	200
		400	400	400	400
		630	630	630	630
		800	800	800	800
		1000	1000	900	800
		1250	1250	1250	1250
		1600	1600	1440	1280
B	2500	630	630	630	630
		800	800	800	800
		1000	1000	900	800
		1250	1250	1250	1250
		1600	1600	1600	1600
		2000	2000	2000	2000
		2500	2500	2250	2000
C	4000	2000	2000	2000	2000
		2500	2500	2500	2500
		2900	2900	2900	2880
		3200	3200	3200	2880
		3600	3600	3240	2880
		4000	4000	3600	3200
D	6300	4000	4000	4000	4000
		5000	5000	4500	4000
		6300	6300	5670	5040

- Altitude
  The rated performance of circuit-breaker remains unchanged with altitude up to 2000 meters. Beyond this altitude, the properties of the atmosphere in terms of composition, dielectric capacitance, cooling power and pressure can vary, and effects the rated operational voltage, rated insulating voltage and rated current, which are subject to derating.

Altitude	m	2000	3000	4000	5000
Rated insulating voltage	V	1000	900	700	600
Max. operational voltage	V	690	590	520	460
Rated current	% In	100	98	95	93

- Atmospheric conditions
  - Humidity: air relative humidity no higher than 50 % when the ambient temperature is + 40 ºC. The higher relative humidity is allowable under lower ambient temperature. In the most humidity month, the average relative humidity no higher than 90 %, and the average lowest temperature no lower than + 25 ºC, special measures should be adopted also for the condensation occasionally produced due to the temperature change.
  - Pollution degree: 3

  Note:
  User should negotiate with manufacturer about the circuit-breakers which may be used under conditions of over + 40 ºC or below - 25 ºC or the altitude higher than 2000 meters.

Installation - Installation environment

- Overvoltage category
  - Main circuit: IV
  - Coil of under-voltage release: IV
  - Primary coil of power transformer: IV
  - Auxiliary circuit, control circuit: III

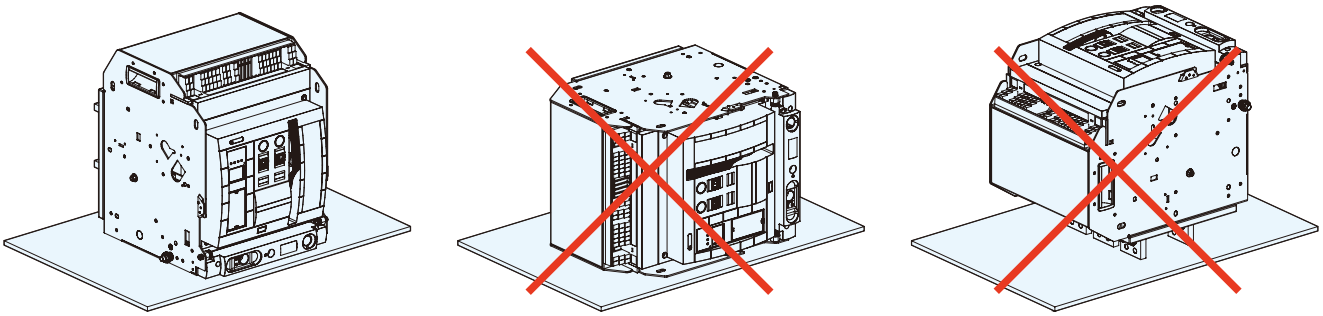
- Other installation conditions
  - The circuit-breaker should be installed under the conditions without risks of explosive, without conductive dust, and without gas which would corrode metal or destroy the insulation.
  - The vertical gradient should be less than 5 °C.

- Power loss and resistance
  The power loss of a circuit-breaker is the total power consumption between the input and output of main circuits, usually they are measured under the rated frame current.
  The resistance between input/output is the value measured per pole (cold state).

Version		Withdrawable circuit-breaker		Fixed circuit-breaker	
Size	Rated frame current (A)	Power loss (W)	Input/output resistance (μΩ)	Power loss (W)	Input/output resistance (μΩ)
A	1600	460	36	220	26
B	2500	600	20	260	12
C	4000	900	12	650	8
D	6300	1200	8	1050	5

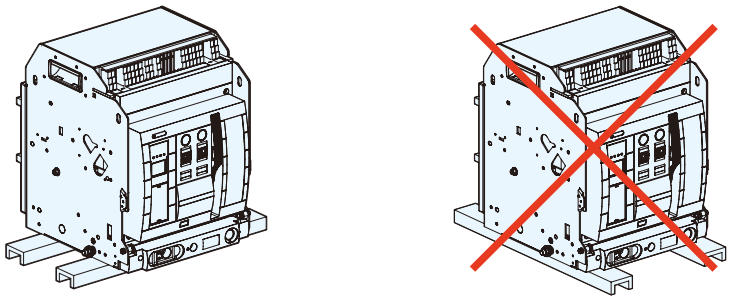
Installation - Installation environment

- Permitted placing of circuit-breaker before installing



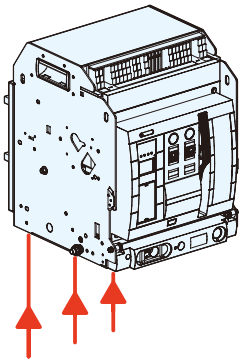
- Installation position

  The circuit-breaker is required to be installed on the flat surface which is hard without deformation, and make the weight evenly distributed on it.



- Power incoming

  The circuit-breaker is available to connect the incoming power from either the top side or the bottom side without any impact on performance.

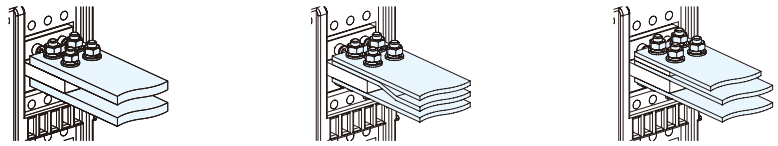


Installation - Power connection

- Clamping

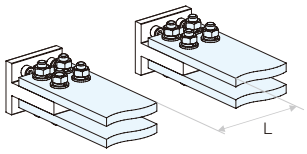
The copper busbars connected to the circuit-breaker should be fixed with steel nuts and bolts, class 8.8, and with proper tightening torque which are shown in the table below, over-tightening may have the same consequences as under-tightening and is prohibited.

Example



Ø Nominal (mm)	Ø Drilling (mm)	Tightening torques with grower or flat washers (Nm)	with contact or corrugatec washers
10	11	37.5	50
12	13	45	60

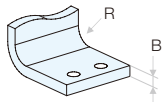
- Isolation distance



Rated impulse withstand voltage Uimp (kV)	L minimum (mm)
12	14

- Busbar bending

When bending busbars maintain the radius indicated below (a smaller radius would cause cracks).



Dimensions (mm)

B	Radius of curvature R	
	Minimum	Recommended
5	5	7.5
10	15	18 ~ 20

- Busbar sizing and quantity

Size of circuit-breaker	Rated frame current	Rated current (A)	Thickness	Width	Quantity per pole
A	1600	200	5	50	1
		400	5	50	1
		630	5	50	2
		800	5	50	2
		1000	5	50	3
		1250	5	50	3
		1600	5	50	4
B	2500	630	5	80	1
		800	5	60	2
		1000	5	60	2
		1250	5	80	2
		1600	10	60	2
		2000	10	80	2
		2500	10	80	3
C	4000	2000	5	100	3
		2500	10	100	2
		2900	10	100	3
		3200	10	100	3
		3600	10	100	4
		4000	10	100	4
D	6300	4000	10	100	4
		5000	10	100	6
		6300	10	100	6 (vertical)

Installation - Power connection

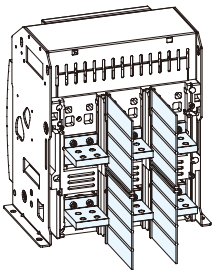
There are four types of connection are available:

- Horizontal connection or vertical connection
- Front connection
- Mix connection
- Spread connection

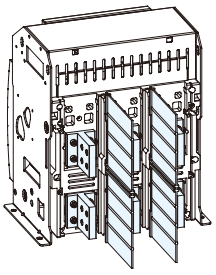
Horizontal connection or vertical connection

- For size A/B, just simply turn the horizontal terminals at 90° to make vertical terminals
- For size D, only vertical connections available
- Phase separators are optional depending on user's requirement

Horizontal connection

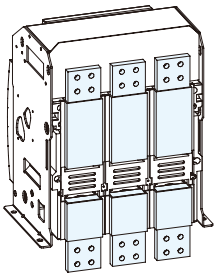


Vertical connection



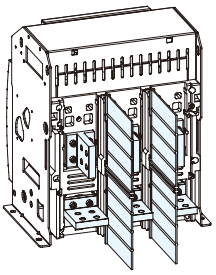
Front connection

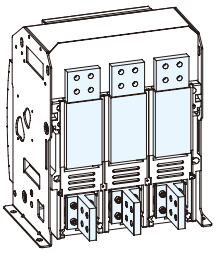
- Front connection is available for circuit-breakers with rated current up to 4000 A, but excluding the circuit-breakers of size A

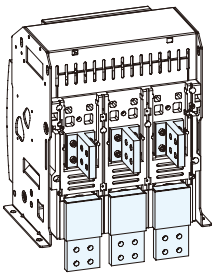


Mixed connection

- For the mixed connections involved front connections, only available for the circuit-breakers with rated current up to 4000 A, but excluding the circuit-breakers of size A.

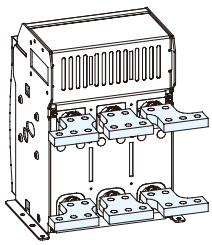




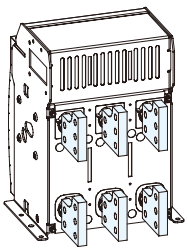


Spread connection (available for size A only)

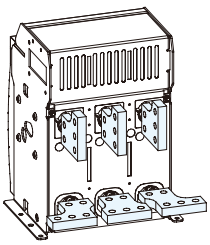
Horizontal



Vetical



Mixed

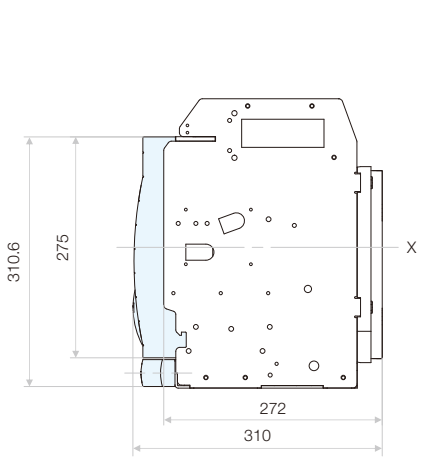


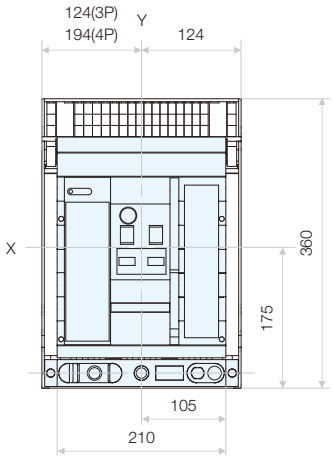
Dimensions

Size A (3SW68-1600) withdrawable circuit-breaker, 3-pole/4-pole

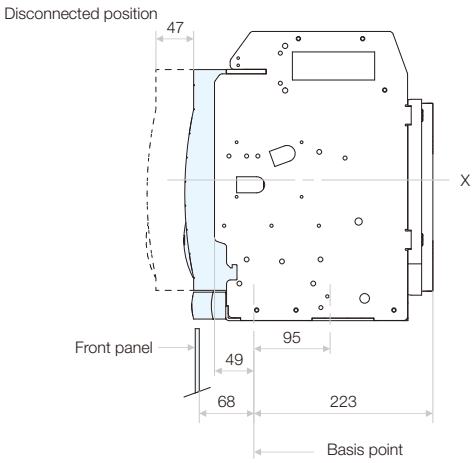
unit in mm

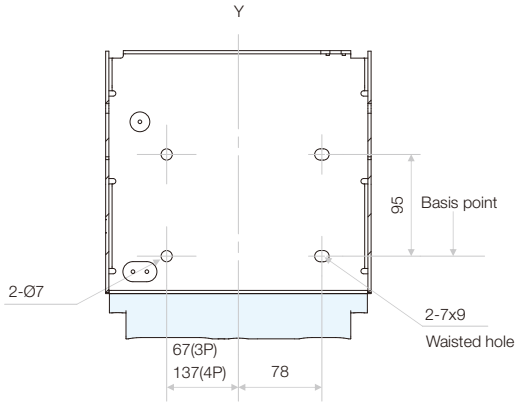
Dimension





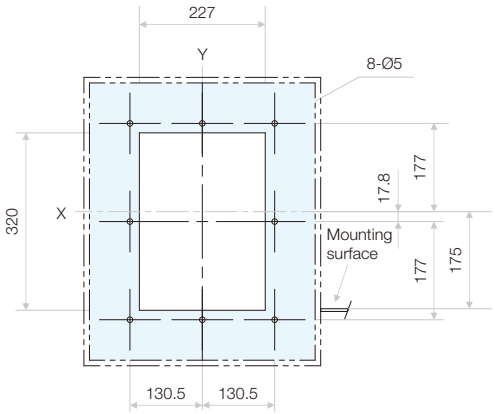
Mounting



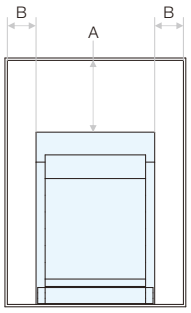


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

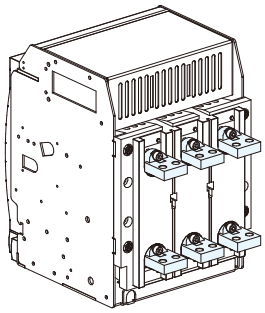
Dimensions

Size A (3SW68-1600) withdrawable circuit-breaker, 3-pole/4-pole

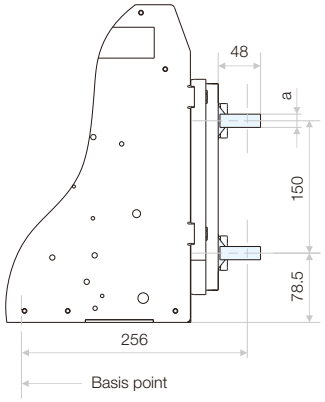
1

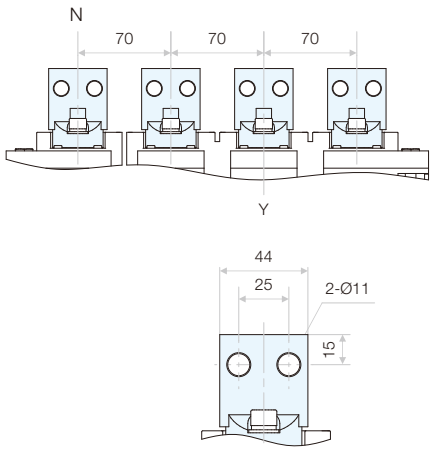
unit in mm

Horizontal rear connections (standard configuration)

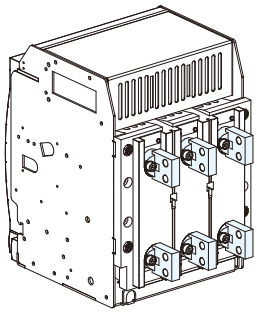


In	a
200 - 1000 A	8
1250 - 1600 A	15

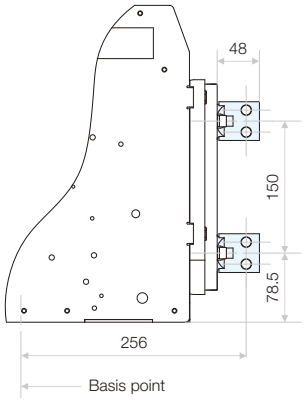


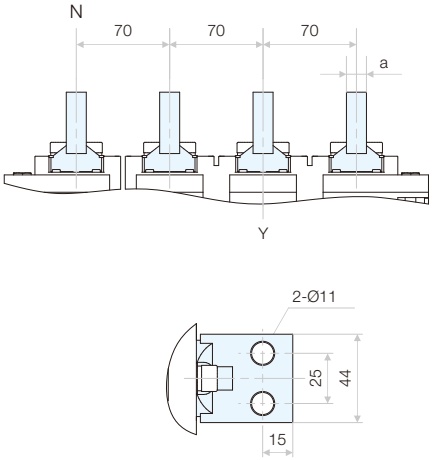


Vertical rear connections

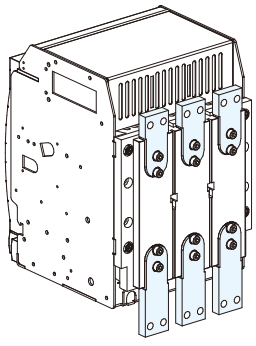


In	a
200 - 1000 A	8
1250 - 1600 A	15

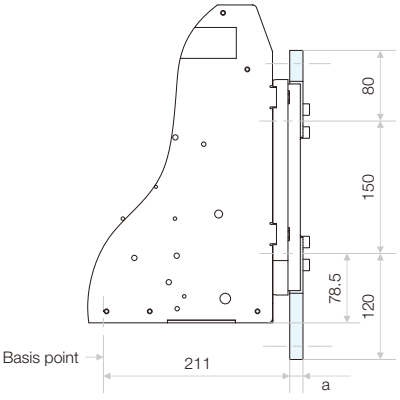


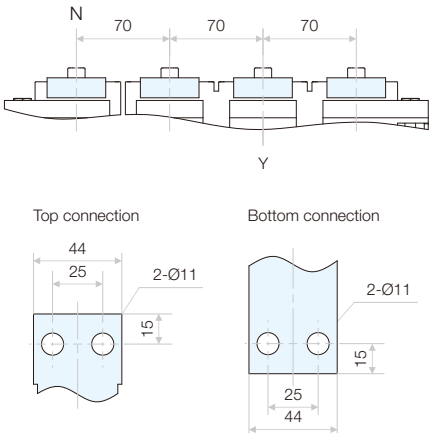


Front connections



In	a
200 - 1000 A	8
1250 - 1600 A	15





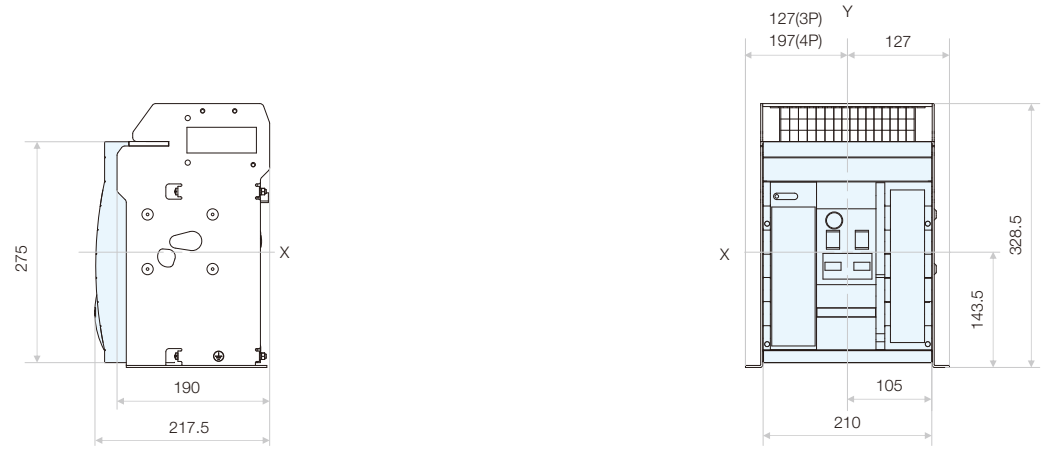
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

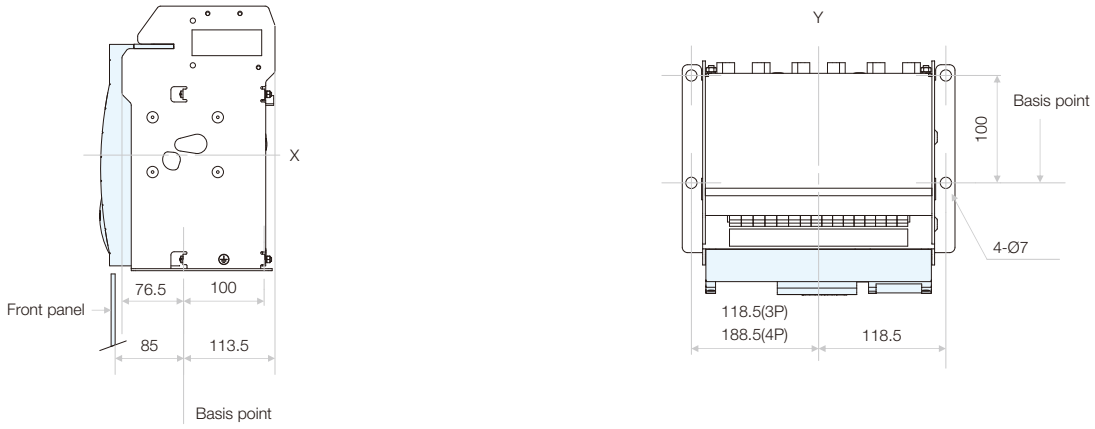
Size A (3SW68-1600) fixed circuit-breaker, 3-pole/4-pole

unit in mm

Dimension

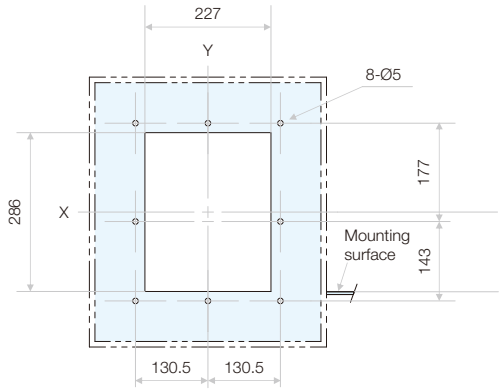


Mounting

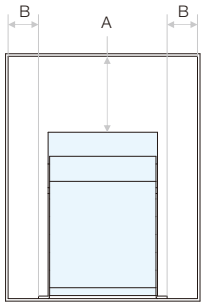


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

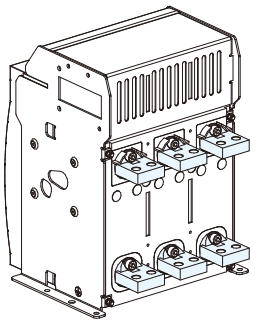
Dimensions

Size A (3SW68-1600) fixed circuit-breaker, 3-pole/4-pole

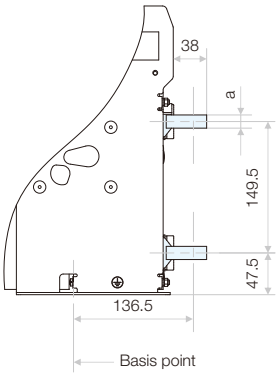
1

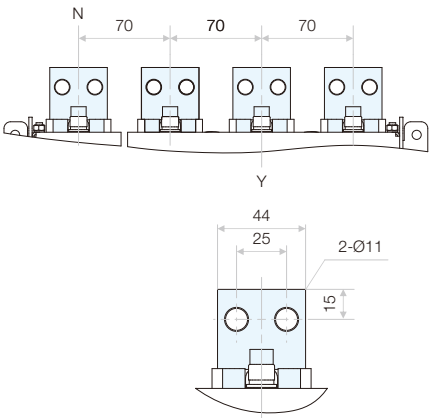
unit in mm

Horizontal rear connections (standard configuration)

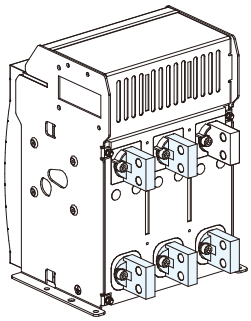


In	a
200 - 1000 A	8
1250 - 1600 A	15

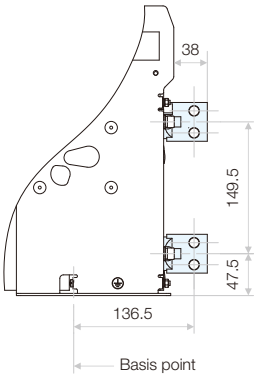


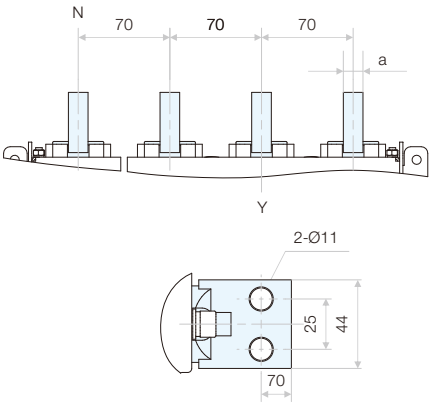


Vertical rear connections



In	a
200 - 1000 A	8
1250 - 1600 A	15

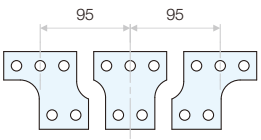




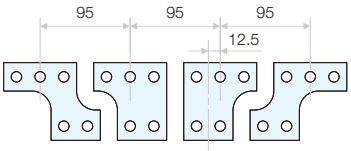
Spread busbar (available for withdrawable circuit-breakers also)

In	a	b
200 - 1000 A	8	6
1250 - 1600 A	15	13

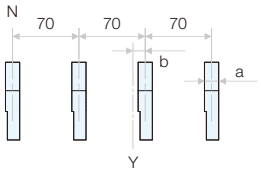
Note: Recommended connection screws: M10 class 8.8
Tightening torque: 50 Nm with contact washer



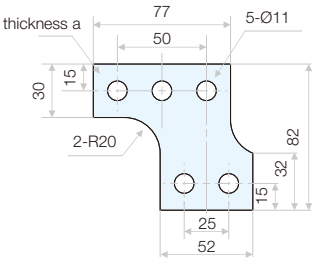
for 3-pole
(available for horizontal and front connections)



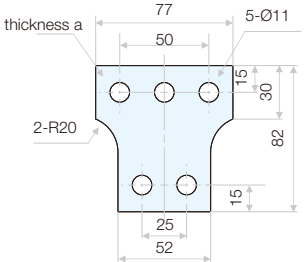
for 4-pole
(available for horizontal and front connections)



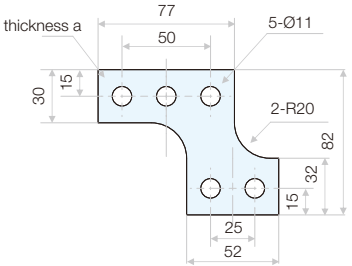
for 3-pole & 4-pole
(available for vertical connections)



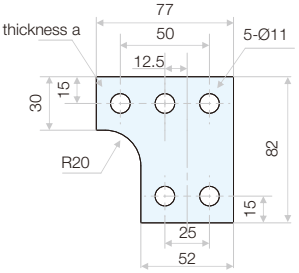
Left or right spread connection for 3-pole



Middle spread connection for 3-pole



Left or right spread connection for 4-pole



Middle spread connections for 4-pole
Vertical spread connection

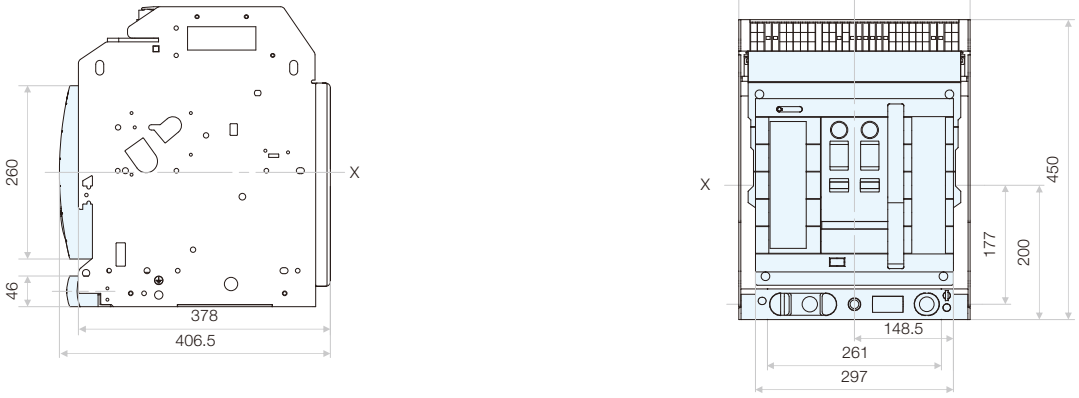
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

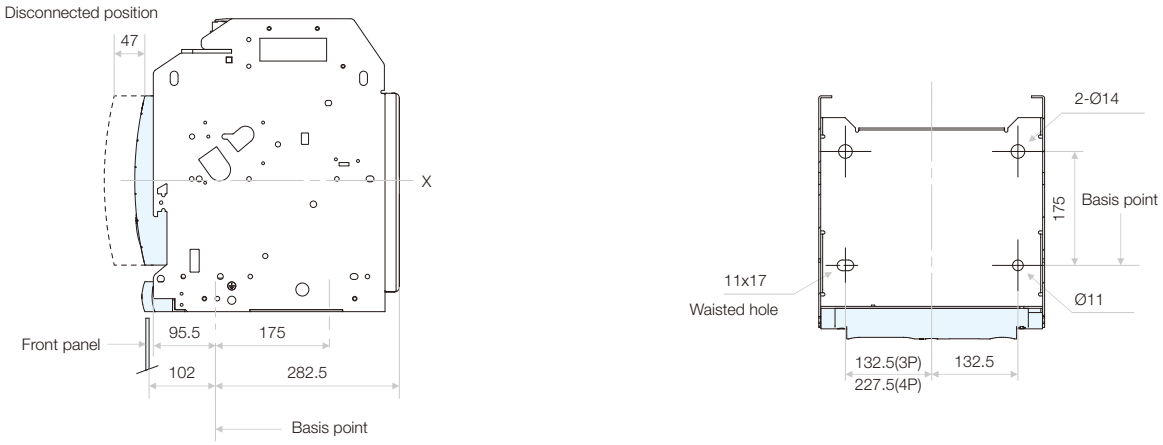
Size B (3SW68-2500) withdrawable circuit-breaker, 3-pole/4-pole

unit in mm

Dimension

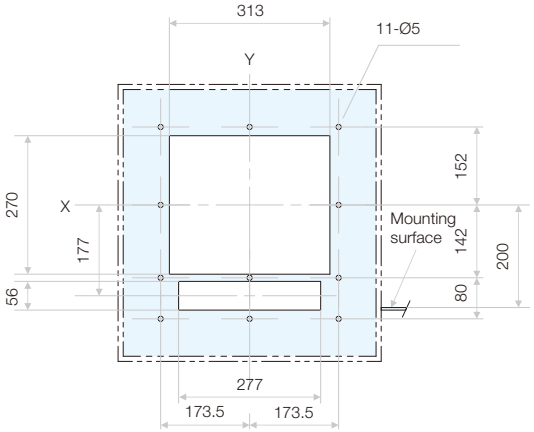


Mounting

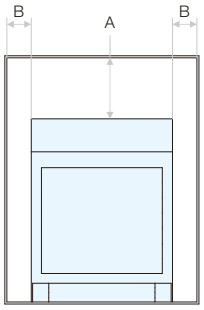


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

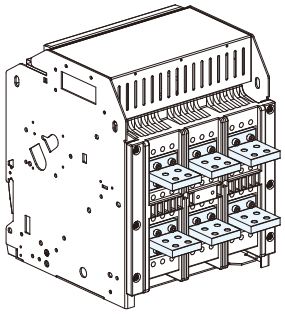
Dimensions

Size B (3SW68-2500) withdrawable circuit-breaker, 3-pole/4-pole

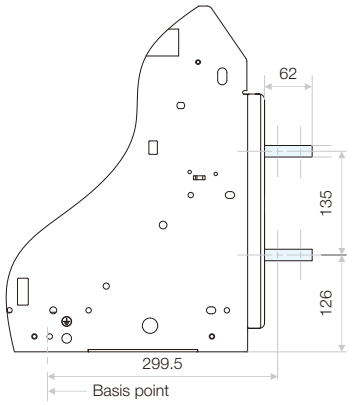
1

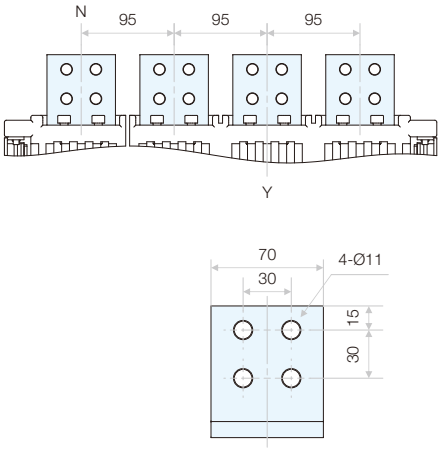
unit in mm

Horizontal rear connections (standard configuration)

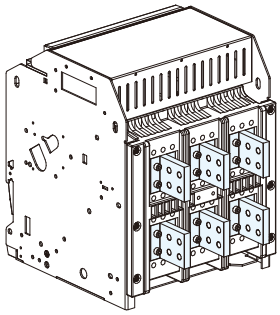


In	a
630 - 1000 A	10
1250 - 2500 A	15

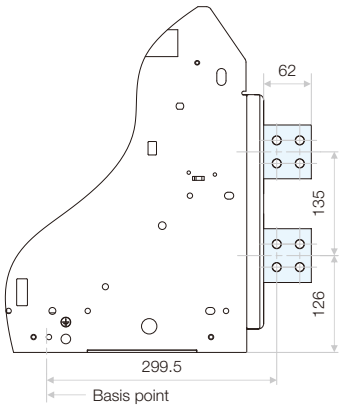


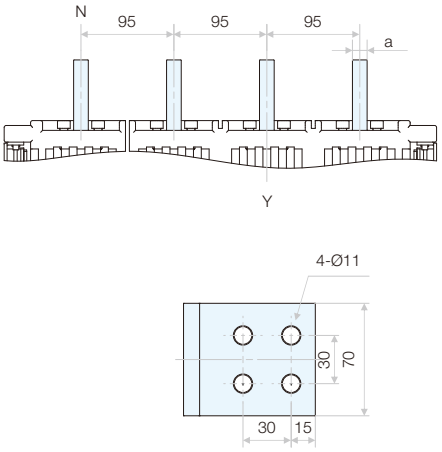


Vertical rear connections

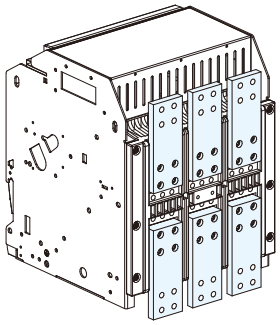


In	a
630 - 1000 A	10
1250 - 2500 A	15

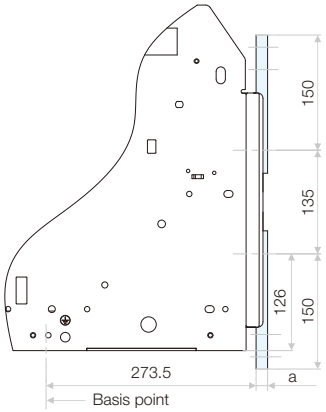


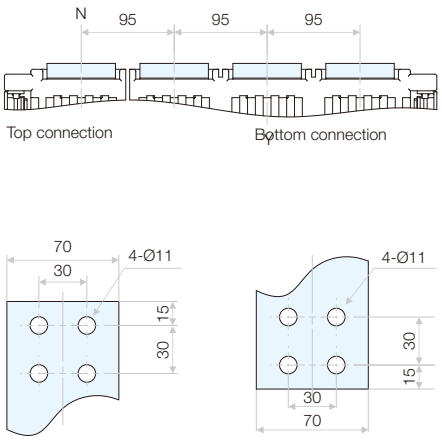


Front connection



In	a
630 - 1000 A	10
1250 - 2500 A	15





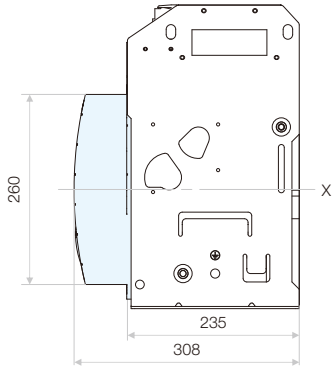
Note:
"Y" is the symmetry plane of circuit-breaker cover.

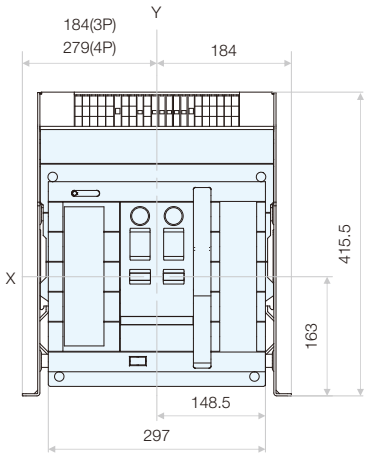
Dimensions

Size B (3SW68-2500) fixed circuit-breaker, 3-pole/4-pole

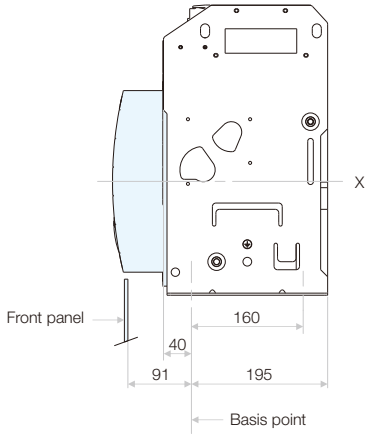
unit in mm

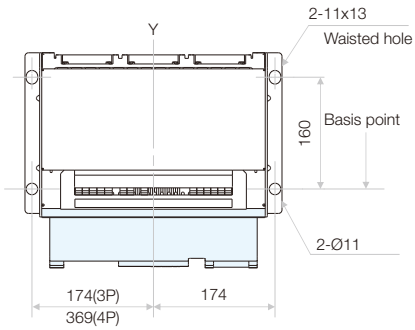
Dimension





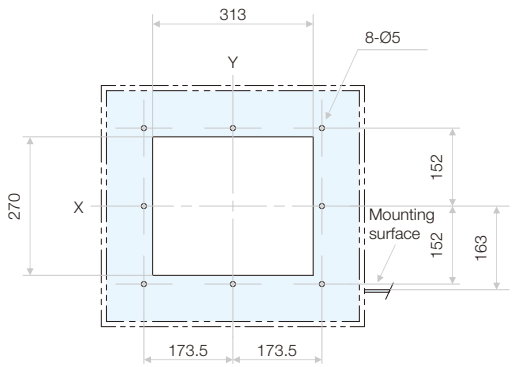
Mounting



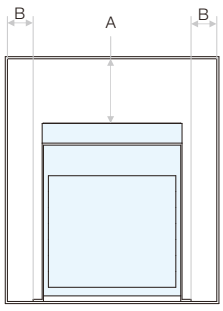


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

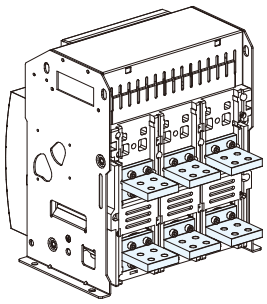
Dimensions

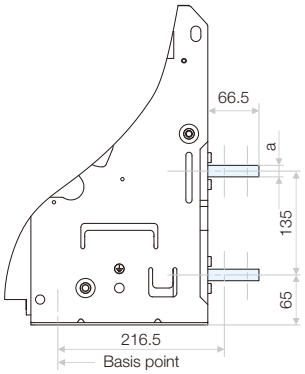
Size B (3SW68-2500) fixed circuit-breaker, 3-pole/4-pole

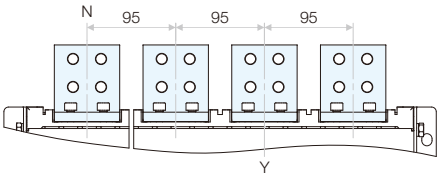
1

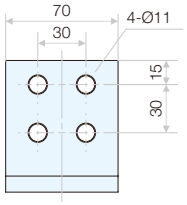
unit in mm

Horizontal rear connections (standard configuration)



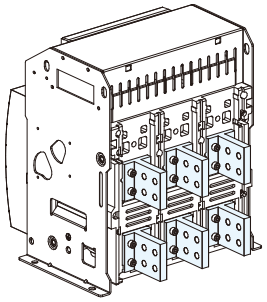


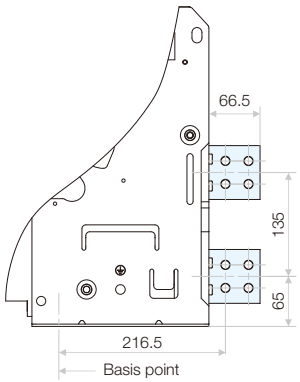


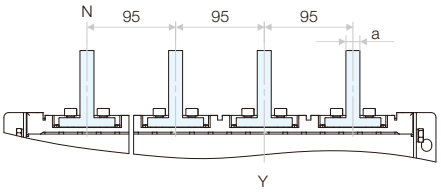


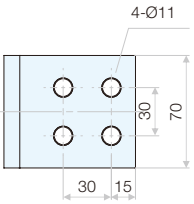
In	a
630 - 1000 A	10
1250 - 2500 A	15

Vertical rear connections



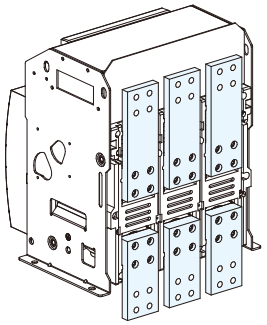


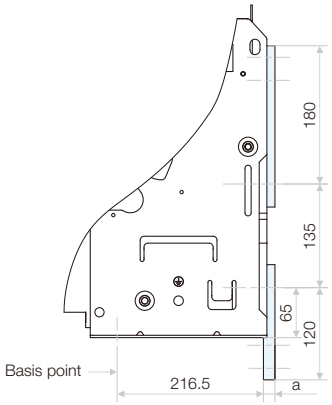


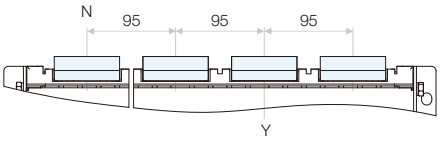


In	a
630 - 1000 A	10
1250 - 2500 A	15

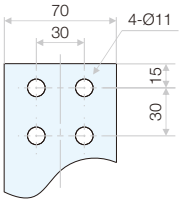
Front connection



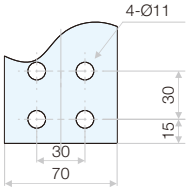




Top connection



Bottom connection



In	a
630 - 1000 A	10
1250 - 2500 A	15

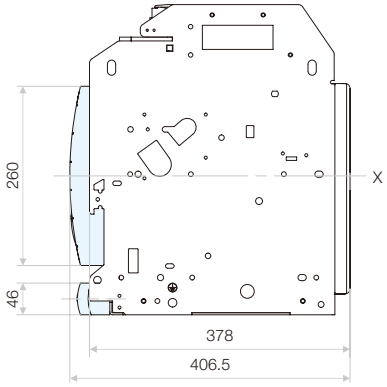
Note:
"Y" is the symmetry plane of circuit-breaker cover.

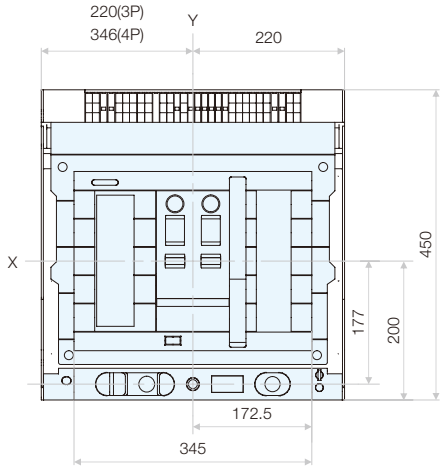
Dimensions

Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

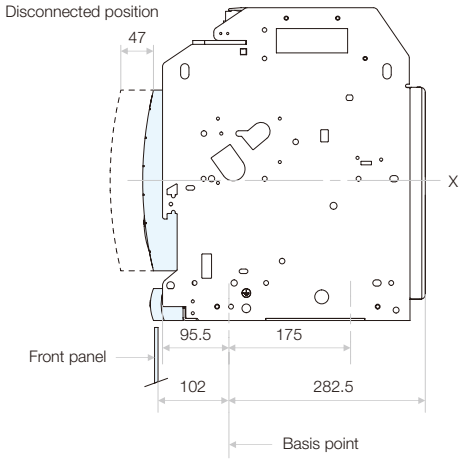
unit in mm

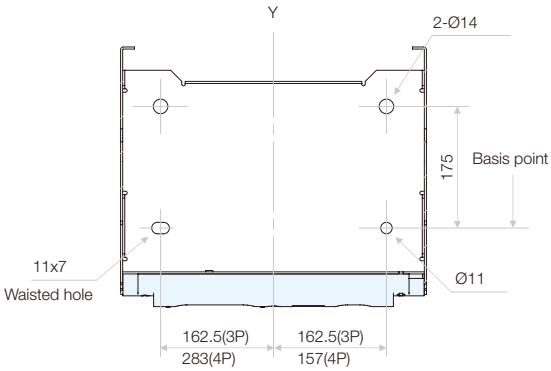
Dimension





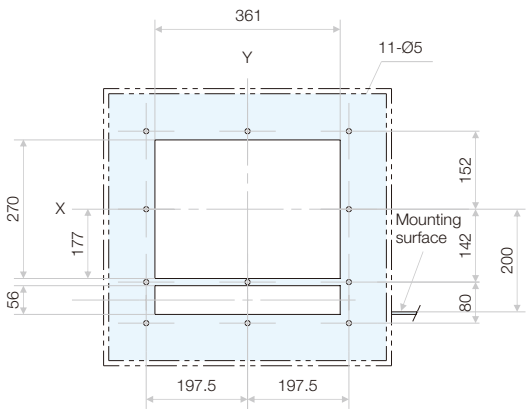
Mounting



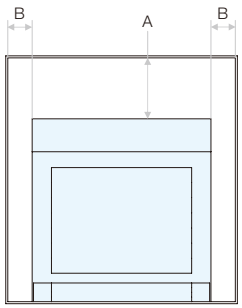


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

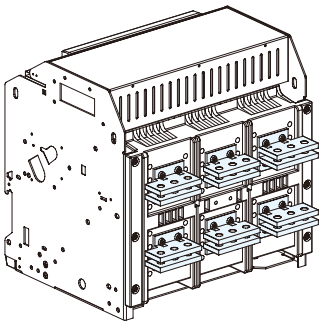
Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

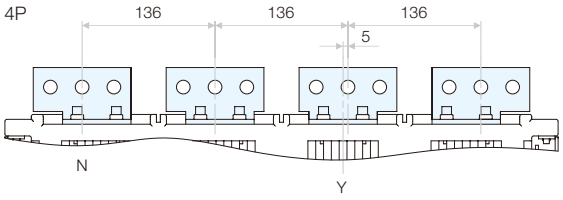
Dimensions

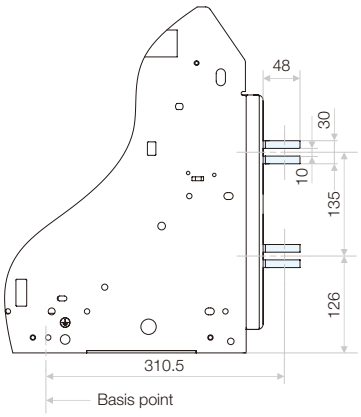
Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

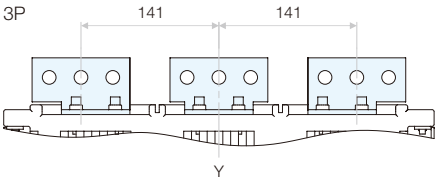
unit in mm

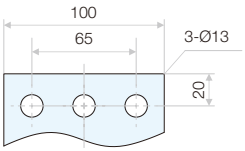
Horizontal rear connections for 2000 A to 3600 A (standard configuration)



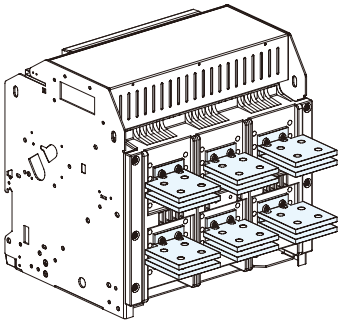


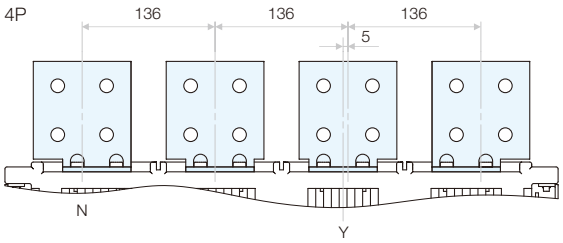


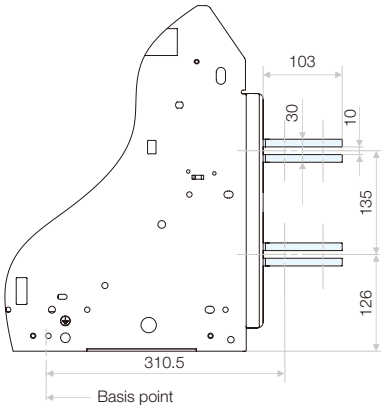


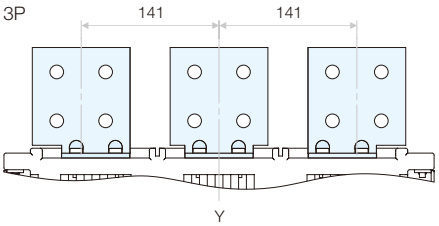


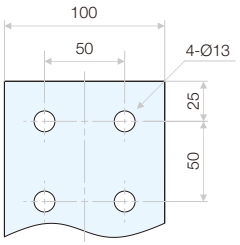
Horizontal rear connections for 4000 A (standard configuration)











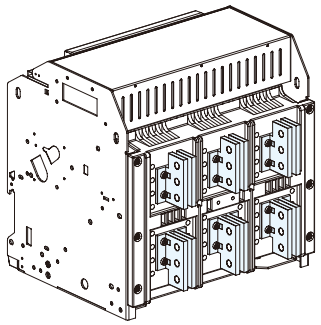
Note:
"Y" is the symmetry plane of circuit-breaker cover.

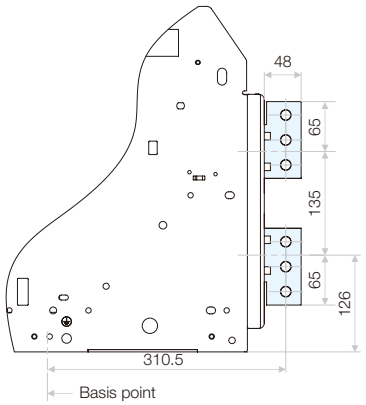
Dimensions

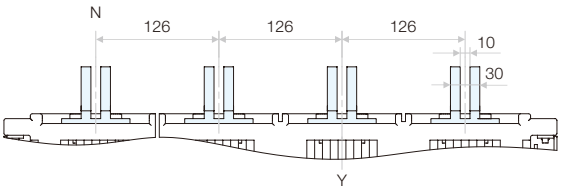
Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

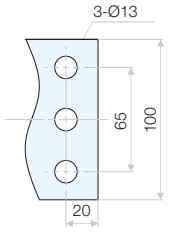
unit in mm

Vertical rear connections for 2000 A to 3600 A

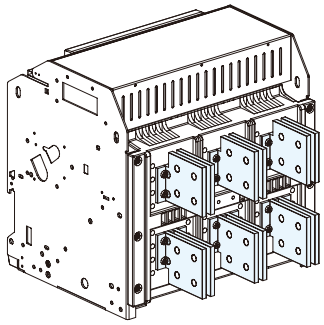


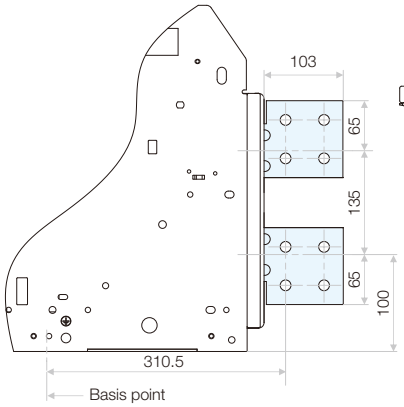


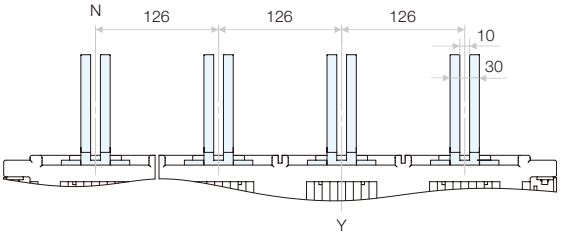


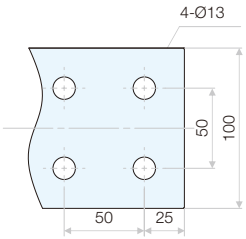


Vertical rear connections for 4000 A

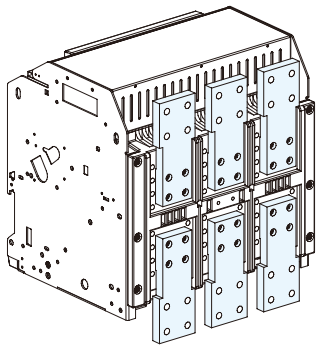




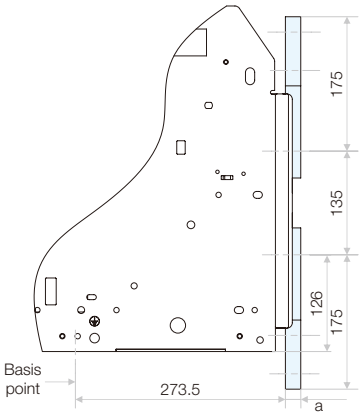


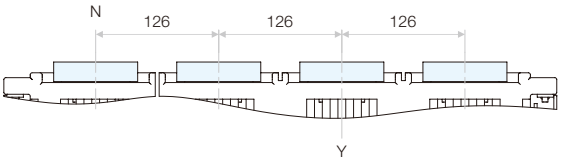


Front connection

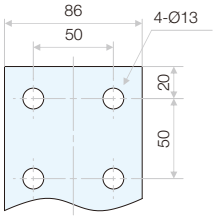


In	a
2000 - 3600 A	15
4000 A	20

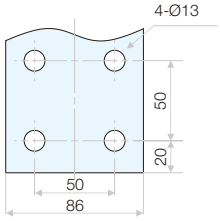




Top connection



Bottom connection



Note:
"Y" is the symmetry plane of circuit-breaker cover.

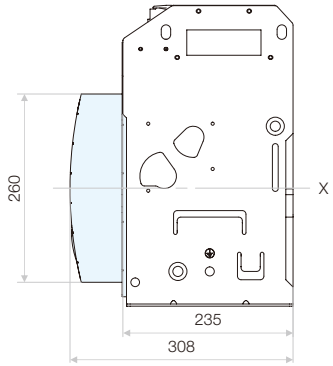
Dimensions

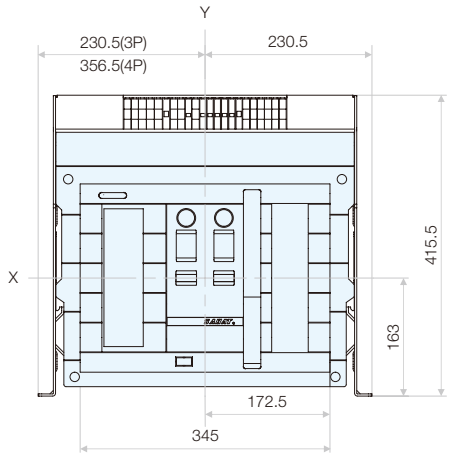
Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

1

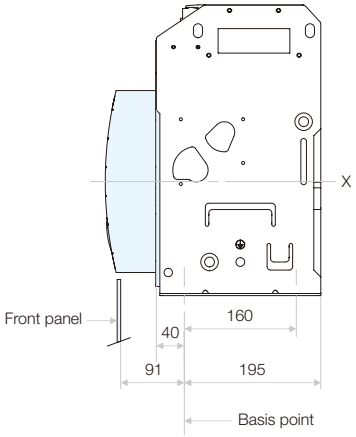
unit in mm

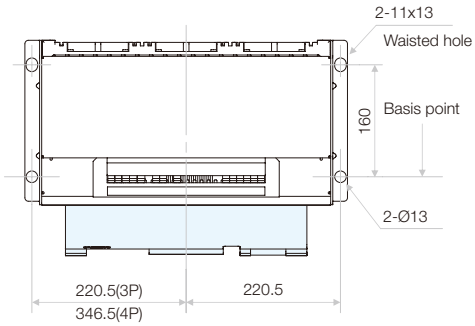
Dimension





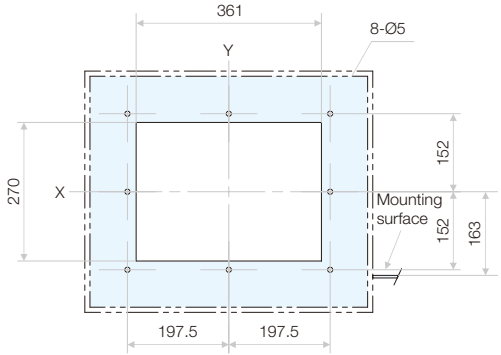
Mounting



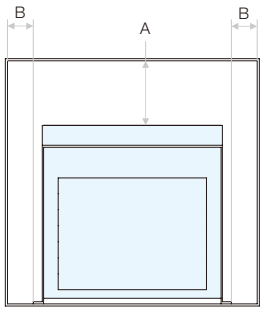


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

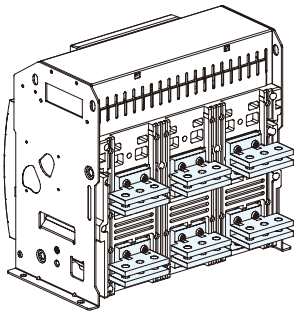
Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

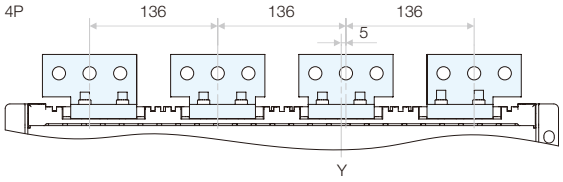
Dimensions

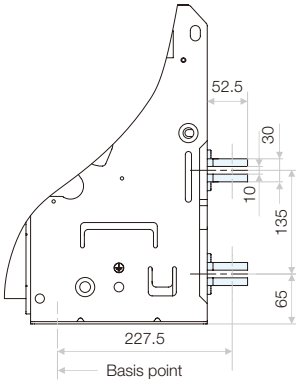
Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

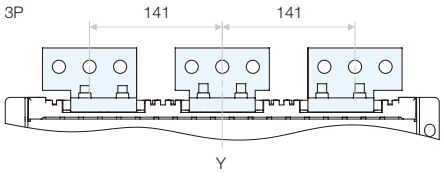
unit in mm

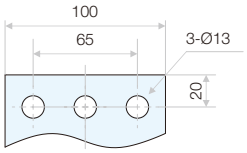
Horizontal rear connections for 2000 A to 3600 A (standard configuration)



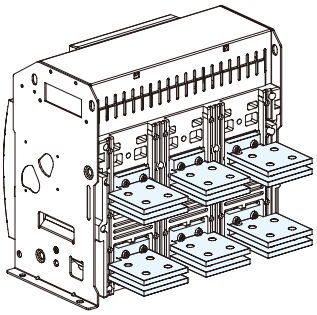


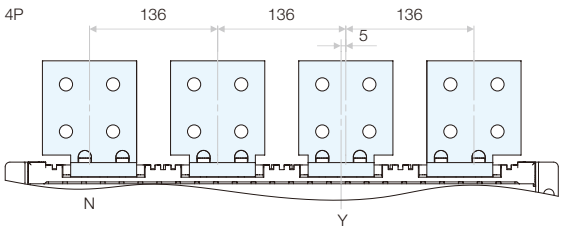


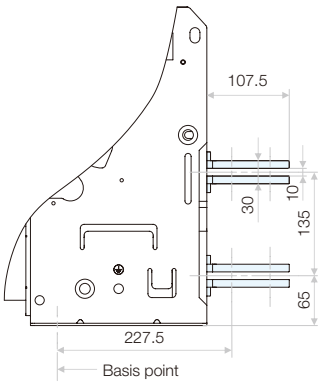


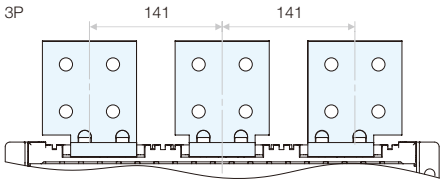


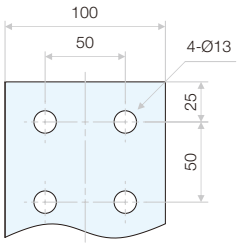
Horizontal rear connections for 4000 A (standard configuration)











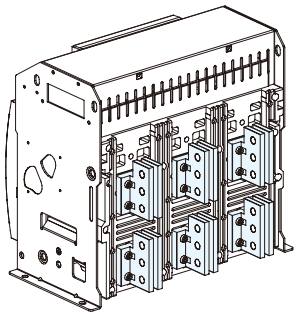
Note:
"X" and "Y" are the symmetry planesof circuit-breaker cover.

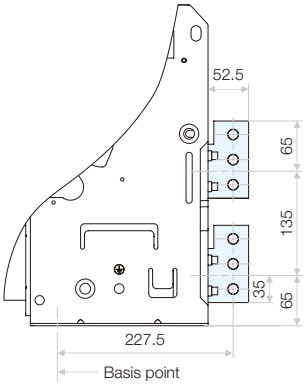
Dimensions

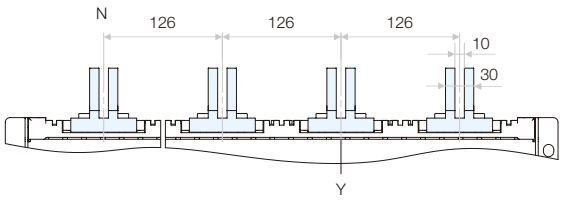
Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

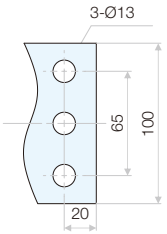
unit in mm

Vertical rear connections for 2000 A to 3600 A

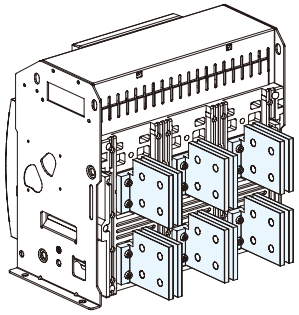


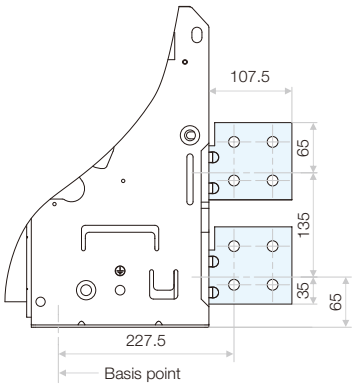


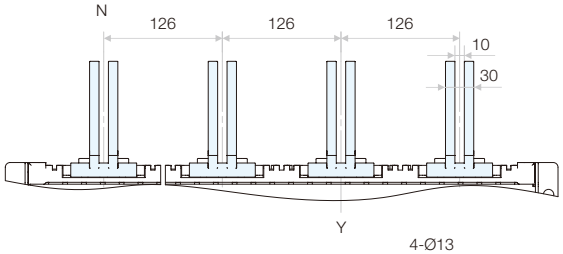


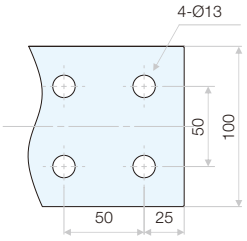


Vertical rear connections for 4000 A

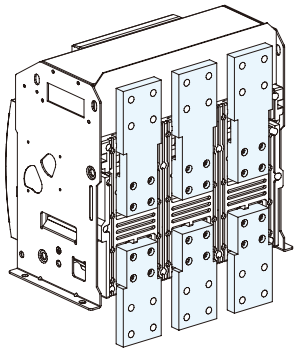




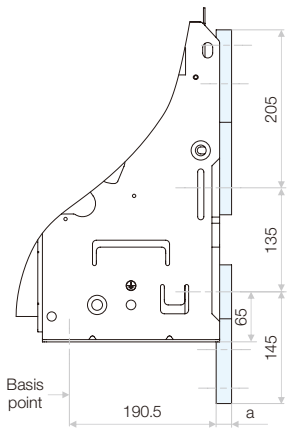


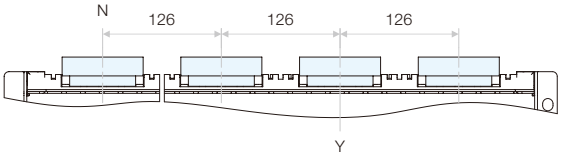


Front connection

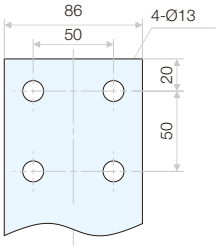


In	a
2000 - 3600 A	15
4000 A	20

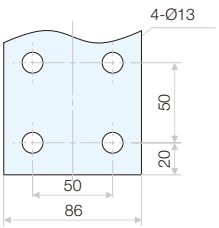




Top connection



Bottom connection



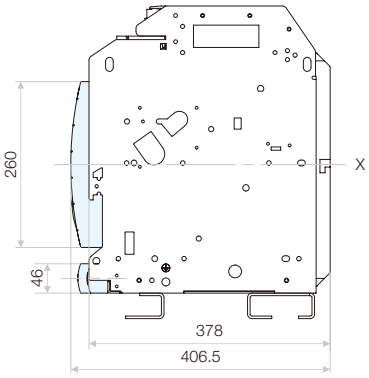
Note:
"Y" is the symmetry plane of circuit-breaker cover.

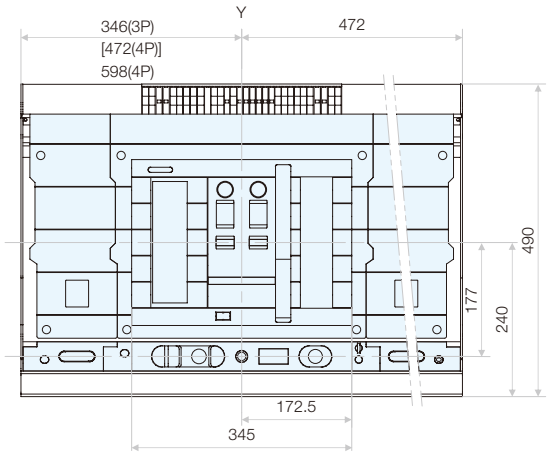
Dimensions

Size D (3SW68-6300) withdrawable circuit-breaker, 3-pole/4-pole

unit in mm

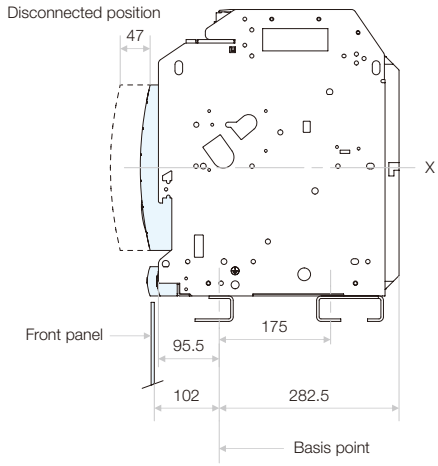
Dimension

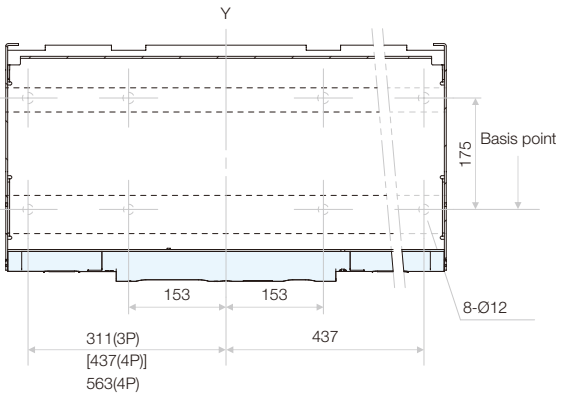




Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

Mounting

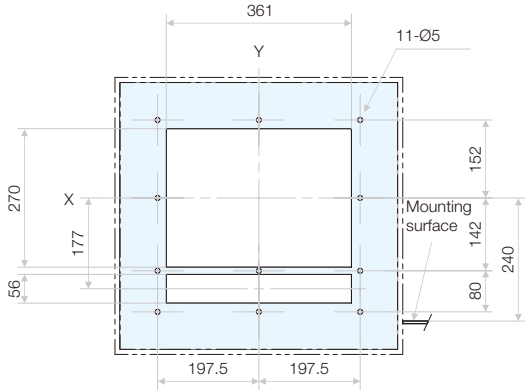




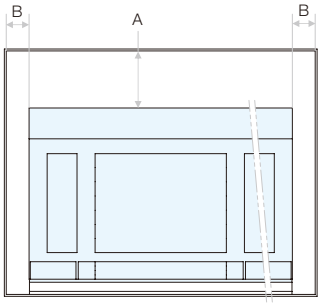
Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

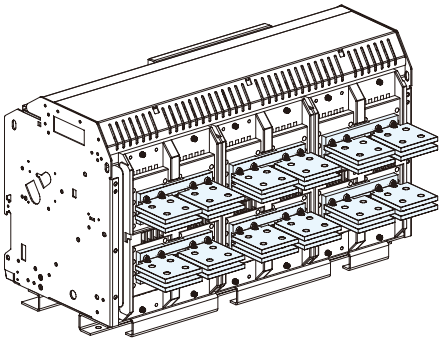
Dimensions

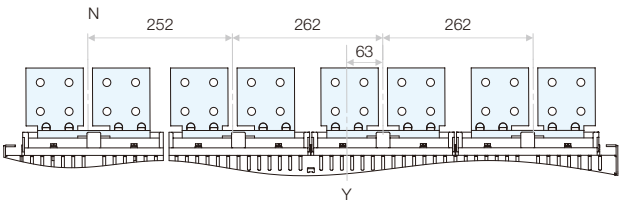
Size D (3SW68-6300) withdrawable circuit-breaker, 3-pole/4-pole

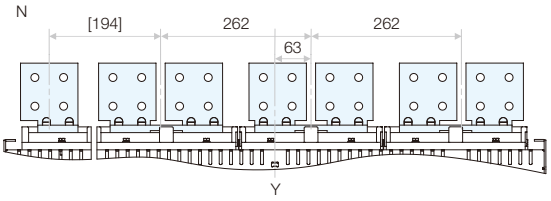
1

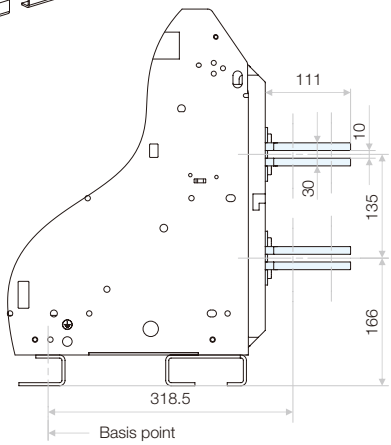
unit in mm

Horizontal rear connections for 4000 A and 5000 A (standard configuration)

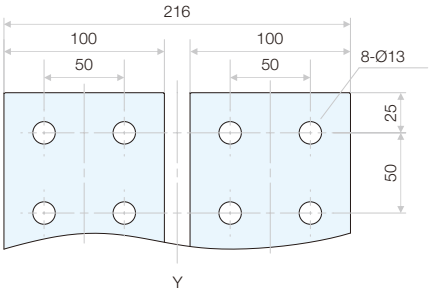




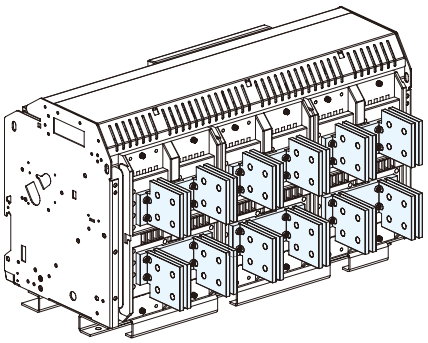


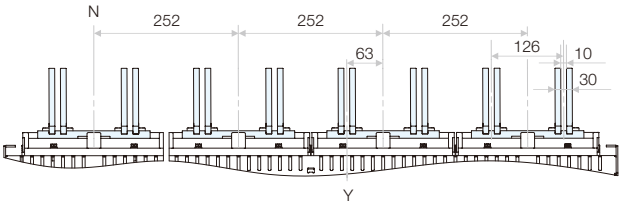


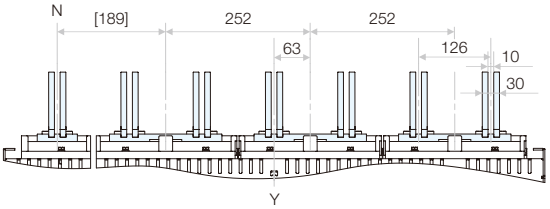
Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

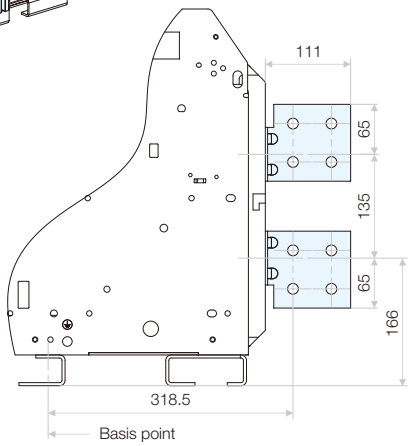


Vertical rear connections for 6300 A (standard configuration)

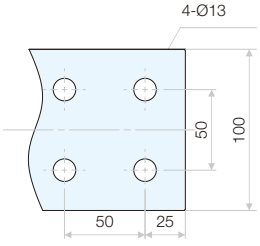








Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.



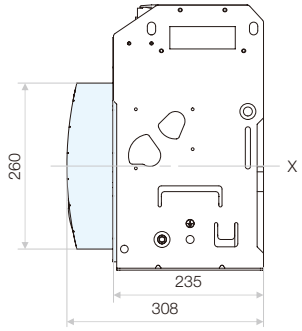
Note:
"Y" is the symmetry plane of circuit-breaker cover.

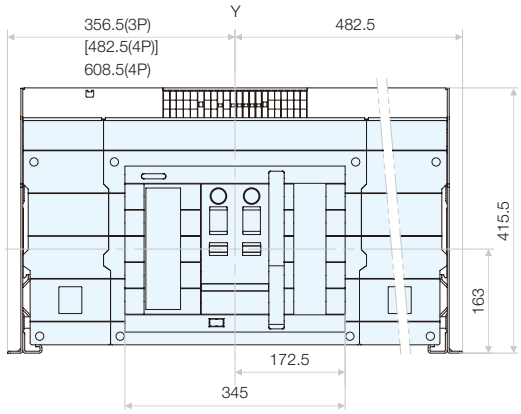
Dimensions

Size D (3SW68-6300) fixed circuit-breaker, 3-pole/4-pole

unit in mm

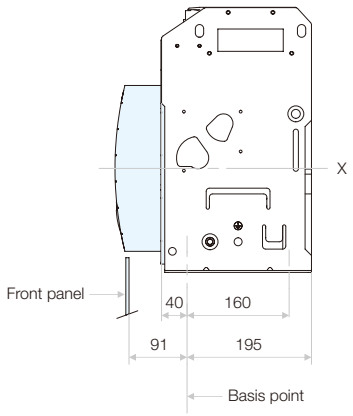
Dimension

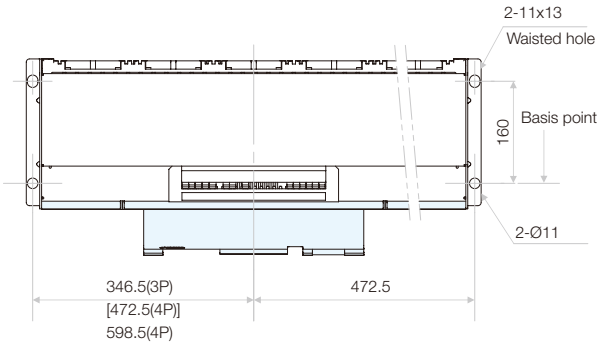




Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

Mounting

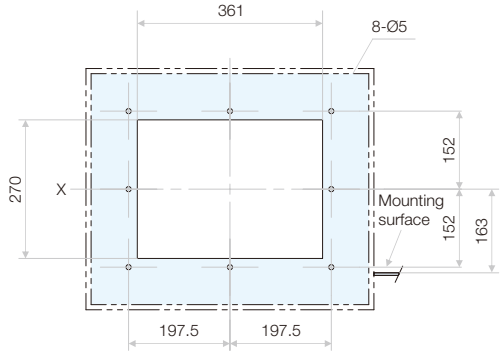




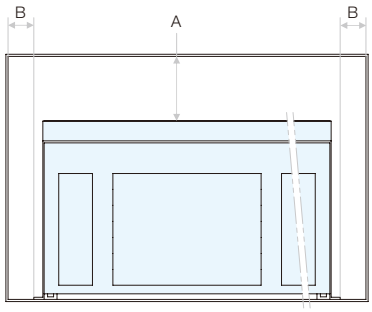
Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

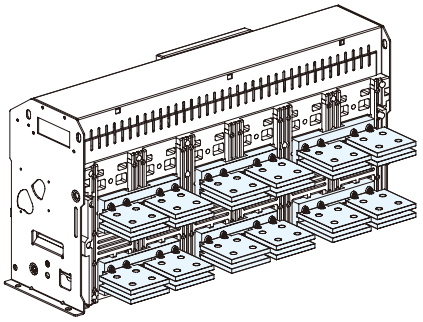
Dimensions

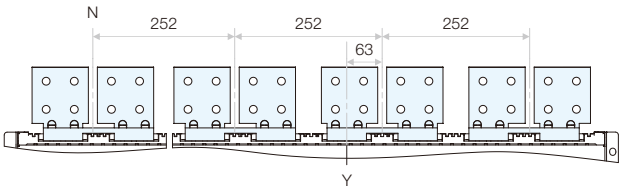
Size D (3SW68-6300) fixed circuit-breaker, 3-pole/4-pole

1

unit in mm

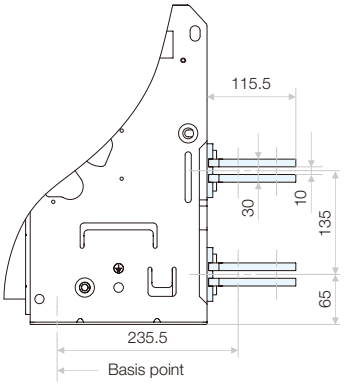
Horizontal rear connections for 4000 A and 5000 A (standard configuration)

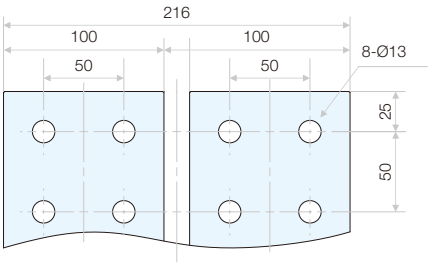




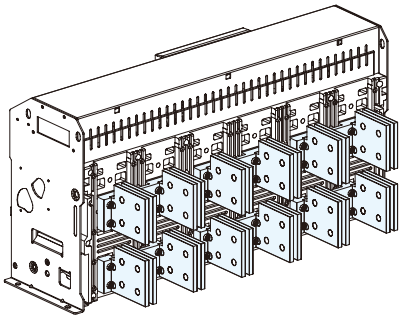


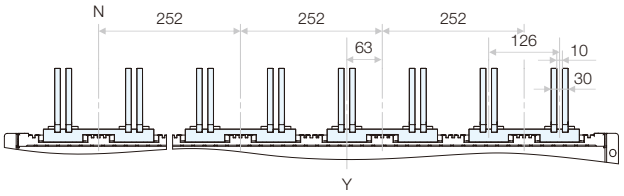
Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.

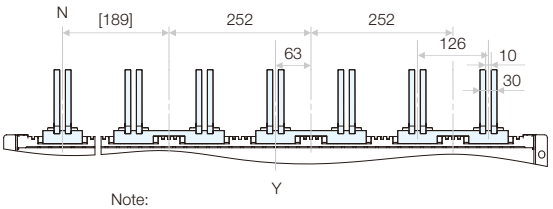




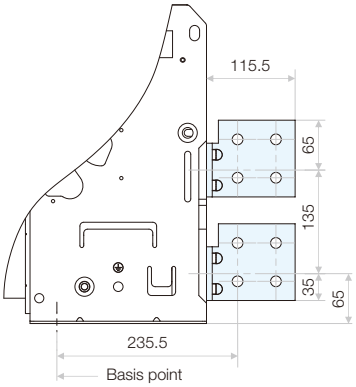
Vertical rear connections for 6300 A (standard configuration)

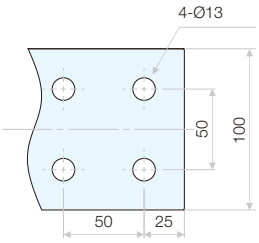






Note:
Value in [ ] is the dimension when the current of Neutral = 0.5 In.





Note:
"Y" is the symmetry plane of circuit-breaker cover.

Electrical diagram

- Reading information

Versions
The electrical diagrams shown are for withdrawable circuit-breakers, but they are also valid for fixed circuit-breakers.

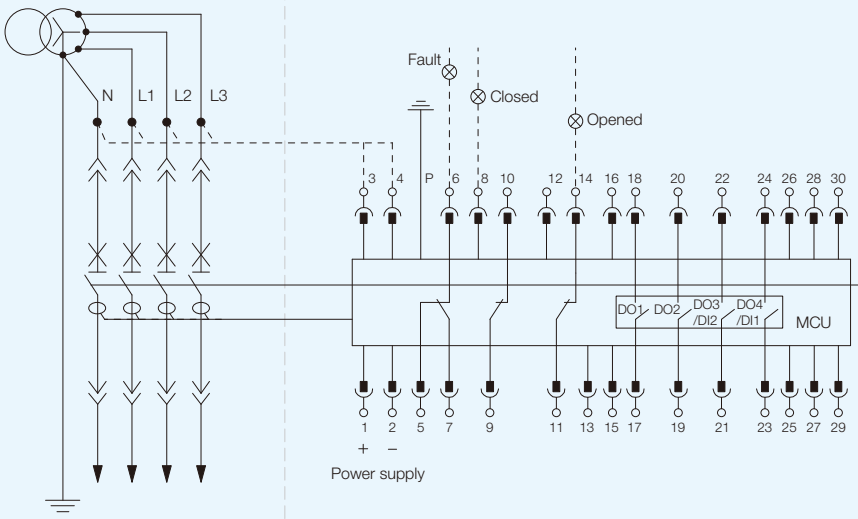
Key

AX	Auxiliary switch	
DT	Closing electromagnet	
DW	Circuit breaker	
ETU	Electronic trip unit	
F	Shunt release	
FU	Fuse	Equipped by user
J1	Relay for remote closing	Equipped by user
J2	Relay for remote opening	Equipped by user
M	Motorized operating mechanism	
Q	Under-voltage release	
Q1 … Q8	Auxiliary contact 4 NO + 4 NC	
Q9 … Q14	3-position indication for withdrawable circuit-breakers	
Qa, Qb	Closing indication contact	
Qc, Qd	Open indication contact	
QY	Time-delay under-voltage release	
Res	Remote reset	
S1 ... S7	Indicators	Equipped by user
SA	Limit switch of motor	
SAL	Indicator contact for fault trip	
SB1	Closing button	Equipped by user
SB2	Shunt release button	Equipped by user
SB3	Under-voltage release button	Equipped by user
SB4	Remote reset button	Equipped by user
TA	Current transformer	
TN	Residual current transformer	Offered upon request
XT	Secondary wiring	

Electrical diagram

- Electrical diagram of secondary circuit for electronic trip unit 3SW68-AL, 3SW68-AM & 3SW68-AH

Power supply | Contact of position indication

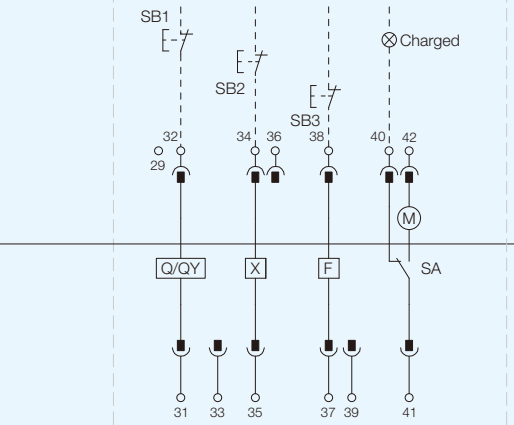


Power supply	Contact of position indication										
Terminal box	O—O	O—O	O	O	O	O	O	O	O	O	O
	1	3	5	8	11	14	17	20	23	26	29
	O—O	O—O	O	O	O	O	O	O	O	O	O
	2	4	6	9	12	15	18	21	24	27	30
		O—O	O	O	O	O	O	O	O	O	O
		P	7	10	13	16	19	22	25	28	

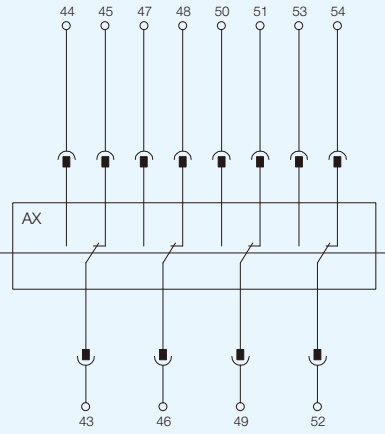
1, 2: Auxiliary power supply for electronic trip unit
P: Protection for earth connection, connect to side board of circuit breaker
3, 4: Input of signal for external current transformer
Type T: connect to output terminal of external ZT100
Type W: connect to output terminal of external ZCT1
5, 6, 7: Signal output of fault trip indication
8, 9, 10: Signal output of closing indication
11, 12, 14: Signal output of opening indication
13: Shield grounding for communication
15, 16: Output of communication
17 … 24: Programmable I/O
DO: DC 110 V 0.5 A or AC 250 V 5A
DI: DC 110 … 130 V or AC 110 … 250 V
No signal unit: all terminals are blank
Type S1 signal unit: 4 DO mode
17, 18: Programmable output contact 1 (DO 1)
19, 20: Programmable output contact 2 (DO 2)
21, 22: Programmable output contact 3 (DO 3)
23, 24: Programmable output contact 4 (DO 4)
Type S2 signal unit: 3 DO + 1 DI mode
17, 18: Programmable output contact 1 (DO 1)
19, 20: Programmable output contact 2 (DO 2)
21, 22: Programmable output contact 3 (DO 3)
23, 24: Programmable switch input contact 1 (DI 1)
Type S3 signal unit: 2 DO + 2 DI mode
17, 18: Programmable output contact 1 (DO 1)
19, 20: Programmable output contact 2 (DO 2)
21, 22: Programmable switch input contact 2 (DI 2)
23, 24: Programmable switch input contact 1 (DI 1)
25 … 28: Input of voltage signal
Must be connected to incoming side of power supply.
Keep blank if no any optional function is selected.
29, 30: Input of signal for external N-pole CT under 3P+N type grounding protection

Electrical diagram

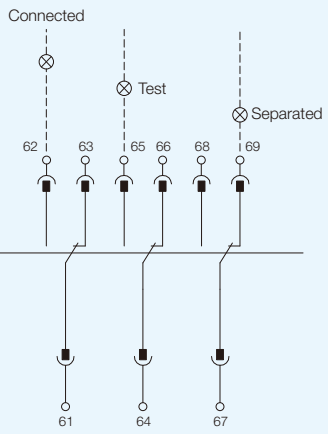
Control unit



Remote operation



Auxiliary contact



Control unit			
O—O 31	O—O 33	O—O 37	O—O 40
O—O 32	O—O 34	O—O 38	O—O 41
			O—O 42

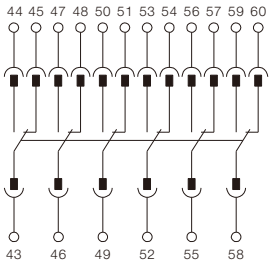
Remote operation					
O—O 43	O—O 46	O—O 49	O—O 52	O—O 55	O—O 58
O—O 44	O—O 47	O—O 50	O—O 53	O—O 56	O—O 59
O—O 45	O—O 48	O—O 51	O—O 54	O—O 57	O—O 60

Auxiliary contact		
O—O 61	O—O 64	O—O 67
O—O 62	O—O 65	O—O 69

31, 32: Power supply for under voltage (or with time delay) release
34, 35: Power supply for closing coil
37, 38: Power supply for shunt release
40, 41, 42: Power supply and signal output of charged

43, 46: Output terminals of auxiliary switch

6 convertible contact is optional:

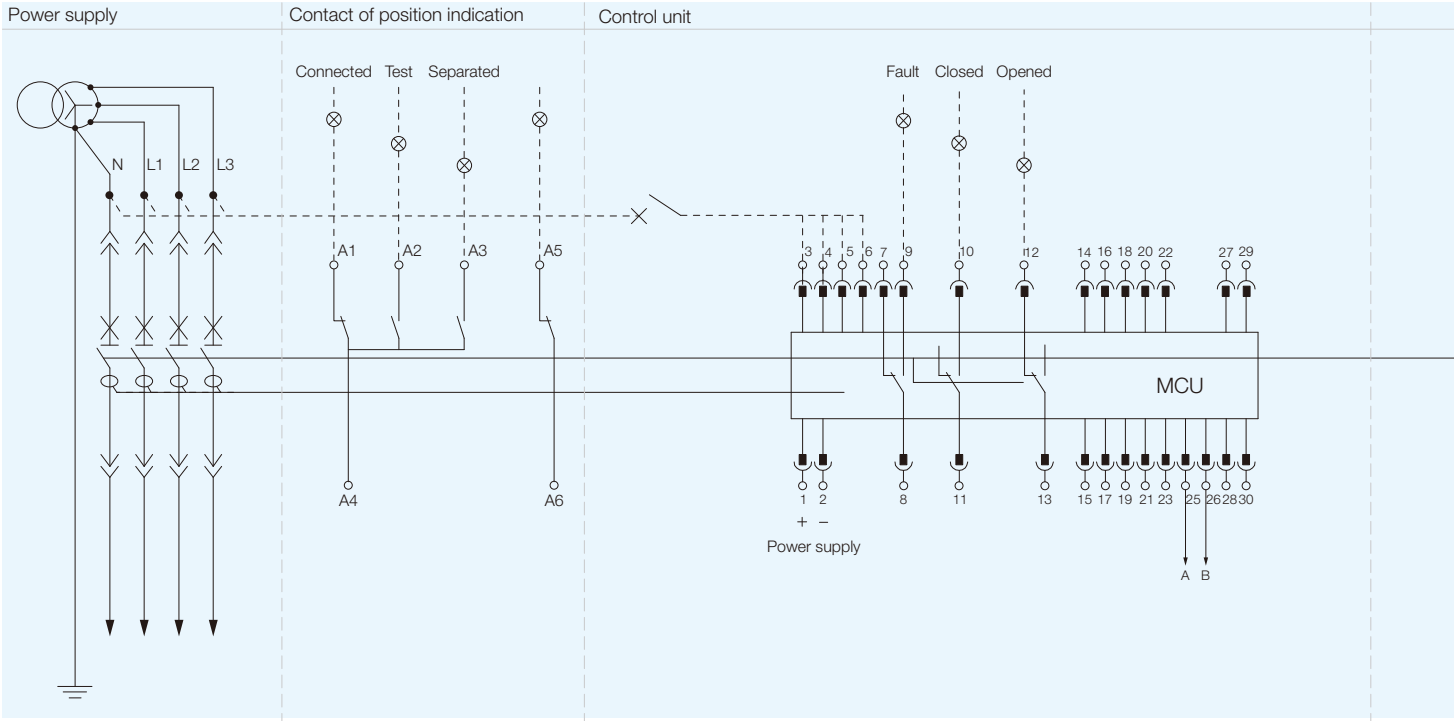


61, 62: Contact of “connected” position indication
64, 65: Contact of “test” position indication
67, 69: Contact of “separated” position indication

1

Electrical diagram

- Electrical diagram of secondary circuit for electronic trip unit 3SW68-BL, 3SW68-BM & 3SW68-BH



Power supply	Contact of position indication		Control unit									
Terminal box	O—O	O—O	O—O	O—O	O	O	O	O	O	O	O	O
	A1	A4	1	4	7	10	13	16	19	22	25	28
	O—O	O—O	O—O	O—O	O	O	O	O	O	O	O	O
	A2	A5	2	5	8	11	14	17	20	23	26	29
	O—O	O—O	O—O	O—O	O	O	O	O	O		O	O
	A3	A6	3	6	9	12	15	18	21		27	30

A1, A2: Connect to contact of position (optional)
A4, A2: Contact of “test” position indication (optional)
A4, A3: Contact of “separated” position indication (optional)
A6, A5: Contact of locked position indication (optional)

1, 2: Auxiliary power supply for electronic trip unit
3, 4, 5, 6: For voltage display, three-phase voltage input of A, B, C and N (optional)
7, 8, 9: Signal output of fault trip indication
10, 11: Signal output of closing indication
12, 13: Signal output of opening indication
14, 15: Relay input DI1 (optional, see below table 1), “Zone interlock” if default
16, 17: Relay input DO1 (optional, see below table 2), “Zone interlock” if default
18, 19: Relay input DO2 (optional, see below table 2), general use if default
20, 21: Relay input DO3 (optional, see below table 2), general use if default
22, 23: Relay input DO4 (optional, see below table 2), general use if default
25, 26: Communication output of electronic trip unit
27, 28: Input of signal for external current transformer (type W) (optional)
29, 30: Input of signal for external current transformer (type T) (optional)

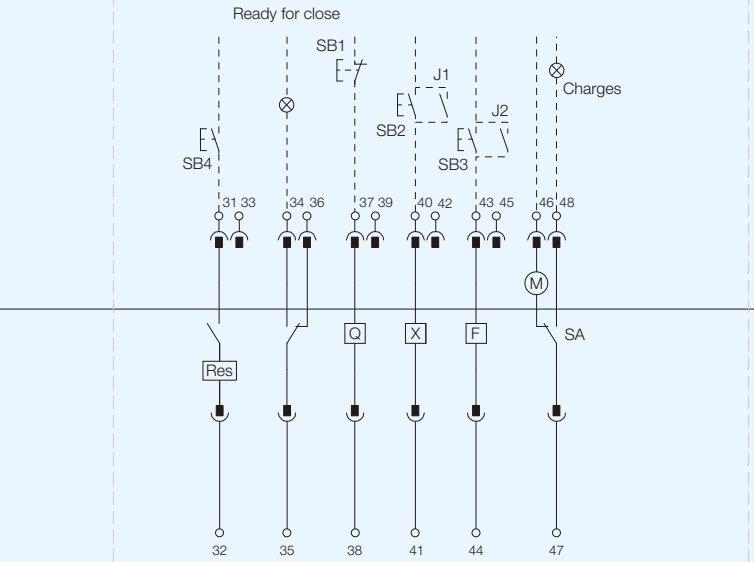
Table 1: function of relay output Di1

General	Alarm	Trip
Zone interlock	Earth interlock	Short-circuit interlock

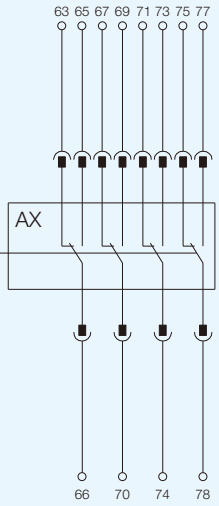
Table 2: function of relay output DO1 … Do4

General	Alarm	Fault trip
Self-diagnosis alarm	Load monitor 1	Load monitor 2
Overload pre-alarm	Overload fault	Short-time delay fault
Instantaneous fault	Earth/residual current fault	Earth alarm
Current imbalance fault	Neutral fault	Under voltage fault
Over voltage fault	Voltage imbalance fault	Under frequency fault
Over frequency fault	Required value fault	Reverse power fault
Zone interlock	Closing	Opening
Phase sequence fault	MCR fault	Earth interlock
Short-circuit interlock	Required value fault of phase A	Required value fault of phase B
Required value fault of phase C	Required value fault of phase N	Required value over limit

Remote operation



Auxiliary contact



Remote operation

O—O 31	O—O 33	O—O 37	O—O 40	O—O 43	O—O 46
O—O 32	O—O 34	O—O 38	O—O 41	O—O 44	O—O 47
					O—O 48

31, 32: Power supply for remote reset (optional)
34, 25: Signal output of ready for closing (optional)
37, 38: Power supply for under voltage (or with time delay) release
40, 41: Power supply for closing coil
43, 44: Power supply for shunt release
46, 47, 48: Power supply and signal output of charged

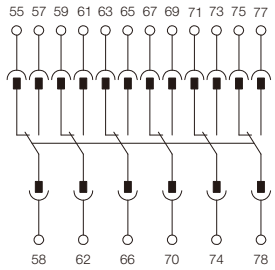
Auxiliary contact

O—O 55	O—O 58	O—O 61	O—O 64	O—O 67	O—O 70	O—O 73	O—O 76
O—O 56	O—O 59	O—O 62	O—O 65	O—O 68	O—O 71	O—O 74	O—O 77
O—O 57	O—O 60	O—O 63	O—O 66	O—O 69	O—O 72	O—O 75	O—O 78

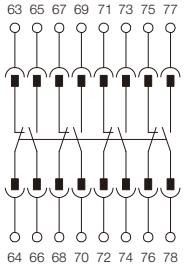
55 … 78: Terminal output connected to auxiliary switch

There are three optional modes:

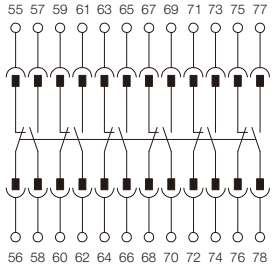
Mode 1: 6 convertible contact



Mode 2: 4 NO + 4 NC

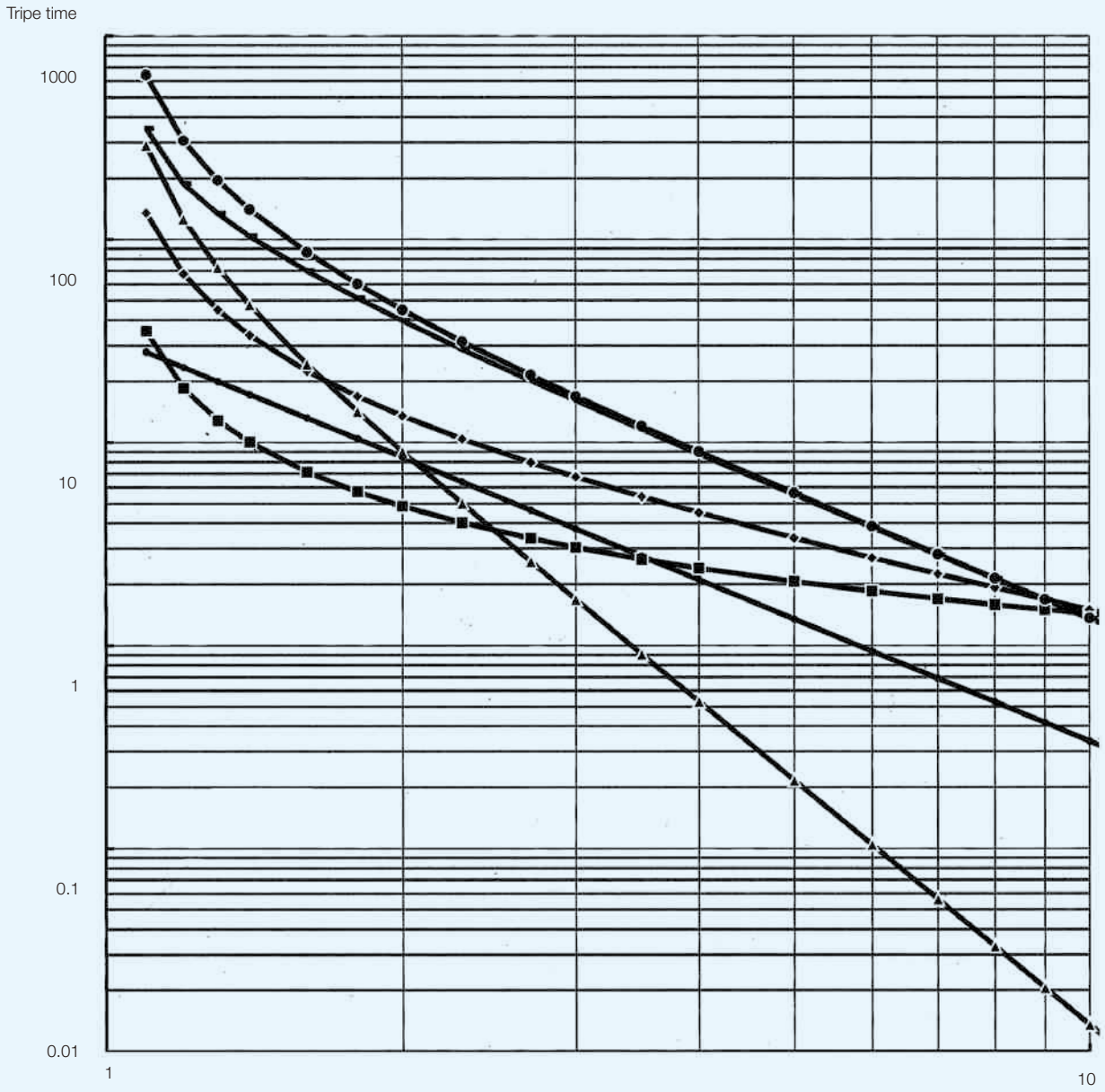


Mode 3: 6 NO + 6 NC



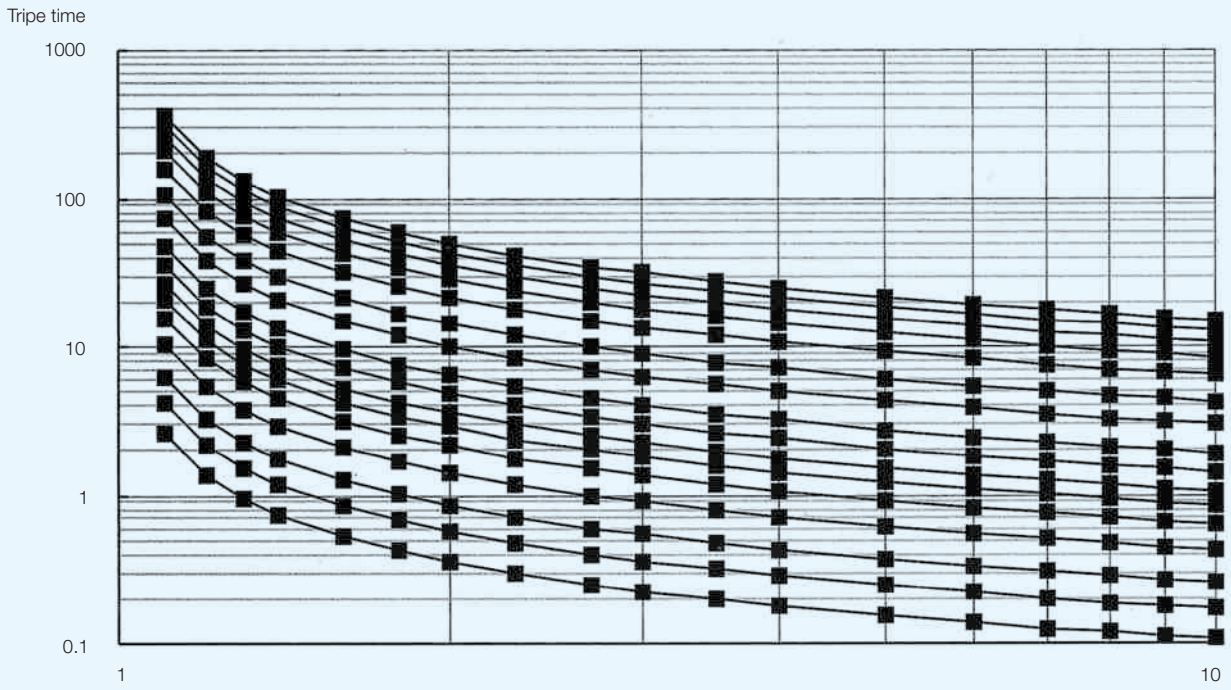
Characteristic curves for overload protection

- Comparison between different curves (curve rate: C8)

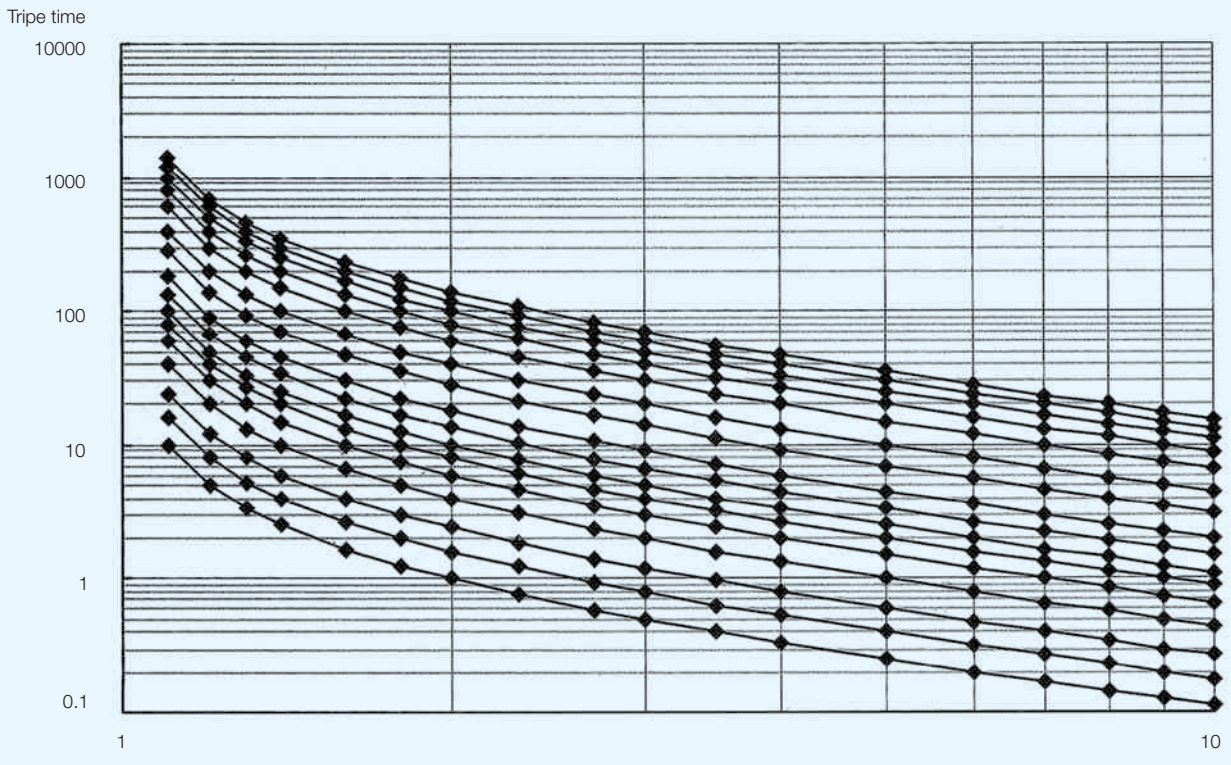


Characteristic curves for overload protection

- Standard inverse time protection C8



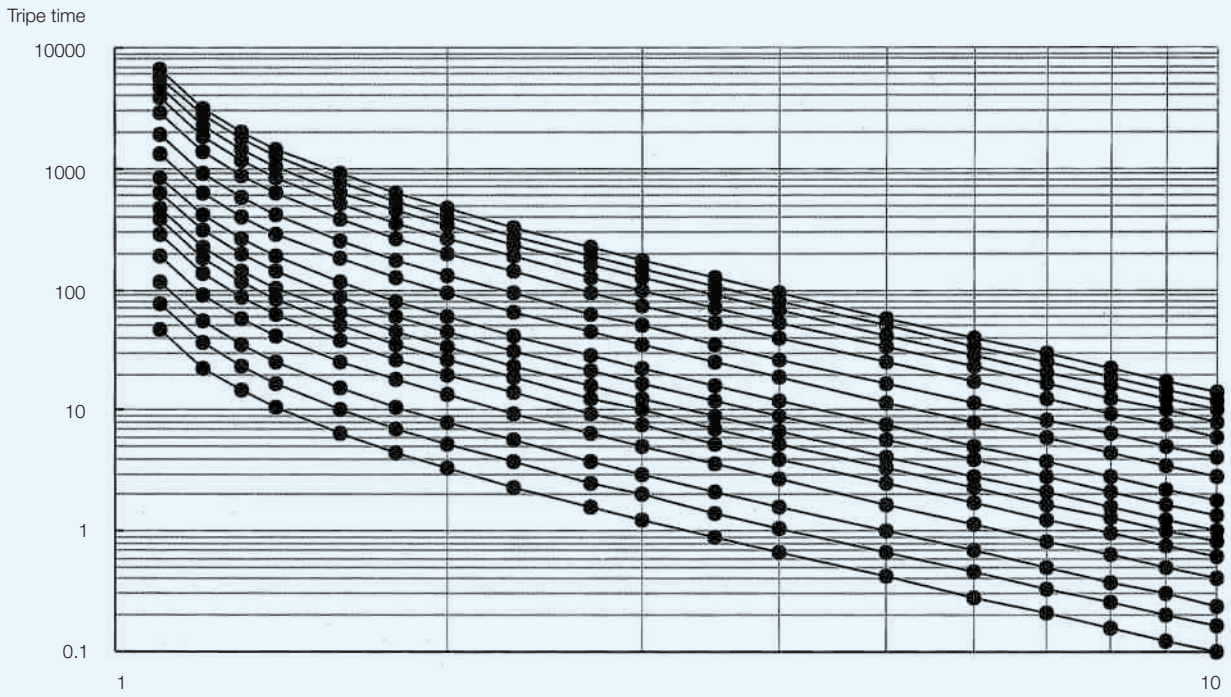
- Fast inverse time protection C8



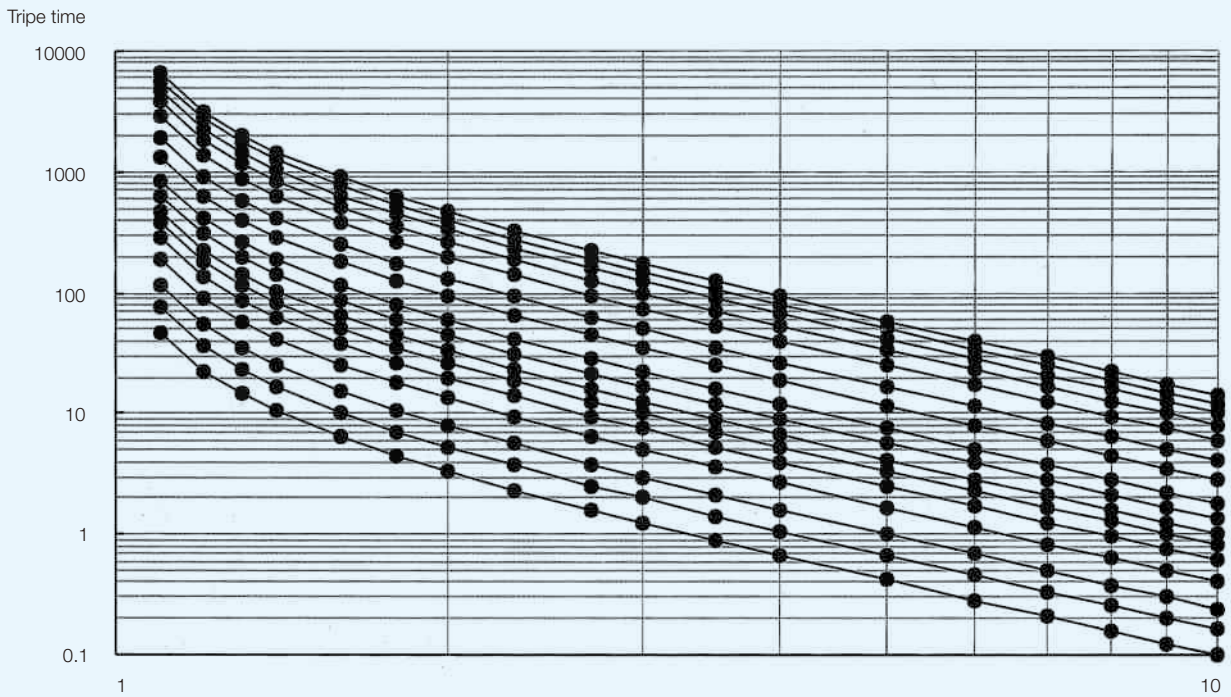
1

Characteristic curves for overload protection

- Express inverse time protection (for power distribution) C8

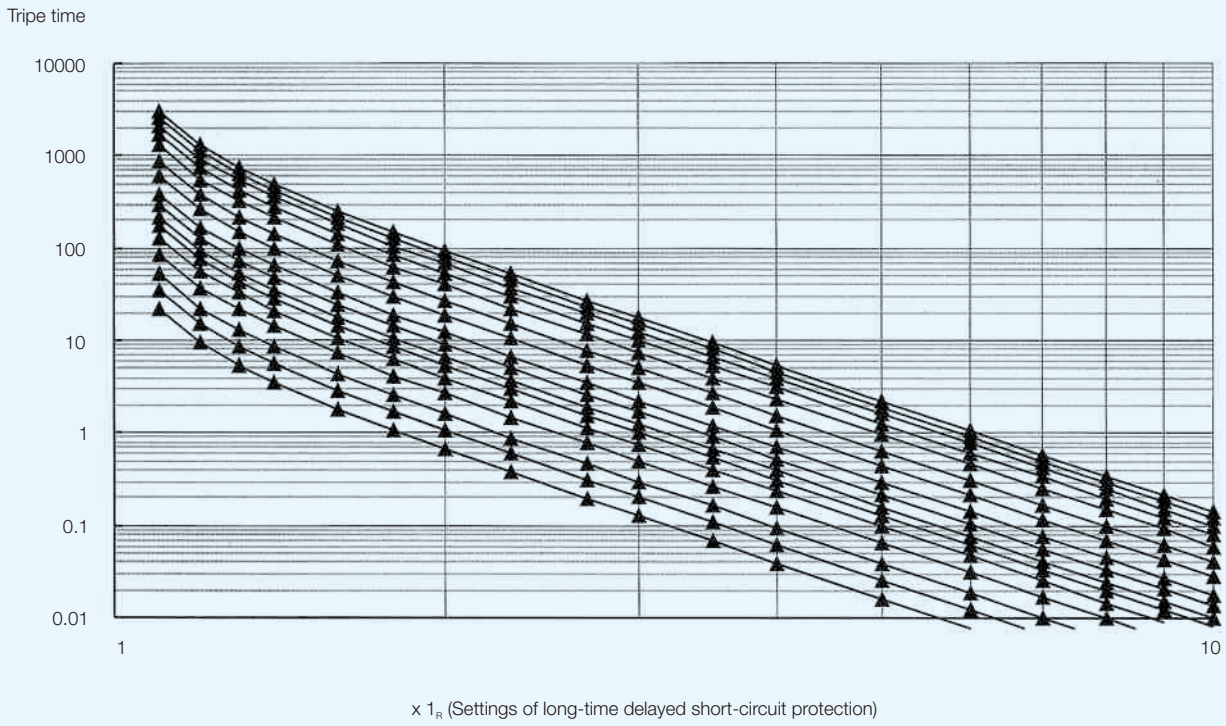


- Express inverse time protection (for motor protection) C8

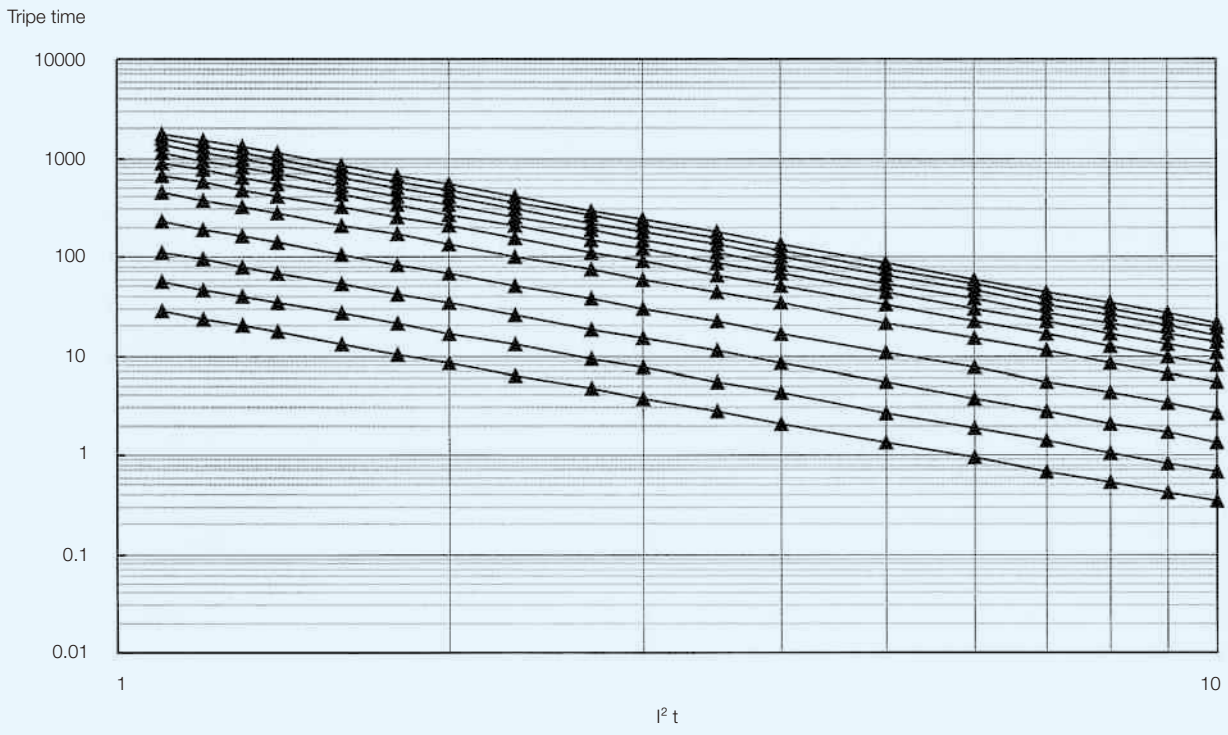


Characteristic curves for overload protection

- High-voltage fuse compatibility C8



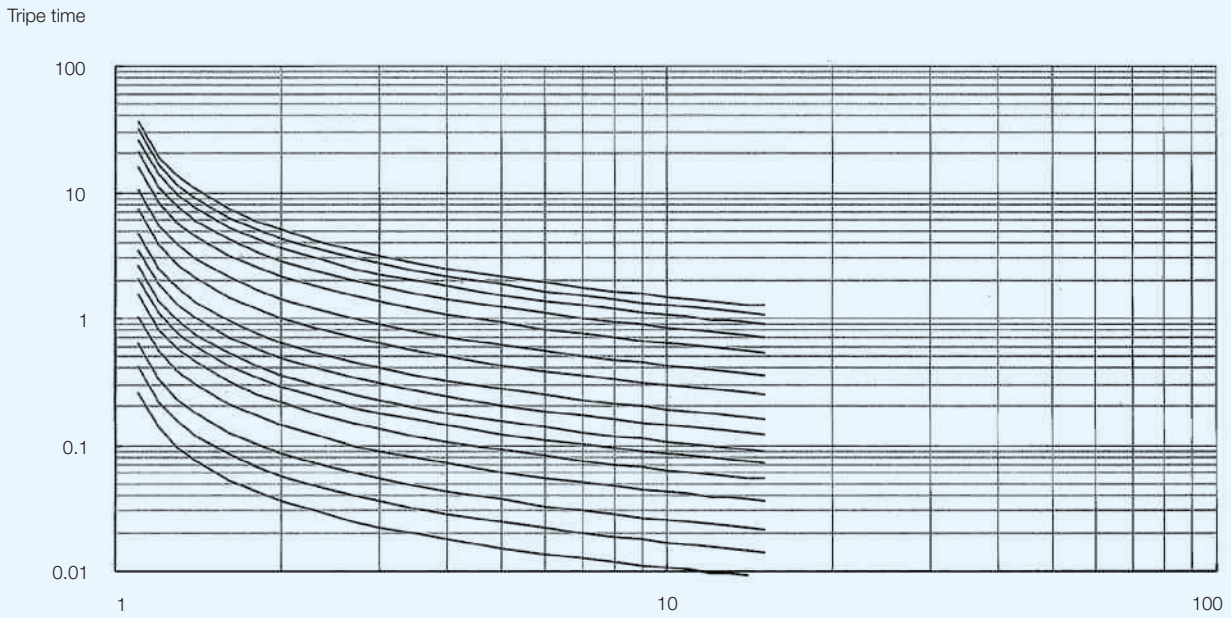
- Express inverse time protection (for motor protection) C8



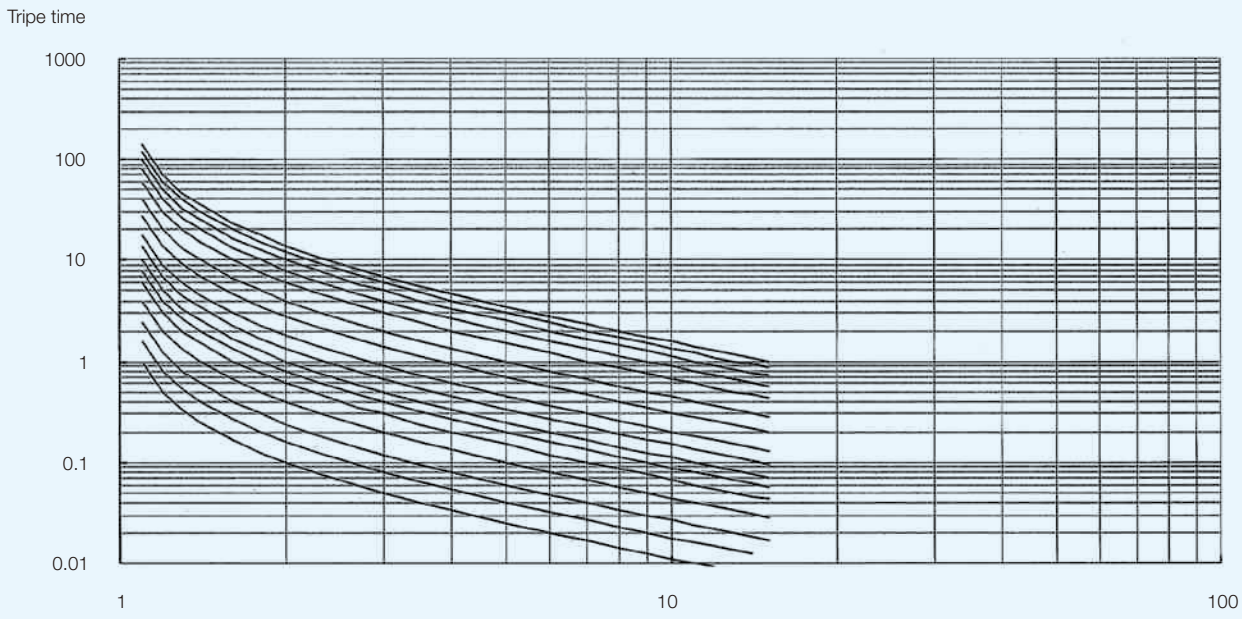
1

Characteristic curves for overload protection

- Short-time delayed inverse time protection - Standard inverse time

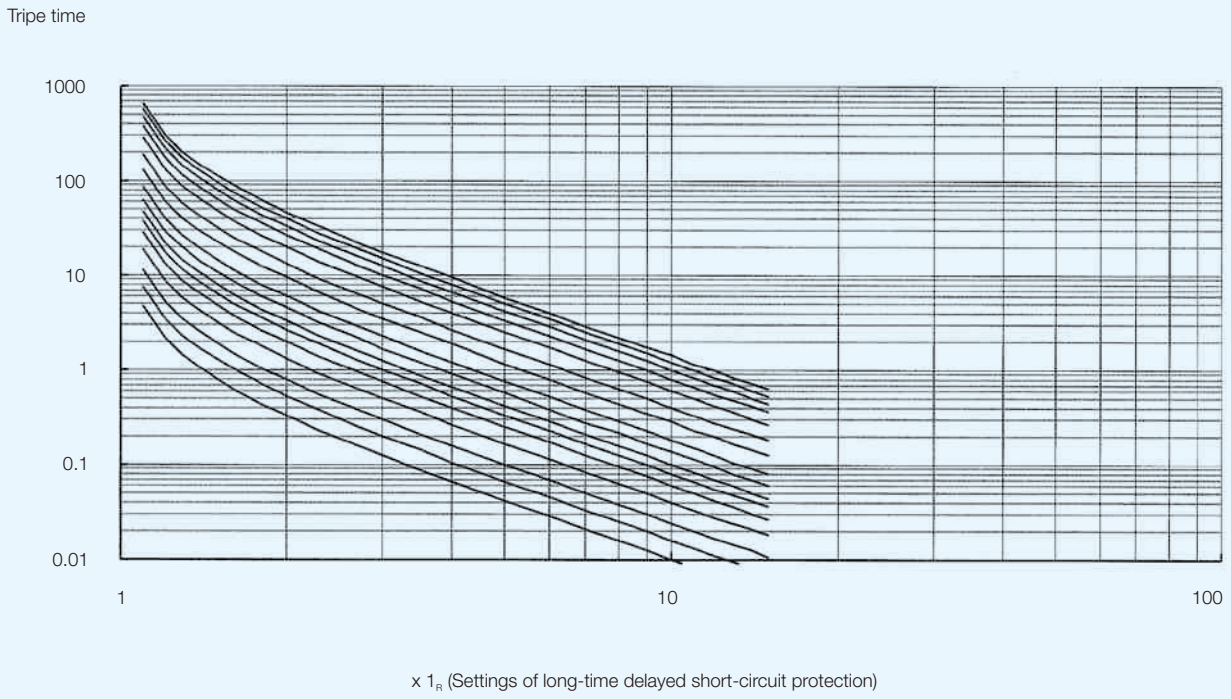


- Short-time delayed inverse time protection - Fast inverse time

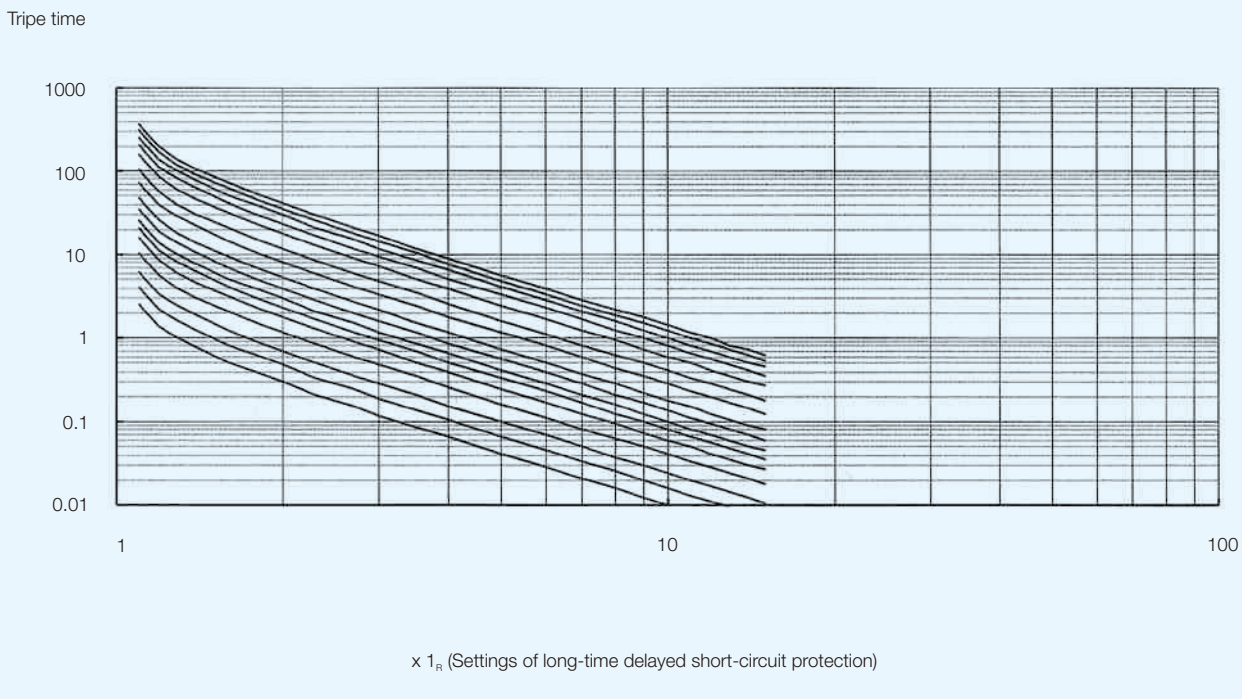


Characteristic curves for overload protection

- Short-time delayed inverse time protection - Express inverse time (for power distribution)



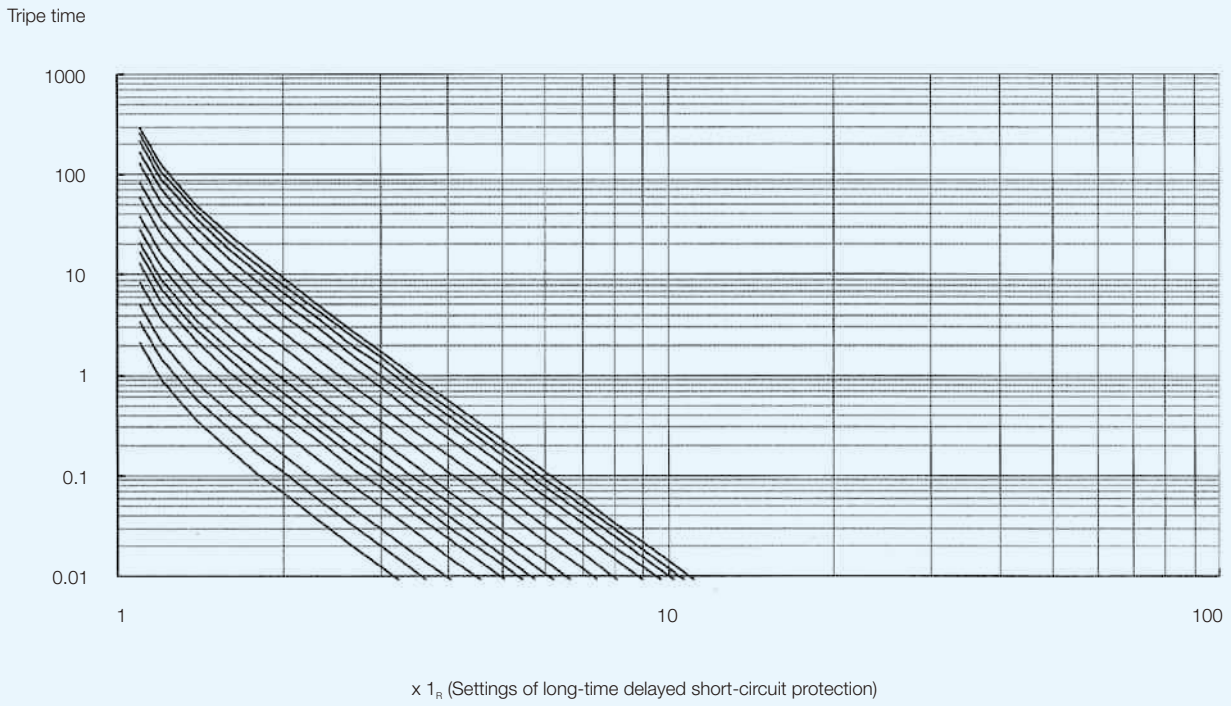
- Short-time delayed inverse time protection - Express inverse time (for power distribution)



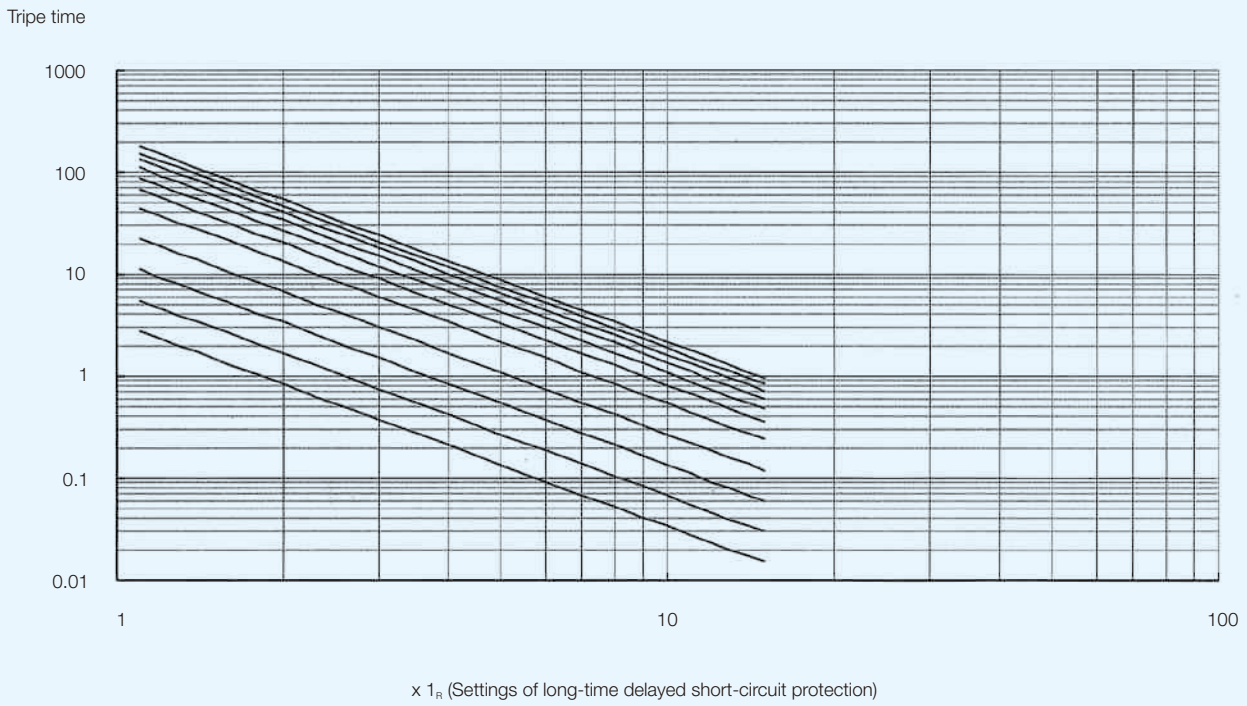
1

Characteristic curves for overload protection

- Short-time delayed inverse time protection - high voltage fuse compatibility

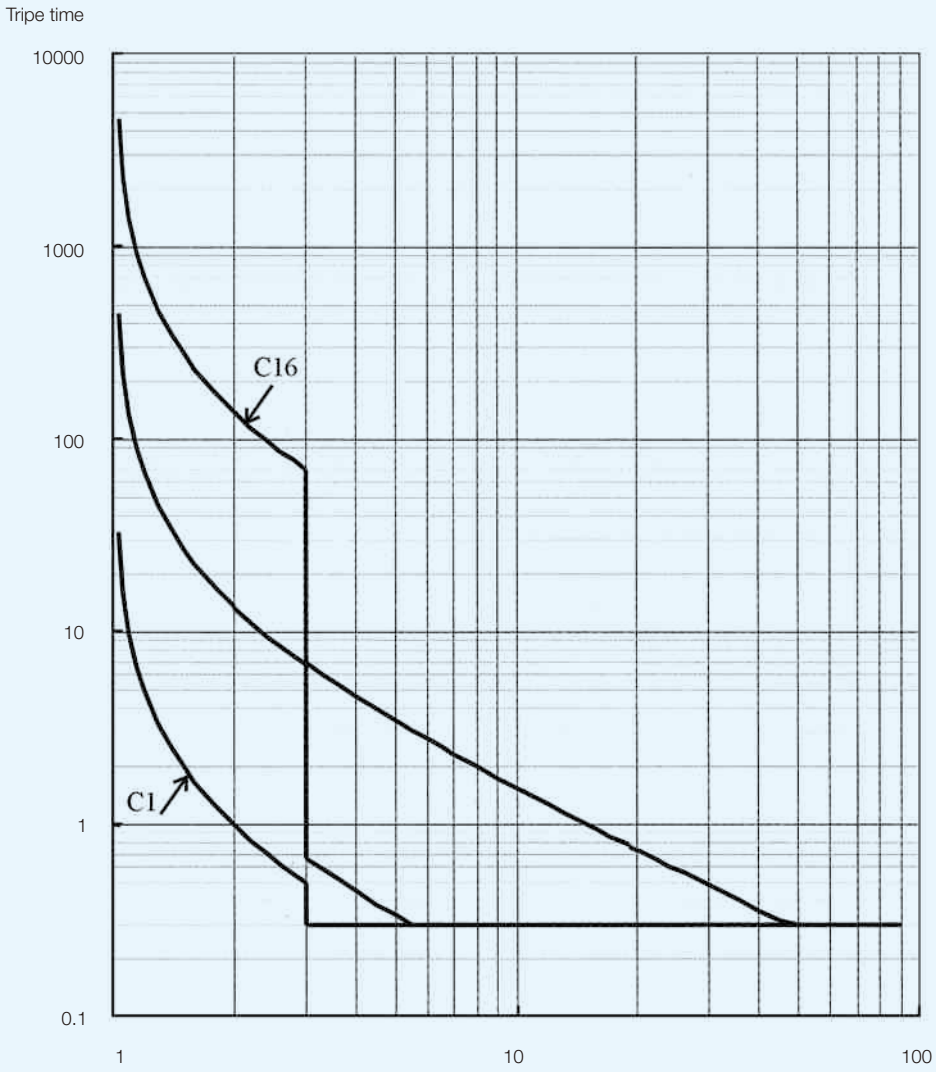


- Short-time delayed inverse time protection



Curve examples

- Example of inverse time protection

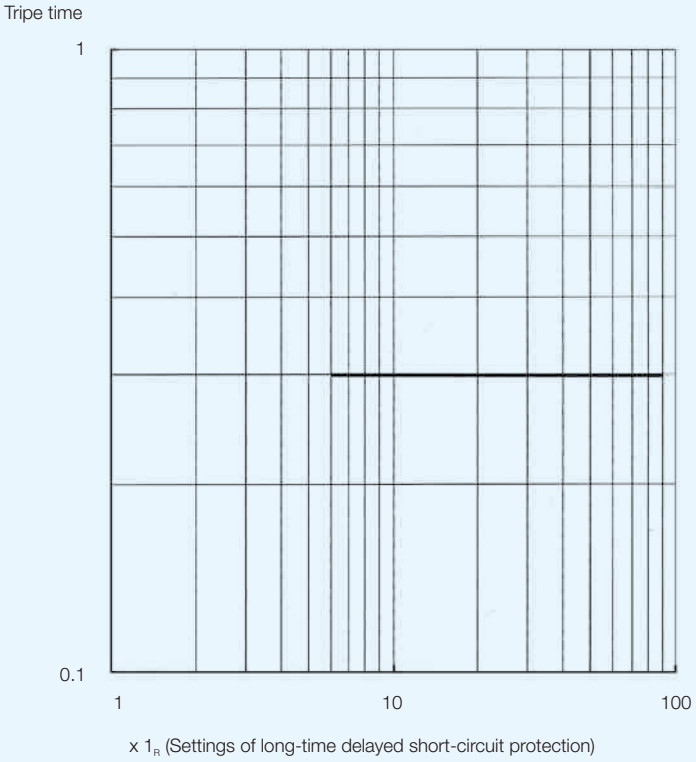


The curve example is based on below the settings:
Curve type: Fast inverse time protection
Curve rate: C1, C8 and C16
Action value setting of short-time delayed inverse time: 3 x Iset
Time setting of short-time delayed definite time: 0.3 s

1

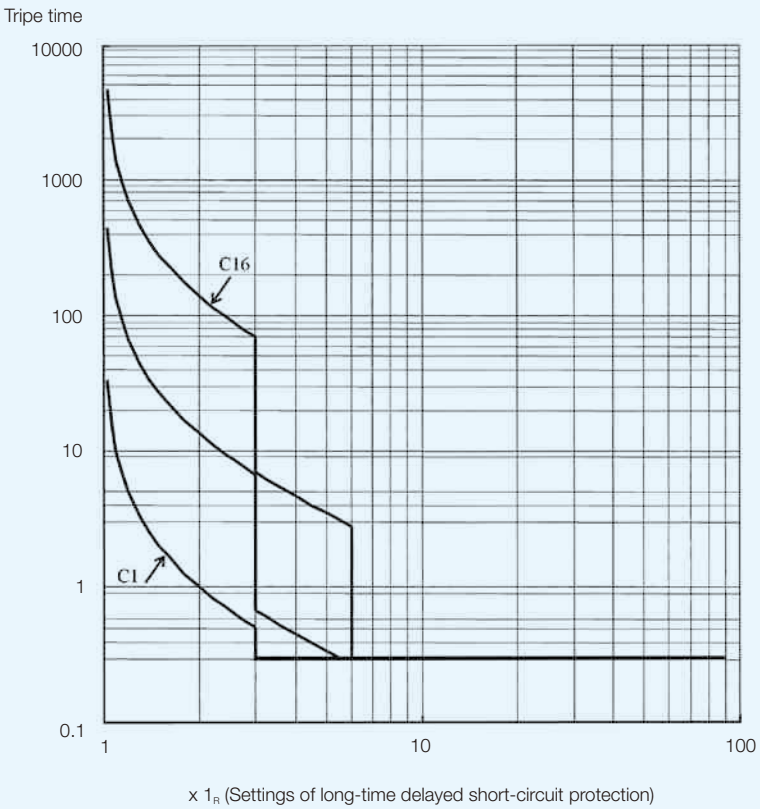
Curve examples

- Example of definite time protection



The curve example is based on below the settings:
Action value setting of short-time delayed definite time: 6 x I_R
Time setting of short-time delayed definite time: 0.3 s

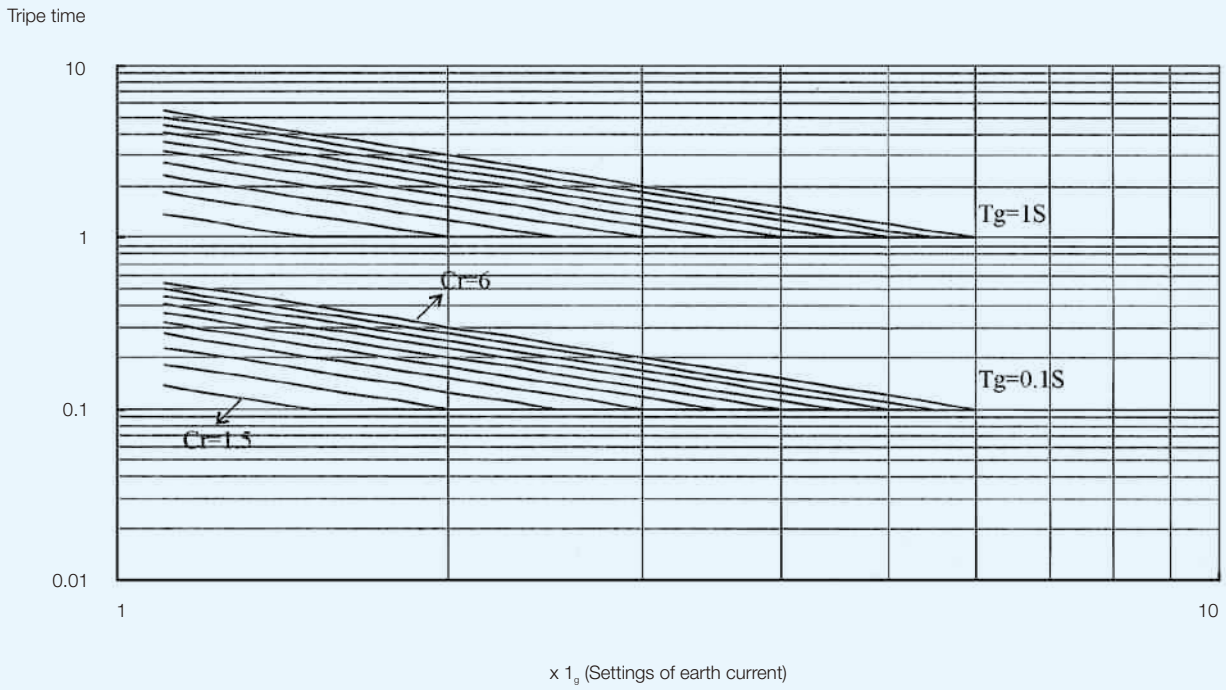
- Example of inverse time and definite time protection



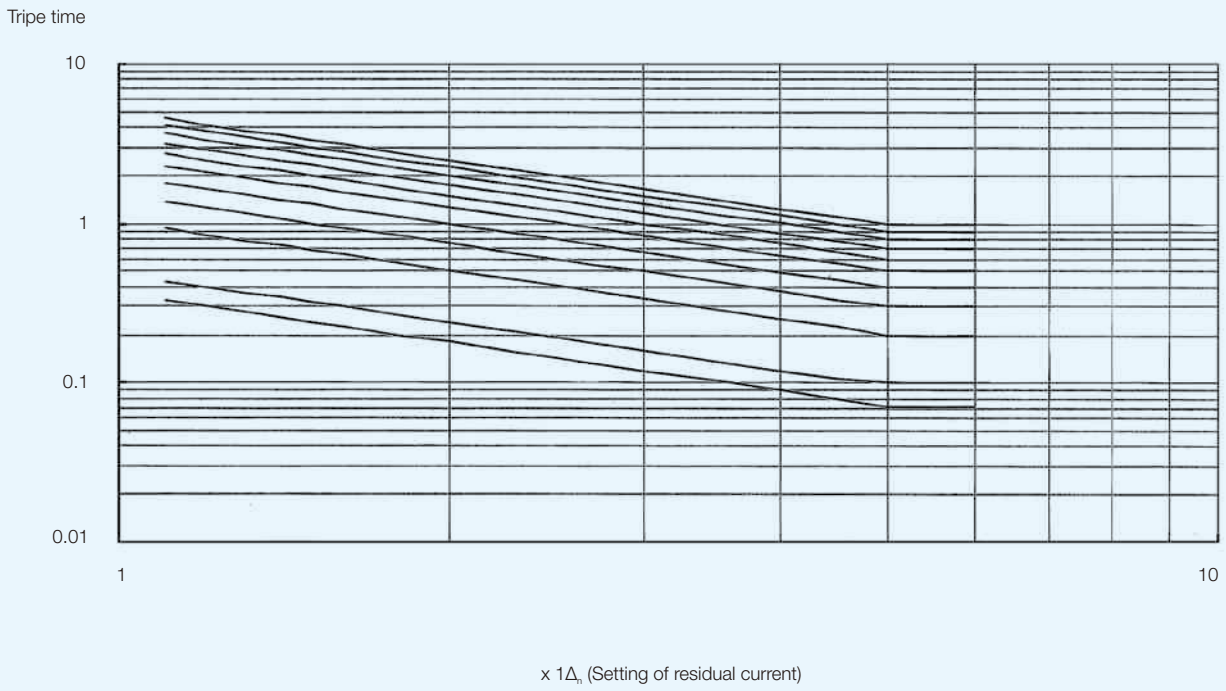
The curve example is based on below the settings:
Curve type: Fast inverse time protection
Curve rate: C1, C8 and C16
Action value setting of short-time delayed inverse time: 3 x I_{set}
Action value setting of short-time delayed definite time: 6 x I_R
Time setting of short-time definite time: 0.3 s

Characteristic curve of earth/residual current protection

- Earth protection



- Residual current protection



1

Selection and ordering data

Size A, fixed version, horizontal rear connection, Icu = 65 kA, Ics = 42 kA, with standard accessories [1]



Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with AL3 electronic trip unit				
200	W68AF 3N200AL3	**28057**	W68AF 4N200AL3	**28127**
400	W68AF 3N400AL3	**28058**	W68AF 4N400AL3	**28128**
630	W68AF 3N630AL3	**28059**	W68AF 4N630AL3	**28129**
800	W68AF 3N800AL3	**28060**	W68AF 4N800AL3	**28130**
1000	W68AF 3N1000AL3	**28061**	W68AF 4N1000AL3	**28131**
1250	W68AF 3N1250AL3	**28062**	W68AF 4N1250AL3	**28132**
1600	W68AF 3N1600AL3	**28063**	W68AF 4N1600AL3	**28133**
Equipped with AL4 electronic trip unit				
200	W68AF 3N200AL4	**28064**	W68AF 4N200AL4	**28134**
400	W68AF 3N400AL4	**28065**	W68AF 4N400AL4	**28135**
630	W68AF 3N630AL4	**28066**	W68AF 4N630AL4	**28136**
800	W68AF 3N800AL4	**28067**	W68AF 4N800AL4	**28137**
1000	W68AF 3N1000AL4	**28068**	W68AF 4N1000AL4	**28138**
1250	W68AF 3N1250AL4	**28069**	W68AF 4N1250AL4	**28139**
1600	W68AF 3N1600AL4	**28070**	W68AF 4N1600AL4	**28140**
Equipped with AM3 electronic trip unit				
200	W68AF 3N200AM3	**28071**	W68AF 4N200AM3	**28141**
400	W68AF 3N400AM3	**28072**	W68AF 4N400AM3	**28142**
630	W68AF 3N630AM3	**28073**	W68AF 4N630AM3	**28143**
800	W68AF 3N800AM3	**28074**	W68AF 4N800AM3	**28144**
1000	W68AF 3N1000AM3	**28075**	W68AF 4N1000AM3	**28145**
1250	W68AF 3N1250AM3	**28076**	W68AF 4N1250AM3	**28146**
1600	W68AF 3N1600AM3	**28077**	W68AF 4N1600AM3	**28147**
Equipped with AM4 electronic trip unit				
200	W68AF 3N200AM4	**28078**	W68AF 4N200AM4	**28148**
400	W68AF 3N400AM4	**28079**	W68AF 4N400AM4	**28149**
630	W68AF 3N630AM4	**28080**	W68AF 4N630AM4	**28150**
800	W68AF 3N800AM4	**28081**	W68AF 4N800AM4	**28151**
1000	W68AF 3N1000AM4	**28082**	W68AF 4N1000AM4	**28152**
1250	W68AF 3N1250AM4	**28083**	W68AF 4N1250AM4	**28153**
1600	W68AF 3N1600AM4	**28084**	W68AF 4N1600AM4	**28154**
Equipped with AH4 electronic trip unit				
200	W68AF 3N200AH	**28085**	W68AF 4N200AH	**28155**
400	W68AF 3N400AH	**28086**	W68AF 4N400AH	**28156**
630	W68AF 3N630AH	**28087**	W68AF 4N630AH	**28157**
800	W68AF 3N800AH	**28088**	W68AF 4N800AH	**28158**
1000	W68AF 3N1000AH	**28089**	W68AF 4N1000AH	**28159**
1250	W68AF 3N1250AH	**28090**	W68AF 4N1250AH	**28160**
1600	W68AF 3N1600AH	**28091**	W68AF 4N1600AH	**28161**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size A, fixed version, horizontal rear connection, Icu = 65 kA, Ics = 55 kA, with standard accessories [1]



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with AL3 electronic trip unit				
200	W68AF 3H200AL3	**28092**	W68AF 4H200AL3	**28162**
400	W68AF 3H400AL3	**28093**	W68AF 4H400AL3	**28163**
630	W68AF 3H630AL3	**28094**	W68AF 4H630AL3	**28164**
800	W68AF 3H800AL3	**28095**	W68AF 4H800AL3	**28165**
1000	W68AF 3H1000AL3	**28096**	W68AF 4H1000AL3	**28166**
1250	W68AF 3H1250AL3	**28097**	W68AF 4H1250AL3	**28167**
1600	W68AF 3H1600AL3	**28098**	W68AF 4H1600AL3	**28168**
Equipped with AL4 electronic trip unit				
200	W68AF 3H200AL4	**28099**	W68AF 4H200AL4	**28169**
400	W68AF 3H400AL4	**28100**	W68AF 4H400AL4	**28170**
630	W68AF 3H630AL4	**28101**	W68AF 4H630AL4	**28171**
800	W68AF 3H800AL4	**28102**	W68AF 4H800AL4	**28172**
1000	W68AF 3H1000AL4	**28103**	W68AF 4H1000AL4	**28173**
1250	W68AF 3H1250AL4	**28104**	W68AF 4H1250AL4	**28174**
1600	W68AF 3H1600AL4	**28105**	W68AF 4H1600AL4	**28175**
Equipped with AM3 electronic trip unit				
200	W68AF 3H200AM3	**28106**	W68AF 4H200AM3	**28176**
400	W68AF 3H400AM3	**28107**	W68AF 4H400AM3	**28177**
630	W68AF 3H630AM3	**28108**	W68AF 4H630AM3	**28178**
800	W68AF 3H800AM3	**28109**	W68AF 4H800AM3	**28179**
1000	W68AF 3H1000AM3	**28110**	W68AF 4H1000AM3	**28180**
1250	W68AF 3H1250AM3	**28111**	W68AF 4H1250AM3	**28181**
1600	W68AF 3H1600AM3	**28112**	W68AF 4H1600AM3	**28182**
Equipped with AM4 electronic trip unit				
200	W68AF 3H200AM4	**28113**	W68AF 4H200AM4	**28183**
400	W68AF 3H400AM4	**28114**	W68AF 4H400AM4	**28184**
630	W68AF 3H630AM4	**28115**	W68AF 4H630AM4	**28185**
800	W68AF 3H800AM4	**28116**	W68AF 4H800AM4	**28186**
1000	W68AF 3H1000AM4	**28117**	W68AF 4H1000AM4	**28187**
1250	W68AF 3H1250AM4	**28118**	W68AF 4H1250AM4	**28188**
1600	W68AF 3H1600AM4	**28119**	W68AF 4H1600AM4	**28189**
Equipped with AH electronic trip unit				
200	W68AF 3H200AH	**28120**	W68AF 4H200AH	**28190**
400	W68AF 3H400AH	**28121**	W68AF 4H400AH	**28191**
630	W68AF 3H630AH	**28122**	W68AF 4H630AH	**28192**
800	W68AF 3H800AH	**28123**	W68AF 4H800AH	**28193**
1000	W68AF 3H1000AH	**28124**	W68AF 4H1000AH	**28194**
1250	W68AF 3H1250AH	**28125**	W68AF 4H1250AH	**28195**
1600	W68AF 3H1600AH	**28126**	W68AF 4H1600AH	**28196**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size A, withdrawable version, horizontal rear connection, Icu = 65 kA, Ics = 42 kA, with standard accessories [1]



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with AL3 electronic trip unit				
200	W68AD 3N200AL3	**28197**	W68AD 4N200AL3	**28267**
400	W68AD 3N400AL3	**28198**	W68AD 4N400AL3	**28268**
630	W68AD 3N630AL3	**28199**	W68AD 4N630AL3	**28269**
800	W68AD 3N800AL3	**28200**	W68AD 4N800AL3	**28270**
1000	W68AD 3N1000AL3	**28201**	W68AD 4N1000AL3	**28271**
1250	W68AD 3N1250AL3	**28202**	W68AD 4N1250AL3	**28272**
1600	W68AD 3N1600AL3	**28203**	W68AD 4N1600AL3	**28273**
Equipped with AL4 electronic trip unit				
200	W68AD 3N200AL4	**28204**	W68AD 4N200AL4	**28274**
400	W68AD 3N400AL4	**28205**	W68AD 4N400AL4	**28275**
630	W68AD 3N630AL4	**28206**	W68AD 4N630AL4	**28276**
800	W68AD 3N800AL4	**28207**	W68AD 4N800AL4	**28277**
1000	W68AD 3N1000AL4	**28208**	W68AD 4N1000AL4	**28278**
1250	W68AD 3N1250AL4	**28209**	W68AD 4N1250AL4	**28279**
1600	W68AD 3N1600AL4	**28210**	W68AD 4N1600AL4	**28280**
Equipped with AM3 electronic trip unit				
200	W68AD 3N200AM3	**28211**	W68AD 4N200AM3	**28281**
400	W68AD 3N400AM3	**28212**	W68AD 4N400AM3	**28282**
630	W68AD 3N630AM3	**28213**	W68AD 4N630AM3	**28283**
800	W68AD 3N800AM3	**28214**	W68AD 4N800AM3	**28284**
1000	W68AD 3N1000AM3	**28215**	W68AD 4N1000AM3	**28285**
1250	W68AD 3N1250AM3	**28216**	W68AD 4N1250AM3	**28286**
1600	W68AD 3N1600AM3	**28217**	W68AD 4N1600AM3	**28287**
Equipped with AM4 electronic trip unit				
200	W68AD 3N200AM4	**28218**	W68AD 4N200AM4	**28288**
400	W68AD 3N400AM4	**28219**	W68AD 4N400AM4	**28289**
630	W68AD 3N630AM4	**28220**	W68AD 4N630AM4	**28290**
800	W68AD 3N800AM4	**28221**	W68AD 4N800AM4	**28291**
1000	W68AD 3N1000AM4	**28222**	W68AD 4N1000AM4	**28292**
1250	W68AD 3N1250AM4	**28223**	W68AD 4N1250AM4	**28293**
1600	W68AD 3N1600AM4	**28224**	W68AD 4N1600AM4	**28294**
Equipped with AH electronic trip unit				
200	W68AD 3N200AH	**28225**	W68AD 4N200AH	**28295**
400	W68AD 3N400AH	**28226**	W68AD 4N400AH	**28296**
630	W68AD 3N630AH	**28227**	W68AD 4N630AH	**28297**
800	W68AD 3N800AH	**28228**	W68AD 4N800AH	**28298**
1000	W68AD 3N1000AH	**28229**	W68AD 4N1000AH	**28299**
1250	W68AD 3N1250AH	**28230**	W68AD 4N1250AH	**28300**
1600	W68AD 3N1600AH	**28231**	W68AD 4N1600AH	**28301**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size A, withdrawable version, horizontal rear connection, Icu = 65 kA, Ics = 55 kA, with standard accessories [1]



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with AL3 electronic trip unit				
200	W68AD 3H200AL3	**28232**	W68AD 4H200AL3	**28302**
400	W68AD 3H400AL3	**28233**	W68AD 4H400AL3	**28303**
630	W68AD 3H630AL3	**28234**	W68AD 4H630AL3	**28304**
800	W68AD 3H800AL3	**28235**	W68AD 4H800AL3	**28305**
1000	W68AD 3H1000AL3	**28236**	W68AD 4H1000AL3	**28306**
1250	W68AD 3H1250AL3	**28237**	W68AD 4H1250AL3	**28307**
1600	W68AD 3H1600AL3	**28238**	W68AD 4H1600AL3	**28308**
Equipped with AL4 electronic trip unit				
200	W68AD 3H200AL4	**28239**	W68AD 4H200AL4	**28309**
400	W68AD 3H400AL4	**28240**	W68AD 4H400AL4	**28310**
630	W68AD 3H630AL4	**28241**	W68AD 4H630AL4	**28311**
800	W68AD 3H800AL4	**28242**	W68AD 4H800AL4	**28312**
1000	W68AD 3H1000AL4	**28243**	W68AD 4H1000AL4	**28313**
1250	W68AD 3H1250AL4	**28244**	W68AD 4H1250AL4	**28314**
1600	W68AD 3H1600AL4	**28245**	W68AD 4H1600AL4	**28315**
Equipped with AM3 electronic trip unit				
200	W68AD 3H200AM3	**28246**	W68AD 4H200AM3	**28316**
400	W68AD 3H400AM3	**28247**	W68AD 4H400AM3	**28317**
630	W68AD 3H630AM3	**28248**	W68AD 4H630AM3	**28318**
800	W68AD 3H800AM3	**28249**	W68AD 4H800AM3	**28319**
1000	W68AD 3H1000AM3	**28250**	W68AD 4H1000AM3	**28320**
1250	W68AD 3H1250AM3	**28251**	W68AD 4H1250AM3	**28321**
1600	W68AD 3H1600AM3	**28252**	W68AD 4H1600AM3	**28322**
Equipped with AM4 electronic trip unit				
200	W68AD 3H200AM4	**28253**	W68AD 4H200AM4	**28323**
400	W68AD 3H400AM4	**28254**	W68AD 4H400AM4	**28324**
630	W68AD 3H630AM4	**28255**	W68AD 4H630AM4	**28325**
800	W68AD 3H800AM4	**28256**	W68AD 4H800AM4	**28326**
1000	W68AD 3H1000AM4	**28257**	W68AD 4H1000AM4	**28327**
1250	W68AD 3H1250AM4	**28258**	W68AD 4H1250AM4	**28328**
1600	W68AD 3H1600AM4	**28259**	W68AD 4H1600AM4	**28329**
Equipped with AH electronic trip unit				
200	W68AD 3H200AH	**28260**	W68AD 4H200AH	**28330**
400	W68AD 3H400AH	**28261**	W68AD 4H400AH	**28331**
630	W68AD 3H630AH	**28262**	W68AD 4H630AH	**28332**
800	W68AD 3H800AH	**28263**	W68AD 4H800AH	**28333**
1000	W68AD 3H1000AH	**28264**	W68AD 4H1000AH	**28334**
1250	W68AD 3H1250AH	**28265**	W68AD 4H1250AH	**28335**
1600	W68AD 3H1600AH	**28266**	W68AD 4H1600AH	**28336**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

1

Selection and ordering data

Size B, fixed version, horizontal rear connection, Icu = Ics = 70 kA, with standard accessories (1)



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
630	W68BF 3N630BL3	**28337**	W68BF 4N630BL3	**28435**
800	W68BF 3N800BL3	**28338**	W68BF 4N800BL3	**28436**
1000	W68BF 3N1000BL3	**28339**	W68BF 4N1000BL3	**28437**
1250	W68BF 3N1250BL3	**28340**	W68BF 4N1250BL3	**28438**
1600	W68BF 3N1600BL3	**28341**	W68BF 4N1600BL3	**28439**
2000	W68BF 3N2000BL3	**28342**	W68BF 4N2000BL3	**28440**
2500	W68BF 3N2500BL3	**28343**	W68BF 4N2500BL3	**28441**
Equipped with BL4 electronic trip unit				
630	W68BF 3N630BL4	**28344**	W68BF 4N630BL4	**28442**
800	W68BF 3N800BL4	**28345**	W68BF 4N800BL4	**28443**
1000	W68BF 3N1000BL4	**28346**	W68BF 4N1000BL4	**28444**
1250	W68BF 3N1250BL4	**28347**	W68BF 4N1250BL4	**28445**
1600	W68BF 3N1600BL4	**28348**	W68BF 4N1600BL4	**28446**
2000	W68BF 3N2000BL4	**28349**	W68BF 4N2000BL4	**28447**
2500	W68BF 3N2500BL4	**28350**	W68BF 4N2500BL4	**28448**
Equipped with BM3 electronic trip unit				
630	W68BF 3N630BM3	**28351**	W68BF 4N630BM3	**28449**
800	W68BF 3N800BM3	**28352**	W68BF 4N800BM3	**28450**
1000	W68BF 3N1000BM3	**28353**	W68BF 4N1000BM3	**28451**
1250	W68BF 3N1250BM3	**28354**	W68BF 4N1250BM3	**28452**
1600	W68BF 3N1600BM3	**28355**	W68BF 4N1600BM3	**28453**
2000	W68BF 3N2000BM3	**28356**	W68BF 4N2000BM3	**28454**
2500	W68BF 3N2500BM3	**28357**	W68BF 4N2500BM3	**28455**
Equipped with BM4 electronic trip unit				
630	W68BF 3N630BM4	**28358**	W68BF 4N630BM4	**28456**
800	W68BF 3N800BM4	**28359**	W68BF 4N800BM4	**28457**
1000	W68BF 3N1000BM4	**28360**	W68BF 4N1000BM4	**28458**
1250	W68BF 3N1250BM4	**28361**	W68BF 4N1250BM4	**28459**
1600	W68BF 3N1600BM4	**28362**	W68BF 4N1600BM4	**28460**
2000	W68BF 3N2000BM4	**28363**	W68BF 4N2000BM4	**28461**
2500	W68BF 3N2500BM4	**28364**	W68BF 4N2500BM4	**28462**
Equipped with BHP electronic trip unit				
630	W68BF 3N630BHP	**28365**	W68BF 4N630BHP	**28463**
800	W68BF 3N800BHP	**28366**	W68BF 4N800BHP	**28464**
1000	W68BF 3N1000BHP	**28367**	W68BF 4N1000BHP	**28465**
1250	W68BF 3N1250BHP	**28368**	W68BF 4N1250BHP	**28466**
1600	W68BF 3N1600BHP	**28369**	W68BF 4N1600BHP	**28467**
2000	W68BF 3N2000BHP	**28370**	W68BF 4N2000BHP	**28468**
2500	W68BF 3N2500BHP	**28371**	W68BF 4N2500BHP	**28469**
Equipped with BHQ electronic trip unit				
630	W68BF 3N630BHQ	**28372**	W68BF 4N630BHQ	**28470**
800	W68BF 3N800BHQ	**28373**	W68BF 4N800BHQ	**28471**
1000	W68BF 3N1000BHQ	**28374**	W68BF 4N1000BHQ	**28472**
1250	W68BF 3N1250BHQ	**28375**	W68BF 4N1250BHQ	**28473**
1600	W68BF 3N1600BHQ	**28376**	W68BF 4N1600BHQ	**28474**
2000	W68BF 3N2000BHQ	**28377**	W68BF 4N2000BHQ	**28475**
2500	W68BF 3N2500BHQ	**28378**	W68BF 4N2500BHQ	**28476**
Equipped with BHG electronic trip unit				
630	W68BF 3N630BHG	**28379**	W68BF 4N630BHG	**28477**
800	W68BF 3N800BHG	**28380**	W68BF 4N800BHG	**28478**
1000	W68BF 3N1000BHG	**28381**	W68BF 4N1000BHG	**28479**
1250	W68BF 3N1250BHG	**28382**	W68BF 4N1250BHG	**28480**
1600	W68BF 3N1600BHG	**28383**	W68BF 4N1600BHG	**28481**
2000	W68BF 3N2000BHG	**28384**	W68BF 4N2000BHG	**28482**
2500	W68BF 3N2500BHG	**28385**	W68BF 4N2500BHG	**28483**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size B, fixed version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories (1)



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
630	W68BF 3H630BL3	**28386**	W68BF 4H630BL3	**28484**
800	W68BF 3H800BL3	**28387**	W68BF 4H800BL3	**28485**
1000	W68BF 3H1000BL3	**28388**	W68BF 4H1000BL3	**28486**
1250	W68BF 3H1250BL3	**28389**	W68BF 4H1250BL3	**28487**
1600	W68BF 3H1600BL3	**28390**	W68BF 4H1600BL3	**28488**
2000	W68BF 3H2000BL3	**28391**	W68BF 4H2000BL3	**28489**
2500	W68BF 3H2500BL3	**28392**	W68BF 4H2500BL3	**28490**
Equipped with BL4 electronic trip unit				
630	W68BF 3H630BL4	**28393**	W68BF 4H630BL4	**28491**
800	W68BF 3H800BL4	**28394**	W68BF 4H800BL4	**28492**
1000	W68BF 3H1000BL4	**28395**	W68BF 4H1000BL4	**28493**
1250	W68BF 3H1250BL4	**28396**	W68BF 4H1250BL4	**28494**
1600	W68BF 3H1600BL4	**28397**	W68BF 4H1600BL4	**28495**
2000	W68BF 3H2000BL4	**28398**	W68BF 4H2000BL4	**28496**
2500	W68BF 3H2500BL4	**28399**	W68BF 4H2500BL4	**28497**
Equipped with BM3 electronic trip unit				
630	W68BF 3H630BM3	**28400**	W68BF 4H630BM3	**28498**
800	W68BF 3H800BM3	**28401**	W68BF 4H800BM3	**28499**
1000	W68BF 3H1000BM3	**28402**	W68BF 4H1000BM3	**28500**
1250	W68BF 3H1250BM3	**28403**	W68BF 4H1250BM3	**28501**
1600	W68BF 3H1600BM3	**28404**	W68BF 4H1600BM3	**28502**
2000	W68BF 3H2000BM3	**28405**	W68BF 4H2000BM3	**28503**
2500	W68BF 3H2500BM3	**28406**	W68BF 4H2500BM3	**28504**
Equipped with BM4 electronic trip unit				
630	W68BF 3H630BM4	**28407**	W68BF 4H630BM4	**28505**
800	W68BF 3H800BM4	**28408**	W68BF 4H800BM4	**28506**
1000	W68BF 3H1000BM4	**28409**	W68BF 4H1000BM4	**28507**
1250	W68BF 3H1250BM4	**28410**	W68BF 4H1250BM4	**28508**
1600	W68BF 3H1600BM4	**28411**	W68BF 4H1600BM4	**28509**
2000	W68BF 3H2000BM4	**28412**	W68BF 4H2000BM4	**28510**
2500	W68BF 3H2500BM4	**28413**	W68BF 4H2500BM4	**28511**
Equipped with BHP electronic trip unit				
630	W68BF 3H630BHP	**28414**	W68BF 4H630BHP	**28512**
800	W68BF 3H800BHP	**28415**	W68BF 4H800BHP	**28513**
1000	W68BF 3H1000BHP	**28416**	W68BF 4H1000BHP	**28514**
1250	W68BF 3H1250BHP	**28417**	W68BF 4H1250BHP	**28515**
1600	W68BF 3H1600BHP	**28418**	W68BF 4H1600BHP	**28516**
2000	W68BF 3H2000BHP	**28419**	W68BF 4H2000BHP	**28517**
2500	W68BF 3H2500BHP	**28420**	W68BF 4H2500BHP	**28518**
Equipped with BHQ electronic trip unit				
630	W68BF 3H630BHQ	**28421**	W68BF 4H630BHQ	**28519**
800	W68BF 3H800BHQ	**28422**	W68BF 4H800BHQ	**28520**
1000	W68BF 3H1000BHQ	**28423**	W68BF 4H1000BHQ	**28521**
1250	W68BF 3H1250BHQ	**28424**	W68BF 4H1250BHQ	**28522**
1600	W68BF 3H1600BHQ	**28425**	W68BF 4H1600BHQ	**28523**
2000	W68BF 3H2000BHQ	**28426**	W68BF 4H2000BHQ	**28524**
2500	W68BF 3H2500BHQ	**28427**	W68BF 4H2500BHQ	**28525**
Equipped with BHG electronic trip unit				
630	W68BF 3H630BHG	**28428**	W68BF 4H630BHG	**28526**
800	W68BF 3H800BHG	**28429**	W68BF 4H800BHG	**28527**
1000	W68BF 3H1000BHG	**28430**	W68BF 4H1000BHG	**28528**
1250	W68BF 3H1250BHG	**28431**	W68BF 4H1250BHG	**28529**
1600	W68BF 3H1600BHG	**28432**	W68BF 4H1600BHG	**28530**
2000	W68BF 3H2000BHG	**28433**	W68BF 4H2000BHG	**28531**
2500	W68BF 3H2500BHG	**28434**	W68BF 4H2500BHG	**28532**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size B, withdrawable version, horizontal rear connection, Icu = Ics = 70 kA, with standard accessories [1]



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
630	W68BD 3N630BL3	**28533**	W68BD 4N630BL3	**18228**
800	W68BD 3N800BL3	**28534**	W68BD 4N800BL3	**18229**
1000	W68BD 3N1000BL3	**28535**	W68BD 4N1000BL3	**18230**
1250	W68BD 3N1250BL3	**28536**	W68BD 4N1250BL3	**18231**
1600	W68BD 3N1600BL3	**28537**	W68BD 4N1600BL3	**18232**
2000	W68BD 3N2000BL3	**28538**	W68BD 4N2000BL3	**18233**
2500	W68BD 3N2500BL3	**28539**	W68BD 4N2500BL3	**18234**
Equipped with BL4 electronic trip unit				
630	W68BD 3N630BL4	**28540**	W68BD 4N630BL4	**18235**
800	W68BD 3N800BL4	**28541**	W68BD 4N800BL4	**18236**
1000	W68BD 3N1000BL4	**28542**	W68BD 4N1000BL4	**18237**
1250	W68BD 3N1250BL4	**28543**	W68BD 4N1250BL4	**18238**
1600	W68BD 3N1600BL4	**28544**	W68BD 4N1600BL4	**18239**
2000	W68BD 3N2000BL4	**28545**	W68BD 4N2000BL4	**18240**
2500	W68BD 3N2500BL4	**28546**	W68BD 4N2500BL4	**18241**
Equipped with BM3 electronic trip unit				
630	W68BD 3N630BM3	**28547**	W68BD 4N630BM3	**18242**
800	W68BD 3N800BM3	**28548**	W68BD 4N800BM3	**18243**
1000	W68BD 3N1000BM3	**28549**	W68BD 4N1000BM3	**18244**
1250	W68BD 3N1250BM3	**28550**	W68BD 4N1250BM3	**18245**
1600	W68BD 3N1600BM3	**28551**	W68BD 4N1600BM3	**18246**
2000	W68BD 3N2000BM3	**28552**	W68BD 4N2000BM3	**18247**
2500	W68BD 3N2500BM3	**28553**	W68BD 4N2500BM3	**18248**
Equipped with BM4 electronic trip unit				
630	W68BD 3N630BM4	**28554**	W68BD 4N630BM4	**18249**
800	W68BD 3N800BM4	**28555**	W68BD 4N800BM4	**18250**
1000	W68BD 3N1000BM4	**28556**	W68BD 4N1000BM4	**18251**
1250	W68BD 3N1250BM4	**28557**	W68BD 4N1250BM4	**18252**
1600	W68BD 3N1600BM4	**28558**	W68BD 4N1600BM4	**18253**
2000	W68BD 3N2000BM4	**28559**	W68BD 4N2000BM4	**18254**
2500	W68BD 3N2500BM4	**28560**	W68BD 4N2500BM4	**18255**
Equipped with BHP electronic trip unit				
630	W68BD 3N630BHP	**28561**	W68BD 4N630BHP	**18256**
800	W68BD 3N800BHP	**28562**	W68BD 4N800BHP	**18257**
1000	W68BD 3N1000BHP	**28563**	W68BD 4N1000BHP	**18258**
1250	W68BD 3N1250BHP	**28564**	W68BD 4N1250BHP	**18259**
1600	W68BD 3N1600BHP	**28565**	W68BD 4N1600BHP	**18260**
2000	W68BD 3N2000BHP	**28566**	W68BD 4N2000BHP	**18261**
2500	W68BD 3N2500BHP	**28567**	W68BD 4N2500BHP	**18262**
Equipped with BHQ electronic trip unit				
630	W68BD 3N630BHQ	**28568**	W68BD 4N630BHQ	**18263**
800	W68BD 3N800BHQ	**28569**	W68BD 4N800BHQ	**18264**
1000	W68BD 3N1000BHQ	**28570**	W68BD 4N1000BHQ	**18265**
1250	W68BD 3N1250BHQ	**28571**	W68BD 4N1250BHQ	**18266**
1600	W68BD 3N1600BHQ	**28572**	W68BD 4N1600BHQ	**18267**
2000	W68BD 3N2000BHQ	**28573**	W68BD 4N2000BHQ	**18268**
2500	W68BD 3N2500BHQ	**28574**	W68BD 4N2500BHQ	**18269**
Equipped with BHG electronic trip unit				
630	W68BD 3N630BHG	**28575**	W68BD 4N630BHG	**18270**
800	W68BD 3N800BHG	**28576**	W68BD 4N800BHG	**18271**
1000	W68BD 3N1000BHG	**28577**	W68BD 4N1000BHG	**18272**
1250	W68BD 3N1250BHG	**28578**	W68BD 4N1250BHG	**18273**
1600	W68BD 3N1600BHG	**28579**	W68BD 4N1600BHG	**18274**
2000	W68BD 3N2000BHG	**28580**	W68BD 4N2000BHG	**18275**
2500	W68BD 3N2500BHG	**28581**	W68BD 4N2500BHG	**18276**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size B, withdrawable version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories [1]



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
630	W68BD 3H630BL3	**28582**	W68BD 4H630BL3	**18277**
800	W68BD 3H800BL3	**28583**	W68BD 4H800BL3	**18278**
1000	W68BD 3H1000BL3	**28584**	W68BD 4H1000BL3	**18279**
1250	W68BD 3H1250BL3	**28585**	W68BD 4H1250BL3	**18280**
1600	W68BD 3H1600BL3	**28586**	W68BD 4H1600BL3	**18281**
2000	W68BD 3H2000BL3	**28587**	W68BD 4H2000BL3	**18282**
2500	W68BD 3H2500BL3	**28588**	W68BD 4H2500BL3	**18283**
Equipped with BL4 electronic trip unit				
630	W68BD 3H630BL4	**28589**	W68BD 4H630BL4	**18284**
800	W68BD 3H800BL4	**28590**	W68BD 4H800BL4	**18285**
1000	W68BD 3H1000BL4	**28591**	W68BD 4H1000BL4	**18286**
1250	W68BD 3H1250BL4	**28592**	W68BD 4H1250BL4	**18287**
1600	W68BD 3H1600BL4	**28593**	W68BD 4H1600BL4	**18288**
2000	W68BD 3H2000BL4	**28594**	W68BD 4H2000BL4	**18289**
2500	W68BD 3H2500BL4	**28595**	W68BD 4H2500BL4	**18290**
Equipped with BM3 electronic trip unit				
630	W68BD 3H630BM3	**28596**	W68BD 4H630BM3	**18291**
800	W68BD 3H800BM3	**28597**	W68BD 4H800BM3	**18292**
1000	W68BD 3H1000BM3	**28598**	W68BD 4H1000BM3	**18293**
1250	W68BD 3H1250BM3	**28599**	W68BD 4H1250BM3	**18294**
1600	W68BD 3H1600BM3	**28600**	W68BD 4H1600BM3	**18295**
2000	W68BD 3H2000BM3	**28601**	W68BD 4H2000BM3	**18296**
2500	W68BD 3H2500BM3	**28602**	W68BD 4H2500BM3	**18297**
Equipped with BM4 electronic trip unit				
630	W68BD 3H630BM4	**28603**	W68BD 4H630BM4	**18298**
800	W68BD 3H800BM4	**28604**	W68BD 4H800BM4	**18299**
1000	W68BD 3H1000BM4	**28605**	W68BD 4H1000BM4	**18300**
1250	W68BD 3H1250BM4	**28606**	W68BD 4H1250BM4	**18301**
1600	W68BD 3H1600BM4	**28607**	W68BD 4H1600BM4	**18302**
2000	W68BD 3H2000BM4	**28608**	W68BD 4H2000BM4	**18303**
2500	W68BD 3H2500BM4	**28609**	W68BD 4H2500BM4	**18304**
Equipped with BHP electronic trip unit				
630	W68BD 3H630BHP	**28610**	W68BD 4H630BHP	**18305**
800	W68BD 3H800BHP	**28611**	W68BD 4H800BHP	**18306**
1000	W68BD 3H1000BHP	**28612**	W68BD 4H1000BHP	**18307**
1250	W68BD 3H1250BHP	**28613**	W68BD 4H1250BHP	**18308**
1600	W68BD 3H1600BHP	**28614**	W68BD 4H1600BHP	**18309**
2000	W68BD 3H2000BHP	**28615**	W68BD 4H2000BHP	**18310**
2500	W68BD 3H2500BHP	**28616**	W68BD 4H2500BHP	**18311**
Equipped with BHQ electronic trip unit				
630	W68BD 3H630BHQ	**18214**	W68BD 4H630BHQ	**18312**
800	W68BD 3H800BHQ	**18215**	W68BD 4H800BHQ	**18313**
1000	W68BD 3H1000BHQ	**18216**	W68BD 4H1000BHQ	**18314**
1250	W68BD 3H1250BHQ	**18217**	W68BD 4H1250BHQ	**18315**
1600	W68BD 3H1600BHQ	**18218**	W68BD 4H1600BHQ	**18316**
2000	W68BD 3H2000BHQ	**18219**	W68BD 4H2000BHQ	**18317**
2500	W68BD 3H2500BHQ	**18220**	W68BD 4H2500BHQ	**18318**
Equipped with BHG electronic trip unit				
630	W68BD 3H630BHG	**18221**	W68BD 4H630BHG	**18319**
800	W68BD 3H800BHG	**18222**	W68BD 4H800BHG	**18320**
1000	W68BD 3H1000BHG	**18223**	W68BD 4H1000BHG	**18321**
1250	W68BD 3H1250BHG	**18224**	W68BD 4H1250BHG	**18322**
1600	W68BD 3H1600BHG	**18225**	W68BD 4H1600BHG	**18323**
2000	W68BD 3H2000BHG	**18226**	W68BD 4H2000BHG	**18324**
2500	W68BD 3H2500BHG	**18227**	W68BD 4H2500BHG	**18325**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

1

Selection and ordering data

Size C, fixed version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories (1)



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
2000	W68CF 3N2000BL3	**18326**	W68CF 34N2000BL3	**18410**
2500	W68CF 3N2500BL3	**18327**	W68CF 34N2500BL3	**18411**
2900	W68CF 3N2900BL3	**18328**	W68CF 34N2900BL3	**18412**
3200	W68CF 3N3200BL3	**18329**	W68CF 34N3200BL3	**18413**
3600	W68CF 3N3600BL3	**18330**	W68CF 34N3600BL3	**18414**
4000	W68CF 3N4000BL3	**18331**	W68CF 34N4000BL3	**18415**
Equipped with BL4 electronic trip unit				
2000	W68CF 3N2000BL4	**18332**	W68CF 34N2000BL4	**18416**
2500	W68CF 3N2500BL4	**18333**	W68CF 34N2500BL4	**18417**
2900	W68CF 3N2900BL4	**18334**	W68CF 34N2900BL4	**18418**
3200	W68CF 3N3200BL4	**18335**	W68CF 34N3200BL4	**18419**
3600	W68CF 3N3600BL4	**18336**	W68CF 34N3600BL4	**18420**
4000	W68CF 3N4000BL4	**18337**	W68CF 34N4000BL4	**18421**
Equipped with BM3 electronic trip unit				
2000	W68CF 3N2000BM3	**18338**	W68CF 34N2000BM3	**18422**
2500	W68CF 3N2500BM3	**18339**	W68CF 34N2500BM3	**18423**
2900	W68CF 3N2900BM3	**18340**	W68CF 34N2900BM3	**18424**
3200	W68CF 3N3200BM3	**18341**	W68CF 34N3200BM3	**18425**
3600A	W68CF 3N3600BM3	**18342**	W68CF 34N3600BM3	**18426**
4000	W68CF 3N4000BM3	**18343**	W68CF 34N4000BM3	**18427**
Equipped with BM4 electronic trip unit				
2000	W68CF 3N2000BM4	**18344**	W68CF 34N2000BM4	**18428**
2500	W68CF 3N2500BM4	**18345**	W68CF 34N2500BM4	**18429**
2900	W68CF 3N2900BM4	**18346**	W68CF 34N2900BM4	**18430**
3200	W68CF 3N3200BM4	**18347**	W68CF 34N3200BM4	**18431**
3600	W68CF 3N3600BM4	**18348**	W68CF 34N3600BM4	**18432**
4000	W68CF 3N4000BM4	**18349**	W68CF 34N4000BM4	**18433**
Equipped with BHP electronic trip unit				
2000	W68CF 3N2000BHP	**18350**	W68CF 34N2000BH4P	**18434**
2500	W68CF 3N2500BHP	**18351**	W68CF 34N2500BH4P	**18435**
2900	W68CF 3N2900BHP	**18352**	W68CF 34N2900BH4P	**18436**
3200	W68CF 3N3200BHP	**18353**	W68CF 34N3200BH4P	**18437**
3600	W68CF 3N3600BHP	**18354**	W68CF 34N3600BH4P	**18438**
4000	W68CF 3N4000BHP	**18355**	W68CF 34N4000BH4P	**18439**
Equipped with BHQ electronic trip unit				
2000	W68CF 3N2000BHQ	**18356**	W68CF 34N2000BHQ	**18440**
2500	W68CF 3N2500BHQ	**18357**	W68CF 34N2500BHQ	**18441**
2900	W68CF 3N2900BHQ	**18358**	W68CF 34N2900BHQ	**18442**
3200	W68CF 3N3200BHQ	**18359**	W68CF 34N3200BHQ	**18443**
3600	W68CF 3N3600BHQ	**18360**	W68CF 34N3600BHQ	**18444**
4000	W68CF 3N4000BHQ	**18361**	W68CF 34N4000BHQ	**18445**
Equipped with BHG electronic trip unit				
2000	W68CF 3N2000BHG	**18362**	W68CF 34N2000BHG	**18446**
2500	W68CF 3N2500BHG	**18363**	W68CF 34N2500BHG	**18447**
2900	W68CF 3N2900BHG	**18364**	W68CF 34N2900BHG	**18448**
3200	W68CF 3N3200BHG	**18365**	W68CF 34N3200BHG	**18449**
3600	W68CF 3N3600BHG	**18366**	W68CF 34N3600BHG	**18450**
4000	W68CF 3N4000BHG	**18367**	W68CF 34N4000BHG	**18451**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size C, fixed version, horizontal rear connection, Icu 120 kA, Ics = 100 kA, with standard accessories (1)



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
2000	W68CF 3H2000BL3	**18368**	W68CF 34H2000BL3	**18452**
2500	W68CF 3H2500BL3	**18369**	W68CF 34H2500BL3	**18453**
2900	W68CF 3H2900BL3	**18370**	W68CF 34H2900BL3	**18454**
3200	W68CF 3H3200BL3	**18371**	W68CF 34H3200BL3	**18455**
3600	W68CF 3H3600BL3	**18372**	W68CF 34H3600BL3	**18456**
4000	W68CF 3H4000BL3	**18373**	W68CF 34H4000BL3	**18457**
Equipped with BL4 electronic trip unit				
2000	W68CF 3H2000BL4	**18374**	W68CF 34H2000BL4	**18458**
2500	W68CF 3H2500BL4	**18375**	W68CF 34H2500BL4	**18459**
2900	W68CF 3H2900BL4	**18376**	W68CF 34H2900BL4	**18460**
3200	W68CF 3H3200BL4	**18377**	W68CF 34H3200BL4	**18461**
3600	W68CF 3H3600BL4	**18378**	W68CF 34H3600BL4	**18462**
4000	W68CF 3H4000BL4	**18379**	W68CF 34H4000BL4	**18463**
Equipped with BM3 electronic trip unit				
2000	W68CF 3H2000BM3	**18380**	W68CF 34H2000BM3	**18464**
2500	W68CF 3H2500BM3	**18381**	W68CF 34H2500BM3	**18465**
2900	W68CF 3H2900BM3	**18382**	W68CF 34H2900BM3	**18466**
3200	W68CF 3H3200BM3	**18383**	W68CF 34H3200BM3	**18467**
3600A	W68CF 3H3600BM3	**18384**	W68CF 34H3600BM3	**18468**
4000	W68CF 3H4000BM3	**18385**	W68CF 34H4000BM3	**18469**
Equipped with BM4 electronic trip unit				
2000	W68CF 3H2000BM4	**18386**	W68CF 34H2000BM4	**18470**
2500	W68CF 3H2500BM4	**18387**	W68CF 34H2500BM4	**18471**
2900	W68CF 3H2900BM4	**18388**	W68CF 34H2900BM4	**18472**
3200	W68CF 3H3200BM4	**18389**	W68CF 34H3200BM4	**18473**
3600	W68CF 3H3600BM4	**18390**	W68CF 34H3600BM4	**18474**
4000	W68CF 3H4000BM4	**18391**	W68CF 34H4000BM4	**18475**
Equipped with BHP electronic trip unit				
2000	W68CF 3H2000BHP	**18392**	W68CF 34H2000BH4P	**18476**
2500	W68CF 3H2500BHP	**18393**	W68CF 34H2500BH4P	**18477**
2900	W68CF 3H2900BHP	**18394**	W68CF 34H2900BH4P	**18478**
3200	W68CF 3H3200BHP	**18395**	W68CF 34H3200BH4P	**18479**
3600	W68CF 3H3600BHP	**18396**	W68CF 34H3600BH4P	**18480**
4000	W68CF 3H4000BHP	**18397**	W68CF 34H4000BH4P	**18481**
Equipped with BHQ electronic trip unit				
2000	W68CF 3H2000BHQ	**18398**	W68CF 34H2000BHQ	**18482**
2500	W68CF 3H2500BHQ	**18399**	W68CF 34H2500BHQ	**18483**
2900	W68CF 3H2900BHQ	**18400**	W68CF 34H2900BHQ	**18484**
3200	W68CF 3H3200BHQ	**18401**	W68CF 34H3200BHQ	**18485**
3600	W68CF 3H3600BHQ	**18402**	W68CF 34H3600BHQ	**18486**
4000	W68CF 3H4000BHQ	**18403**	W68CF 34H4000BHQ	**18487**
Equipped with BHG electronic trip unit				
2000	W68CF 3H2000BHG	**18404**	W68CF 34H2000BHG	**18488**
2500	W68CF 3H2500BHG	**18405**	W68CF 34H2500BHG	**18489**
2900	W68CF 3H2900BHG	**18406**	W68CF 34H2900BHG	**18490**
3200	W68CF 3H3200BHG	**18407**	W68CF 34H3200BHG	**18491**
3600	W68CF 3H3600BHG	**18408**	W68CF 34H3600BHG	**18492**
4000	W68CF 3H4000BHG	**18409**	W68CF 34H4000BHG	**18493**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

1

Selection and ordering data

Size C, withdrawable version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories (1)



Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
2000	W68CD 3N2000BL3	**18494**	W68CD 34N2000BL3	**32145**
2500	W68CD 3N2500BL3	**18495**	W68CD 34N2500BL3	**32146**
2900	W68CD 3N2900BL3	**18496**	W68CD 34N2900BL3	**32147**
3200	W68CD 3N3200BL3	**18497**	W68CD 34N3200BL3	**32148**
3600	W68CD 3N3600BL3	**18498**	W68CD 34N3600BL3	**32149**
4000	W68CD 3N4000BL3	**18499**	W68CD 34N4000BL3	**32150**
Equipped with BL4 electronic trip unit				
2000	W68CD 3N2000BL4	**18500**	W68CD 34N2000BL4	**32151**
2500	W68CD 3N2500BL4	**18501**	W68CD 34N2500BL4	**32152**
2900	W68CD 3N2900BL4	**32069**	W68CD 34N2900BL4	**32153**
3200	W68CD 3N3200BL4	**32070**	W68CD 34N3200BL4	**32154**
3600	W68CD 3N3600BL4	**32071**	W68CD 34N3600BL4	**32155**
4000	W68CD 3N4000BL4	**32072**	W68CD 34N4000BL4	**32156**
Equipped with BM3 electronic trip unit				
2000	W68CD 3N2000BM3	**32073**	W68CD 34N2000BM3	**32157**
2500	W68CD 3N2500BM3	**32074**	W68CD 34N2500BM3	**32158**
2900	W68CD 3N2900BM3	**32075**	W68CD 34N2900BM3	**32159**
3200	W68CD 3N3200BM3	**32076**	W68CD 34N3200BM3	**32160**
3600A	W68CD 3N3600BM3	**32077**	W68CD 34N3600BM3	**32161**
4000	W68CD 3N4000BM3	**32078**	W68CD 34N4000BM3	**32162**
Equipped with BM4 electronic trip unit				
2000	W68CD 3N2000BM4	**32079**	W68CD 34N2000BM4	**32163**
2500	W68CD 3N2500BM4	**32080**	W68CD 34N2500BM4	**32164**
2900	W68CD 3N2900BM4	**32081**	W68CD 34N2900BM4	**32165**
3200	W68CD 3N3200BM4	**32082**	W68CD 34N3200BM4	**32166**
3600	W68CD 3N3600BM4	**32083**	W68CD 34N3600BM4	**32167**
4000	W68CD 3N4000BM4	**32084**	W68CD 34N4000BM4	**32168**
Equipped with BHP electronic trip unit				
2000	W68CD 3N2000BHP	**32085**	W68CD 34N2000BH4P	**32169**
2500	W68CD 3N2500BHP	**32086**	W68CD 34N2500BH4P	**32170**
2900	W68CD 3N2900BHP	**32087**	W68CD 34N2900BH4P	**32171**
3200	W68CD 3N3200BHP	**32088**	W68CD 34N3200BH4P	**32172**
3600	W68CD 3N3600BHP	**32089**	W68CD 34N3600BH4P	**32173**
4000	W68CD 3N4000BHP	**32090**	W68CD 34N4000BH4P	**32174**
Equipped with BHQ electronic trip unit				
2000	W68CD 3N2000BHQ	**32091**	W68CD 34N2000BHQ	**32175**
2500	W68CD 3N2500BHQ	**32092**	W68CD 34N2500BHQ	**32176**
2900	W68CD 3N2900BHQ	**32093**	W68CD 34N2900BHQ	**32177**
3200	W68CD 3N3200BHQ	**32094**	W68CD 34N3200BHQ	**32178**
3600	W68CD 3N3600BHQ	**32095**	W68CD 34N3600BHQ	**32179**
4000	W68CD 3N4000BHQ	**32096**	W68CD 34N4000BHQ	**32180**
Equipped with BHG electronic trip unit				
2000	W68CD 3N2000BHG	**32097**	W68CD 34N2000BHG	**32181**
2500	W68CD 3N2500BHG	**32098**	W68CD 34N2500BHG	**32182**
2900	W68CD 3N2900BHG	**32099**	W68CD 34N2900BHG	**32183**
3200	W68CD 3N3200BHG	**32100**	W68CD 34N3200BHG	**32184**
3600	W68CD 3N3600BHG	**32101**	W68CD 34N3600BHG	**32185**
4000	W68CD 3N4000BHG	**32102**	W68CD 34N4000BHG	**32186**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size C, withdrawable version, horizontal rear connection, Icu 120 kA, Ics = 100 kA, with standard accessories (1)



Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
2000	W68CD 3H2000BL3	**32103**	W68CD 34H2000BL3	**32187**
2500	W68CD 3H2500BL3	**32104**	W68CD 34H2500BL3	**32188**
2900	W68CD 3H2900BL3	**32105**	W68CD 34H2900BL3	**32189**
3200	W68CD 3H3200BL3	**32106**	W68CD 34H3200BL3	**32190**
3600	W68CD 3H3600BL3	**32107**	W68CD 34H3600BL3	**32191**
4000	W68CD 3H4000BL3	**32108**	W68CD 34H4000BL3	**32192**
Equipped with BL4 electronic trip unit				
2000	W68CD 3H2000BL4	**32109**	W68CD 34H2000BL4	**32193**
2500	W68CD 3H2500BL4	**32110**	W68CD 34H2500BL4	**32194**
2900	W68CD 3H2900BL4	**32111**	W68CD 34H2900BL4	**32195**
3200	W68CD 3H3200BL4	**32112**	W68CD 34H3200BL4	**32196**
3600	W68CD 3H3600BL4	**32113**	W68CD 34H3600BL4	**32197**
4000	W68CD 3H4000BL4	**32114**	W68CD 34H4000BL4	**32198**
Equipped with BM3 electronic trip unit				
2000	W68CD 3H2000BM3	**32115**	W68CD 34H2000BM3	**32199**
2500	W68CD 3H2500BM3	**32116**	W68CD 34H2500BM3	**32200**
2900	W68CD 3H2900BM3	**32117**	W68CD 34H2900BM3	**32201**
3200	W68CD 3H3200BM3	**32118**	W68CD 34H3200BM3	**32202**
3600A	W68CD 3H3600BM3	**32119**	W68CD 34H3600BM3	**32203**
4000	W68CD 3H4000BM3	**32120**	W68CD 34H4000BM3	**32204**
Equipped with BM4 electronic trip unit				
2000	W68CD 3H2000BM4	**32121**	W68CD 34H2000BM4	**32205**
2500	W68CD 3H2500BM4	**32122**	W68CD 34H2500BM4	**32206**
2900	W68CD 3H2900BM4	**32123**	W68CD 34H2900BM4	**32207**
3200	W68CD 3H3200BM4	**32124**	W68CD 34H3200BM4	**32208**
3600	W68CD 3H3600BM4	**32125**	W68CD 34H3600BM4	**32209**
4000	W68CD 3H4000BM4	**32126**	W68CD 34H4000BM4	**32210**
Equipped with BHP electronic trip unit				
2000	W68CD 3H2000BHP	**32127**	W68CD 34H2000BH4P	**32211**
2500	W68CD 3H2500BHP	**32128**	W68CD 34H2500BH4P	**32212**
2900	W68CD 3H2900BHP	**32129**	W68CD 34H2900BH4P	**32213**
3200	W68CD 3H3200BHP	**32130**	W68CD 34H3200BH4P	**32214**
3600	W68CD 3H3600BHP	**32131**	W68CD 34H3600BH4P	**32215**
4000	W68CD 3H4000BHP	**32132**	W68CD 34H4000BH4P	**32216**
Equipped with BHQ electronic trip unit				
2000	W68CD 3H2000BHQ	**32133**	W68CD 34H2000BHQ	**32217**
2500	W68CD 3H2500BHQ	**32134**	W68CD 34H2500BHQ	**32218**
2900	W68CD 3H2900BHQ	**32135**	W68CD 34H2900BHQ	**32219**
3200	W68CD 3H3200BHQ	**32136**	W68CD 34H3200BHQ	**32220**
3600	W68CD 3H3600BHQ	**32137**	W68CD 34H3600BHQ	**32221**
4000	W68CD 3H4000BHQ	**32138**	W68CD 34H4000BHQ	**32222**
Equipped with BHG electronic trip unit				
2000	W68CD 3H2000BHG	**32139**	W68CD 34H2000BHG	**32223**
2500	W68CD 3H2500BHG	**32140**	W68CD 34H2500BHG	**32224**
2900	W68CD 3H2900BHG	**32141**	W68CD 34H2900BHG	**32225**
3200	W68CD 3H3200BHG	**32142**	W68CD 34H3200BHG	**32226**
3600	W68CD 3H3600BHG	**32143**	W68CD 34H3600BHG	**32227**
4000	W68CD 3H4000BHG	**32144**	W68CD 34H4000BHG	**32228**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size D, fixed version, Icu = Ics = 100 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3N4000BL3	**32229**	W68DF 4N4000BL3	**32292**
5000	W68DF 3N5000BL3	**32230**	W68DF 4N5000BL3	**32293**
6300	W68DF 3N6300BL3	**32231**	W68DF 4N6300BL3	**32294**
Equipped with BL4 electronic trip unit				
4000	W68DF 3N4000BL4	**32232**	W68DF 4N4000BL4	**32295**
5000	W68DF 3N5000BL4	**32233**	W68DF 4N5000BL4	**32296**
6300	W68DF 3N6300BL4	**32234**	W68DF 4N6300BL4	**32297**
Equipped with BM3 electronic trip unit				
4000	W68DF 3N4000BM3	**32235**	W68DF 4N4000BM3	**32298**
5000	W68DF 3N5000BM3	**32236**	W68DF 4N5000BM3	**32299**
6300	W68DF 3N6300BM3	**32237**	W68DF 4N6300BM3	**32300**
Equipped with BM4 electronic trip unit				
4000	W68DF 3N4000BM4	**32238**	W68DF 4N4000BM4	**32301**
5000	W68DF 3N5000BM4	**32239**	W68DF 4N5000BM4	**32302**
6300	W68DF 3N6300BM4	**32240**	W68DF 4N6300BM4	**32303**
Equipped with BHP electronic trip unit				
4000	W68DF 3N4000BHP	**32241**	W68DF 4N4000BHP	**32304**
5000	W68DF 3N5000BHP	**32242**	W68DF 4N5000BHP	**32305**
6300	W68DF 3N6300BHP	**32243**	W68DF 4N6300BHP	**32306**
Equipped with BHQ electronic trip unit				
4000	W68DF 3N4000BHQ	**32244**	W68DF 4N4000BHQ	**32307**
5000	W68DF 3N5000BHQ	**32245**	W68DF 4N5000BHQ	**32308**
6300	W68DF 3N6300BHQ	**32246**	W68DF 4N6300BHQ	**32309**
Equipped with BHG electronic trip unit				
4000	W68DF 3N4000BHG	**32247**	W68DF 4N4000BHG	**32310**
5000	W68DF 3N5000BHG	**32248**	W68DF 4N5000BHG	**32311**
6300	W68DF 3N6300BHG	**32249**	W68DF 4N6300BHG	**32312**

Size D, fixed version, Icu = Ics = 120 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3H4000BL3	**32250**	W68DF 4H4000BL3	**32313**
5000	W68DF 3H5000BL3	**32251**	W68DF 4H5000BL3	**32314**
6300	W68DF 3H6300BL3	**32252**	W68DF 4H6300BL3	**32315**
Equipped with BL4 electronic trip unit				
4000	W68DF 3H4000BL4	**32253**	W68DF 4H4000BL4	**32316**
5000	W68DF 3H5000BL4	**32254**	W68DF 4H5000BL4	**32317**
6300	W68DF 3H6300BL4	**32255**	W68DF 4H6300BL4	**32318**
Equipped with BM3 electronic trip unit				
4000	W68DF 3H4000BM3	**32256**	W68DF 4H4000BM3	**32319**
5000	W68DF 3H5000BM3	**32257**	W68DF 4H5000BM3	**32320**
6300	W68DF 3H6300BM3	**32258**	W68DF 4H6300BM3	**32321**
Equipped with BM4 electronic trip unit				
4000	W68DF 3H4000BM4	**32259**	W68DF 4H4000BM4	**32322**
5000	W68DF 3H5000BM4	**32260**	W68DF 4H5000BM4	**32323**
6300	W68DF 3H6300BM4	**32261**	W68DF 4H6300BM4	**32324**
Equipped with BHP electronic trip unit				
4000	W68DF 3H4000BHP	**32262**	W68DF 4H4000BHP	**32325**
5000	W68DF 3H5000BHP	**32263**	W68DF 4H5000BHP	**32326**
6300	W68DF 3H6300BHP	**32264**	W68DF 4H6300BHP	**32327**
Equipped with BHQ electronic trip unit				
4000	W68DF 3H4000BHQ	**32265**	W68DF 4H4000BHQ	**32328**
5000	W68DF 3H5000BHQ	**32266**	W68DF 4H5000BHQ	**32329**
6300	W68DF 3H6300BHQ	**32267**	W68DF 4H6300BHQ	**32330**
Equipped with BHG electronic trip unit				
4000	W68DF 3H4000BHG	**32268**	W68DF 4H4000BHG	**32331**
5000	W68DF 3H5000BHG	**32269**	W68DF 4H5000BHG	**32332**
6300	W68DF 3H6300BHG	**32270**	W68DF 4H6300BHG	**32333**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size D, fixed version, Icu = Ics = 150 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3S4000BL3	**32271**	W68DF 4S4000BL3	**32334**
5000	W68DF 3S5000BL3	**32272**	W68DF 4S5000BL3	**32335**
6300	W68DF 3S6300BL3	**32273**	W68DF 4S6300BL3	**32336**
Equipped with BL4 electronic trip unit				
4000	W68DF 3S4000BL4	**32274**	W68DF 4S4000BL4	**32337**
5000	W68DF 3S5000BL4	**32275**	W68DF 4S5000BL4	**32338**
6300	W68DF 3S6300BL4	**32276**	W68DF 4S6300BL4	**32339**
Equipped with BM3 electronic trip unit				
4000	W68DF 3S4000BM3	**32277**	W68DF 4S4000BM3	**32340**
5000	W68DF 3S5000BM3	**32278**	W68DF 4S5000BM3	**32341**
6300	W68DF 3S6300BM3	**32279**	W68DF 4S6300BM3	**32342**
Equipped with BM4 electronic trip unit				
4000	W68DF 3S4000BM4	**32280**	W68DF 4S4000BM4	**32343**
5000	W68DF 3S5000BM4	**32281**	W68DF 4S5000BM4	**32344**
6300	W68DF 3S6300BM4	**32282**	W68DF 4S6300BM4	**32345**
Equipped with BHP electronic trip unit				
4000	W68DF 3S4000BHP	**32283**	W68DF 4S4000BHP	**32346**
5000	W68DF 3S5000BHP	**32284**	W68DF 4S5000BHP	**32347**
6300	W68DF 3S6300BHP	**32285**	W68DF 4S6300BHP	**32348**
Equipped with BHQ electronic trip unit				
4000	W68DF 3S4000BHQ	**32286**	W68DF 4S4000BHQ	**32349**
5000	W68DF 3S5000BHQ	**32287**	W68DF 4S5000BHQ	**32350**
6300	W68DF 3S6300BHQ	**32288**	W68DF 4S6300BHQ	**32351**
Equipped with BHG electronic trip unit				
4000	W68DF 3S4000BHG	**32289**	W68DF 4S4000BHG	**32352**
5000	W68DF 3S5000BHG	**32290**	W68DF 4S5000BHG	**32353**
6300	W68DF 3S6300BHG	**32291**	W68DF 4S6300BHG	**32354**

Size D, withdrawable version, Icu = Ics = 100 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3N4000BL3	**32355**	W68DD 4N4000BL3	**32418**
5000	W68DD 3N5000BL3	**32356**	W68DD 4N5000BL3	**32419**
6300	W68DD 3N6300BL3	**32357**	W68DD 4N6300BL3	**32420**
Equipped with BL4 electronic trip unit				
4000	W68DD 3N4000BL4	**32358**	W68DD 4N4000BL4	**13898**
5000	W68DD 3N5000BL4	**32359**	W68DD 4N5000BL4	**13899**
6300	W68DD 3N6300BL4	**32360**	W68DD 4N6300BL4	**13900**
Equipped with BM3 electronic trip unit				
4000	W68DD 3N4000BM3	**32361**	W68DD 4N4000BM3	**13901**
5000	W68DD 3N5000BM3	**32362**	W68DD 4N5000BM3	**13902**
6300	W68DD 3N6300BM3	**32363**	W68DD 4N6300BM3	**13903**
Equipped with BM4 electronic trip unit				
4000	W68DD 3N4000BM4	**32364**	W68DD 4N4000BM4	**13904**
5000	W68DD 3N5000BM4	**32365**	W68DD 4N5000BM4	**13905**
6300	W68DD 3N6300BM4	**32366**	W68DD 4N6300BM4	**13906**
Equipped with BHP electronic trip unit				
4000	W68DD 3N4000BHP	**32367**	W68DD 4N4000BHP	**13907**
5000	W68DD 3N5000BHP	**32368**	W68DD 4N5000BHP	**13908**
6300	W68DD 3N6300BHP	**32369**	W68DD 4N6300BHP	**13909**
Equipped with BHQ electronic trip unit				
4000	W68DD 3N4000BHQ	**32370**	W68DD 4N4000BHQ	**13910**
5000	W68DD 3N5000BHQ	**32371**	W68DD 4N5000BHQ	**13911**
6300	W68DD 3N6300BHQ	**32372**	W68DD 4N6300BHQ	**13912**
Equipped with BHG electronic trip unit				
4000	W68DD 3N4000BHG	**32373**	W68DD 4N4000BHG	**13913**
5000	W68DD 3N5000BHG	**32374**	W68DD 4N5000BHG	**13914**
6300	W68DD 3N6300BHG	**32375**	W68DD 4N6300BHG	**13915**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size D, withdrawable version, Icu = Ics = 120 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3H4000BL3	**32376**	W68DD 4H4000BL3	**13916**
5000	W68DD 3H5000BL3	**32377**	W68DD 4H5000BL3	**13917**
6300	W68DD 3H6300BL3	**32378**	W68DD 4H6300BL3	**13918**
Equipped with BL4 electronic trip unit				
4000	W68DD 3H4000BL4	**32379**	W68DD 4H4000BL4	**13919**
5000	W68DD 3H5000BL4	**32380**	W68DD 4H5000BL4	**13920**
6300	W68DD 3H6300BL4	**32381**	W68DD 4H6300BL4	**13921**
Equipped with BM3 electronic trip unit				
4000	W68DD 3H4000BM3	**32382**	W68DD 4H4000BM3	**13922**
5000	W68DD 3H5000BM3	**32383**	W68DD 4H5000BM3	**13923**
6300	W68DD 3H6300BM3	**32384**	W68DD 4H6300BM3	**13924**
Equipped with BM4 electronic trip unit				
4000	W68DD 3H4000BM4	**32385**	W68DD 4H4000BM4	**13925**
5000	W68DD 3H5000BM4	**32386**	W68DD 4H5000BM4	**13926**
6300	W68DD 3H6300BM4	**32387**	W68DD 4H6300BM4	**13927**
Equipped with BHP electronic trip unit				
4000	W68DD 3H4000BHP	**32388**	W68DD 4H4000BHP	**13928**
5000	W68DD 3H5000BHP	**32389**	W68DD 4H5000BHP	**13929**
6300	W68DD 3H6300BHP	**32390**	W68DD 4H6300BHP	**13930**
Equipped with BHQ electronic trip unit				
4000	W68DD 3H4000BHQ	**32391**	W68DD 4H4000BHQ	**13931**
5000	W68DD 3H5000BHQ	**32392**	W68DD 4H5000BHQ	**13932**
6300	W68DD 3H6300BHQ	**32393**	W68DD 4H6300BHQ	**13933**
Equipped with BHG electronic trip unit				
4000	W68DD 3H4000BHG	**32394**	W68DD 4H4000BHG	**13934**
5000	W68DD 3H5000BHG	**32395**	W68DD 4H5000BHG	**13935**
6300	W68DD 3H6300BHG	**32396**	W68DD 4H6300BHG	**13936**

Size D, withdrawable version, Icu = Ics = 150 kA, with standard accessories (1)
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3S4000BL3	**32397**	W68DD 4S4000BL3	**13937**
5000	W68DD 3S5000BL3	**32398**	W68DD 4S5000BL3	**13938**
6300	W68DD 3S6300BL3	**32399**	W68DD 4S6300BL3	**13939**
Equipped with BL4 electronic trip unit				
4000	W68DD 3S4000BL4	**32400**	W68DD 4S4000BL4	**13940**
5000	W68DD 3S5000BL4	**32401**	W68DD 4S5000BL4	**13941**
6300	W68DD 3S6300BL4	**32402**	W68DD 4S6300BL4	**13942**
Equipped with BM3 electronic trip unit				
4000	W68DD 3S4000BM3	**32403**	W68DD 4S4000BM3	**13943**
5000	W68DD 3S5000BM3	**32404**	W68DD 4S5000BM3	**13944**
6300	W68DD 3S6300BM3	**32405**	W68DD 4S6300BM3	**13945**
Equipped with BM4 electronic trip unit				
4000	W68DD 3S4000BM4	**32406**	W68DD 4S4000BM4	**13946**
5000	W68DD 3S5000BM4	**32407**	W68DD 4S5000BM4	**13947**
6300	W68DD 3S6300BM4	**32408**	W68DD 4S6300BM4	**13948**
Equipped with BHP electronic trip unit				
4000	W68DD 3S4000BHP	**32409**	W68DD 4S4000BHP	**13949**
5000	W68DD 3S5000BHP	**32410**	W68DD 4S5000BHP	**13950**
6300	W68DD 3S6300BHP	**32411**	W68DD 4S6300BHP	**13951**
Equipped with BHQ electronic trip unit				
4000	W68DD 3S4000BHQ	**32412**	W68DD 4S4000BHQ	**13952**
5000	W68DD 3S5000BHQ	**32413**	W68DD 4S5000BHQ	**13953**
6300	W68DD 3S6300BHQ	**32414**	W68DD 4S6300BHQ	**13954**
Equipped with BHG electronic trip unit				
4000	W68DD 3S4000BHG	**32415**	W68DD 4S4000BHG	**13955**
5000	W68DD 3S5000BHG	**32416**	W68DD 4S5000BHG	**13956**
6300	W68DD 3S6300BHG	**32417**	W68DD 4S6300BHG	**13957**

Note:
(1) The standard accessories includes:
- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Electrical accessories for circuit breakers

Size	Rated Voltage Un	Description	Type code	Order code
Motorized operating mechanism - EM				
Size A	AC 230 V	EM AC 230 V for 3SW68-1600	W68A EM230A	**39684**
	AC 400 V	EM AC 400 V for 3SW68-1600	W68A EM400A	**39685**
	DC 110 V	EM DC 110 V for 3SW68-1600	W68A EM110D	**39686**
Size B/C/D	DC 220 V	EM DC 220 V for 3SW68-1600	W68A EM220D	**39687**
	AC 230 V	EM AC 230 V for 3SW68-2500…6300	W68B EM230A	**39688**
	AC 400 V	EM AC 400 V for 3SW68-2500…6300	W68B EM400A	**39689**
	DC 110 V	EM DC 110 V for 3SW68-2500…6300	W68B EM110D	**39690**
	DC 220 V	EM DC 220 V for 3SW68-2500…6300	W68B EM220D	**39691**
Closing coil - CM				
Size A/B/C/D	AC 230 V	CM AC 230 V for 3SW68	W68 CM230A	**39692**
	AC 400 V	CM AC 400 V for 3SW68	W68 CM400A	**39693**
	DC 110 V	CM DC 110 V for 3SW68	W68 CM110D	**39694**
	DC 220 V	CM DC 220 V for 3SW68	W68 CM220D	**39695**
Shunt release - SH				
Size A/B/C/D	AC 230 V	SH AC 230 V for 3SW68	W68 SH230A	**39696**
	AC 400 V	SH AC 400 V for 3SW68	W68 SH400A	**39697**
	DC 110 V	SH DC 110 V for 3SW68	W68 SH110D	**39698**
	DC 220 V	SH DC 220 V for 3SW68	W68 SH220D	**39699**
Under-voltage release - UV				
Size A/B/C/D	AC 230 V	UV AC 230 V for 3SW68	W68 UV230A	**39700**
	AC 400 V	UV AC 400 V for 3SW68	W68 UV400A	**39701**
Time-delay module for under-voltage release - UVD				
Size A/B/C/D	AC 230 V	UVD AC 230 V for 3SW68	W68 UVD230A	**39702**
	AC 400 V	UVD AC 400 V for 3SW68	W68 UVD400A	**39703**
Auxiliary contact - AU				
Size A	AC 230 V	AU 4 convertible contact AC 230 V for 3SW68-1600	W68A AU4X230A	**39704**
	AC 400 V	AU 4 convertible contact AC 400 V for 3SW68-1600	W68A AU4X400A	**39705**
	DC 110 V	AU 4 convertible contact DC 110 V for 3SW68-1600	W68A AU4X110D	**39706**
	DC 220 V	AU 4 convertible contact DC 220 V for 3SW68-1600	W68A AU4X220D	**39707**
	AC 230 V	AU 4 NO + 4 NC AC 230 V for 3SW68-1600	W68A AU44230A	**39708**
	AC 400 V	AU 4 NO + 4 NC AC 400 V for 3SW68-1600	W68A AU44400A	**39709**
	DC 110 V	AU 4 NO + 4 NC DC 110 V for 3SW68-1600	W68A AU44110D	**39710**
	DC 220 V	AU 4 NO + 4 NC DC 220 V for 3SW68-1600	W68A AU44220D	**39711**
	AC 230 V	AU 6 NO + 6 NC AC 230 V for 3SW68-1600	W68A AU66230A	**39712**
	AC 400 V	AU 6 NO + 6 NC AC 400 V for 3SW68-1600	W68A AU66400A	**39713**
	DC 110 V	AU 6 NO + 6 NC DC 110 V for 3SW68-1600	W68A AU66110D	**39714**
	DC 220 V	AU 6 NO + 6 NC DC 220 V for 3SW68-1600	W68A AU66220D	**39715**
Size B/C/D	AC 230 V	AU 4 convertible contact AC 230 V for 3SW68-2500...6300	W68B AU4X230A	**39716**
	AC 400 V	AU 4 convertible contact AC 400 V for 3SW68-2500...6300	W68B AU4X400A	**39717**
	AC 415 V	AU 4 convertible contact AC 415 V for 3SW68-2500...6300	W68B AU4X415A	**39718**
	DC 110 V	AU 4 convertible contact DC 110 V for 3SW68-2500...6300	W68B AU4X110D	**39719**
	DC 220 V	AU 4 convertible contact DC 220 V for 3SW68-2500...6300	W68B AU4X220D	**39720**
	DC 250 V	AU 4 convertible contact DC 250 V for 3SW68-2500...6300	W68B AU4X250D	**39721**
	AC 230 V	AU 4 NO + 4 NC AC 230 V for 3SW68-2500...6300	W68B AU44230A	**39722**
	AC 400 V	AU 4 NO + 4 NC AC 400 V for 3SW68-2500...6300	W68B AU44400A	**39723**
	AC 415 V	AU 4 NO + 4 NC AC 415 V for 3SW68-2500...6300	W68B AU44415A	**39724**
	DC 110 V	AU 4 NO + 4 NC DC 110 V for 3SW68-2500...6300	W68B AU44110D	**39725**
	DC 220 V	AU 4 NO + 4 NC DC 220 V for 3SW68-2500...6300	W68B AU44220D	**39726**
	DC 250 V	AU 4 NO + 4 NC DC 250 V for 3SW68-2500...6300	W68B AU44250D	**39727**
	AC 230 V	AU 6 NO + 6 NC AC 230 V for 3SW68-2500...6300	W68B AU66230A	**39728**
	AC 400 V	AU 6 NO + 6 NC AC 400 V for 3SW68-2500...6300	W68B AU66400A	**39729**
	AC 415 V	AU 6 NO + 6 NC AC 415 V for 3SW68-2500...6300	W68B AU66415A	**39730**
	DC 110 V	AU 6 NO + 6 NC DC 110 V for 3SW68-2500...6300	W68B AU66110D	**39731**
	DC 220 V	AU 6 NO + 6 NC DC 220 V for 3SW68-2500...6300	W68B AU66220D	**39732**
	DC 250 V	AU 6 NO + 6 NC DC 250 V for 3SW68-2500...6300	W68B AU66250D	**39733**
Auxiliary position contacts - AUP				
Size A		AUP for 3SW68-1600	W68A AUP	**39734**
Size B/C/D		AUP for 3SW68-2500...6300	W68B AUP	**39735**

Selection and ordering data

Mechanical accessories for circuit breakers

Size	Description	4-pole	
		Type code	Order code
Safety protection devices			
Size A/B/C/D	Opening protection for racking in / racking out for 3SW68 - OPC	W68 OPC	**39737**
Size A/B/C/D	Protection device for unexpected charging for 3SW68 - PUC	W68 PUC	**39738**
Size A	Protection cover for secondary terminal for 3SW68-1600 - CST	W68A CST	**13959**
Size B/C/D	Protection cover for secondary terminal for 3SW68-2500…6300 - CST	W68B CST	**13960**
Size A/B/C/D	Separate lock device for 3SW68 - SLD	W68 SLD	**13961**
Size A	3-position locking device for 3SW68-1600 - TPL	W68A TPL	**13962**
Size B	3-position locking device for 3SW68-2500…6300 - TPL	W68B TPL	**13963**
Size A/B/C/D	Position locking device for 3SW68 - PLD	W68 PLD	**13964**
Size A/B/C/D	Protection device for opening and closing buttons for 3SW68 - PDOC	W68 PDOC	**13965**
Size A/B/C/D	Key lock in open position for 3SW68 - KLO	W68 KLO	**13966**
Size A/B/C/D	Interlock for switchgear door for 3SW68 - ISD	W68 ISD	**13967**
Size A/B/C/D	Position key lock for 3SW68 - PKL	W68 PKL	**13968**
Size A/B/C/D	Blocking device for inserting in crank when the door is open for 3SW68 - BDI	W68 BDI	**13969**
Separators			
Size A	Separators 2 pieces for 3-pole 3SW68-1600 - PSB	W68A PSB3	**39739**
	Separators 3 pieces for 4-pole 3SW68-1600 - PSB	W68A PSB4	**39740**
Size B/C/D	Separators 2 pieces for 3-pole 3SW68-2500…6300 - PSB	W68B PSB3	**39741**
	Separators 3 pieces for 4-pole 3SW68-2500…6300 - PSB	W68B PSB4	**39742**
Door frame			
Size A	Door frame for withdrawable 3SW68-1600 - DF	W68A DFD	**39744**
Size B	Door frame for withdrawable 3SW68-2500 - DF	W68B DFD	**39745**
Size C	Door frame for withdrawable 3SW68-4000 - DF	W68C DFD	**39746**
Size D	Door frame for withdrawable 3SW68-6300 - DF	W68D DFD	**39747**
Size A	Door frame for fixed 3SW68-1600 - DF	W68A DFF	**39748**
Size B	Door frame for fixed 3SW68-2500 - DF	W68B DFF	**32490**
Size C	Door frame for fixed 3SW68-4000 - DF	W68C DFF	**32491**
Size D	Door frame for fixed 3SW68-6300 - DF	W68D DFF	**13958**
Connection terminals			
Size A	Front terminals for 3-pole 3SW68-1600 200…1000 A thickness 8 mm - BR	W68A BRF31	**13970**
	Front terminals for 3-pole 3SW68-1600 1250…1600 A thickness 15 mm - BR	W68A BRF32	**13971**
Size B	Front terminals for 3-pole 3SW68-2500 630…1000 A thickness 10 mm - BR	W68B BRF31	**13972**
	Front terminals for 3-pole 3SW68-2500 1250…2500 A thickness 10 mm - BR	W68B BRF32	**13973**
Size C	Front terminals for 3-pole 3SW68-4000 2000…3600 A thickness 15 mm - BR	W68C BRF31	**13974**
	Front terminals for 3-pole 3SW68-4000 4000 A thickness 20 mm - BR	W68C BRF32	**13975**
Size A	Front terminals for 4-pole 3SW68-1600 200…1000 A thickness 8 mm - BR	W68A BRF41	**13976**
	Front terminals for 4-pole 3SW68-1600 1250…1600 A thickness 15 mm - BR	W68A BRF42	**13977**
Size B	Front terminals for 4-pole 3SW68-2500 630…1000 A thickness 10 mm - BR	W68B BRF41	**13978**
	Front terminals for 4-pole 3SW68-2500 1250…2500 A thickness 10 mm - BR	W68B BRF42	**13979**
Size C	Front terminals for 4-pole 3SW68-4000 2000…3600 A thickness 15 mm - BR	W68C BRF41	**13980**
	Front terminals for 4-pole 3SW68-4000 4000 A thickness 20 mm - BR	W68C BRF42	**13981**
Size A	Spread terminals for 3-pole 3SW68-1600 200…1000 A thickness 8 mm - BR	W68A BRE31	**13982**
	Spread terminals for 3-pole 3SW68-1600 1250…1600 A thickness 15 mm - BR	W68A BRE32	**13983**
	Spread terminals for 4-pole 3SW68-1600 200…1000 A thickness 8 mm - BR	W68A BRE41	**13984**
	Spread terminals for 4-pole 3SW68-1600 1250…1600 A thickness 15 mm - BR	W68A BRE42	**13985**
Mechnical interlock			
Size A/B/C/D	Mechanical interlock cable type - LM	W68 LMC	**13986**
Size A/B/C/D	Mechanical interlock connecting rod type - LM	W68 LML	**13987**
Other accessories			
Size A/B/C/D	Crank for 3SW68 - CRK	W68 CRK	**39736**
Size A/B/C/D	Mechanical operation counter - MOC	MOC	**39743**

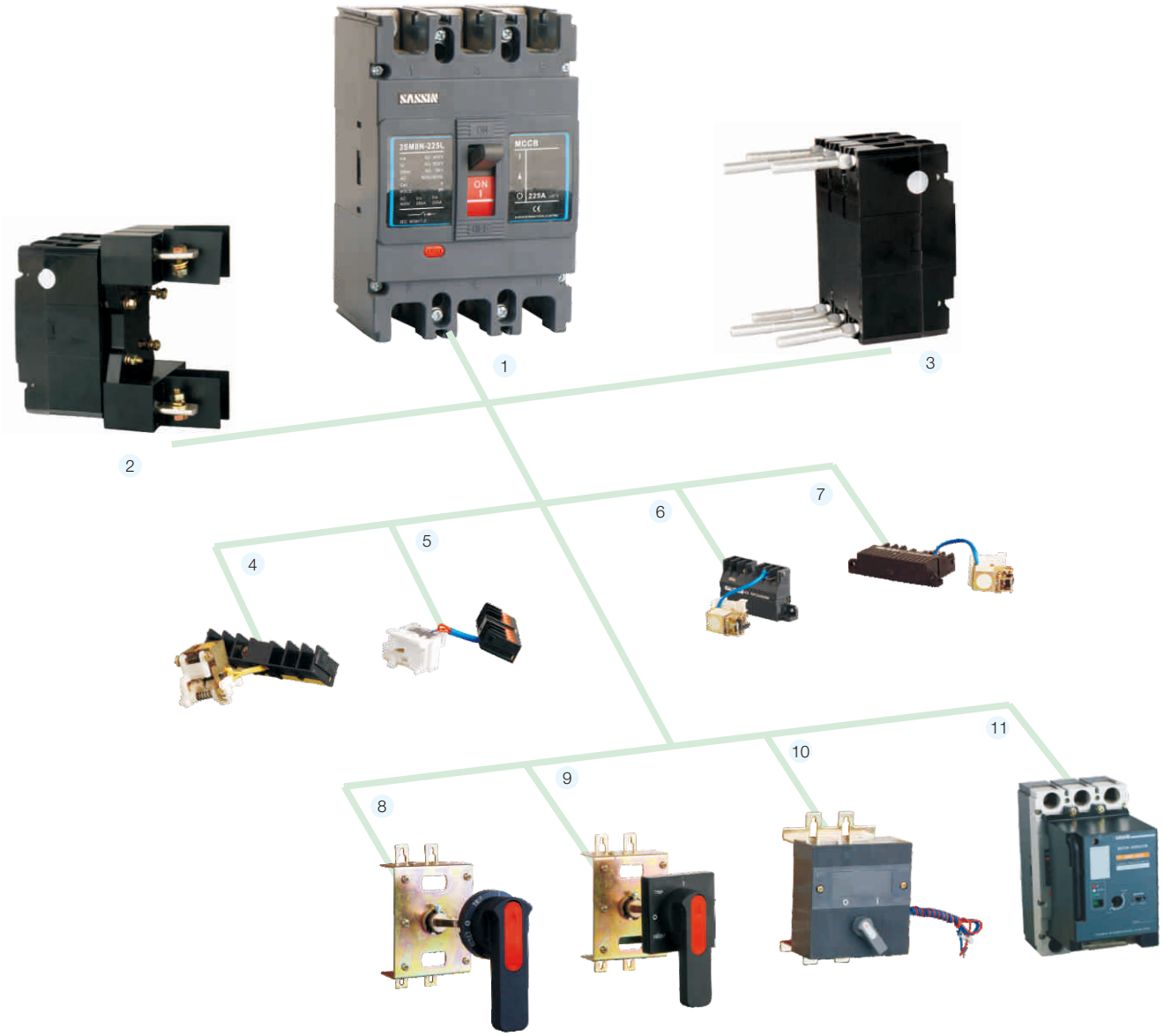
Selection and ordering data

Accessories for electronic trip unit

Size	Rated Voltage Un	Description	Type code	Order code
DC power supply – PSM				
Size A/B/C/D	DC 220 V	Power supply DC 220 V	W68 PSM220D	**13988**
	DC 110 V	Power supply DC 110 V	W68 PSM110D	**13989**
External current transformer for neutral conductor – CTN				
Size A		CTN for 3SW68-1600 200…1000 A	W68A CTN1	**13990**
		CTN for 3SW68-1600 1250…1600 A	W68A CTN2	**13991**
Size B		CTN for 3SW68-2500 630…1000 A	W68B CTN1	**13992**
		CTN for 3SW68-2500 1250…1600 A	W68B CTN2	**13993**
Size C		CTN for 3SW68-4000 2000…3600 A	W68C CTN1	**13994**
		CTN for 3SW68-4000 4000 A	W68C CTN2	**13995**
Size D		CTN for 3SW68-6300	W68D CTN	**13996**
External current transformer for earth-fault protection – CTE				
Size A		CTE for 3SW68-1600 200…1000 A	W68A CTE1	**13997**
		CTE for 3SW68-1600 1250…1600 A	W68A CTE2	**13998**
Size B		CTE for 3SW68-2500 630…1000 A	W68B CTE1	**13999**
		CTE for 3SW68-2500 1250…1600 A	W68B CTE2	**14000**
Size C		CTE for 3SW68-4000 2000…3600 A	W68C CTE1	**14001**
		CTE for 3SW68-4000 4000 A	W68C CTE2	**14002**
Size D		CTE for 3SW68-6300	W68D CTE	**14003**
External current transformer for differential protection – CTD				
Size A		CTD for 3SW68-1600 200…1000 A	W68A CTD1	**14004**
		CTD for 3SW68-1600 1250…1600 A	W68A CTD2	**14005**
Size B		CTD for 3SW68-2500 630…1000 A	W68B CTD1	**14006**
		CTD for 3SW68-2500 1250…1600 A	W68B CTD2	**14007**
Size C		CTD for 3SW68-4000 2000…3600 A	W68C CTD1	**14008**
		CTD for 3SW68-4000 4000 A	W68C CTD2	**14009**
Size D		CTD for 3SW68-6300	W68D CTD	**14010**

Series 3SM8N with thermal-magnetic trip unit

Overview



3SM8N series product overview

1	Body	5	Alarm contact	9	Rotary handle operating mechanism
2	Plug-in connection	6	Shunt release	10	Electromagnetic operating mechanism
3	Rear panel connection	7	Under-voltage release	11	Electric motor operating mechanism
4	Auxiliary contact	8	Rotary handle operating mechanism		

Applications and functions

- Incoming and outgoing function in distribution systems
- Switching and protection devices for motors, transformers and capacitors
- Disconnect or units with features for stopping and switching off in emergency mechanisms and terminal covers in conjunction with likeable rotary operating
- Available in the following versions
- Power protection: the overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads
- Motor protection: the overload and short-circuit releases are designed for optimized protection and direct-on-line starting of induction squirrel-cage motors. The circuit breakers for motor protection are susceptible to phase failure and feature an adjustable trip class



Instruction of type code

M8N A 3 P 400 L

- L — Breaking capacity
  - L: Standard breaking capacity
  - M: Middle breaking capacity
  - H: High breaking capacity
- 400 — Rated current (A)
  - 10, 16, 20, 25, 32, 40, 50, 63 (Frame A)
  - 16, 20, 25, 32, 40, 50, 63, 80, 100 (Frame B)
  - 100, 125, 160, 180, 200, 225 (Frame C)
  - 225, 250, 315, 350, 400 (Frame D)
  - 400, 500, 630 (Frame E)
  - 630, 700, 800 (Frame F)
- P — Protection type
  - P: Power protection
  - M: Motor protection
- 3 — Poles (P): 3: 3P; 4: 4P
- A — Frame
  - A: 3SM8N-63; B: 3SM8N-100; C: 3SM8N-225
  - D: 3SM8N-400; E: 3SM8N-630; F: 3SM8N-800
- M8N — Series code

Instruction of external structure



1. SASSIN logo
2. Type
3. Technical data
4. Standard
5. Test button
6. Working condition indicator
7. Rated current
8. Certificate

- There is no frame E and F for motor protection.
- Only M type (medium breaking capacity type) has 4 poles:
  - 4A: N-pole fixed without over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.
  - 4B: N-pole fixed without over-current release unit, it acts with other three poles.
  - 4C: N-pole fixed with over-current release unit, it acts with other three poles.
  - 4D: N-pole fixed with over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.

Series 3SM8N with thermal-magnetic trip unit

Technical Specifications

Type	3SM8N-63		3SM8N-100			3SM8N-225			3SM8N-400			3SM8N-630			3SM8N-800	
Standards	IEC 60947-2		IEC 60947-2			IEC 60947-2			IEC 60947-2			IEC 60947-2			IEC 60947-2	
Approval	IEC 60947-4-1		IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1	
Frame type	A		B			C			D			E			F	
Class of breaking capacity	L	M	L	M	H	L	M	H	L	M	H	L	M	H	M	H
Number of poles	3	3,4	3	3, 4	3	3	3, 4	3	3	3, 4	3	3	3, 4	3	3, 4	3
Frame Current Inm (A)	63		100			225			400			630			800	
Rated current In (A)	10, 16, 20, 25, 32, 40, 50, 63		16, 20, 25, 32 40, 50, 63, 80,100			100, 125,160 180, 200, 225			225, 250, 315 350, 400			400, 500 630			630, 700 800	
Rated insulating voltage Ui (V)	500		800			800			800			800			800	
Rated operating voltage, Ue (V)	400		400	690	400	400	690	400	400	690	400	400	690	400	690	400
Rated frequency (Hz)	50/60		50/60			50/60			50/60			50/60			50/60	
Rated impulsed withstand voltage, Uimp (kV)	6		8			8			8			8			8	
Rated ultimate short-circuit breaking capacity, Icu																
(AC) 50-60 Hz 400 V O-CO (kA)	25	50	35	50	85	35	50	85	50	65	100	50	65	100	65	100
(AC) 50-60 Hz 690 V O-CO (kA)	-	-	-	20	-	-	20	-	-	20	-	-	20	-	20	-
Rated operating short-circuit breaking capacity,Ics																
(AC) 50-60 Hz 400 V O-CO-CO (kA)	18	35	22	35	50	22	35	50	35	42	65	35	42	65	42	65
(AC) 50-60 Hz 690 V O-CO-CO (kA)	-	-	-	10	-	-	10	-	-	10	-	-	10	-	15	-
Mechanical life (times)	8000		8000			8000			7500			7500			7500	
Electrical life (times.)	1500		1500			1000			1000			1000			500	
Flashover distance (mm)	≤ 50		≤ 50			≤ 50			≤ 50			≤ 100			≤ 100	
Thermal magnetic release	■		■			■			■			■			■	
Electronic release	-		-			-			-			-			-	
Utilization category (IEC 60947-2)	A		A			A			A			A			A	
Under-voltage release	■		■			■			■			■			■	
Shunt-release	■		■			■			■			■			■	
Auxiliary contact	■		■			■			■			■			■	
Alarm Contact	■		■			■			■			■			■	
Weight	-		-			-			-			-			-	
Ambient temperature	-5 to +40 °C , max. 95% humidity															
Storage temperature	-40 to +75 °C															
Altitude (Max)	2000															

Selection and ordering data

	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
For 4 poles, please complete the code by adding N-pole code.							
Frame A	L	16	3	M8NA 3P16L	**25016**	M8NA 3M16L	**10139**
3SM8N-63	25 kA	20	3	M8NA 3P20L	**25017**	M8NA 3M20L	**10140**
		25	3	M8NA 3P25L	**25018**	M8NA 3M25L	**10141**
		32	3	M8NA 3P32L	**25019**	M8NA 3M32L	**10142**
		40	3	M8NA 3P40L	**25020**	M8NA 3M40L	**10143**
		50	3	M8NA 3P50L	**25021**	M8NA 3M50L	**10144**
		63	3	M8NA 3P63L	**25022**	M8NA 3M63L	**10145**
	M	16	3	M8NA 3P16M	**25025**	M8NA 3M16M	**10148**
	50 kA		4	M8NA 4*P16M	**25034***	M8NA 4*M16M	**10157***
		20	3	M8NA 3P20M	**25026**	M8NA 3M20M	**10149**
			4	M8NA 4*P20M	**25035***	M8NA 4*M20M	**10158***
		25	3	M8NA 3P25M	**25027**	M8NA 3M25M	**10150**
			4	M8NA 4*P25M	**25036***	M8NA 4*M25M	**10159***
		32	3	M8NA 3P32M	**25028**	M8NA 3M32M	**10151**
			4	M8NA 4*P32M	**25037***	M8NA 4*M32M	**10160***
		40	3	M8NA 3P40M	**25029**	M8NA 3M40M	**10152**
			4	M8NA 4*P40M	**25038***	M8NA 4*M40M	**10161***
		50	3	M8NA 3P50M	**25030**	M8NA 3M50M	**10153**
			4	M8NA 4*P50M	**25039***	M8NA 4*M50M	**10162***
		63	3	M8NA 3P63M	**25031**	M8NA 3M63M	**10154**
			4	M8NA 4*P63M	**25040***	M8NA 4*M63M	**10163***
Frame B	L	16	3	M8NB 3P016L	**25041**	M8NB 3M016L	**10164**
3SM8N-100	35 kA	20	3	M8NB 3P020L	**25042**	M8NB 3M020L	**10165**
		25	3	M8NB 3P025L	**25043**	M8NB 3M025L	**10166**
		32	3	M8NB 3P032L	**25044**	M8NB 3M032L	**10167**
		40	3	M8NB 3P040L	**25045**	M8NB 3M040L	**10168**
		50	3	M8NB 3P050L	**25046**	M8NB 3M050L	**10169**
		63	3	M8NB 3P063L	**25047**	M8NB 3M063L	**10170**
		80	3	M8NB 3P080L	**25048**	M8NB 3M080L	**10171**
		100	3	M8NB 3P100L	**25049**	M8NB 3M100L	**10172**
	M	16	3	M8NB 3P16M	**25050**	M8NB 3M16M	**10173**
	50 kA		4	M8NB 4*P16M	**25059***	M8NB 4*M16M	**10182***
		20	3	M8NB 3P20M	**25051**	M8NB 3M20M	**10174**
			4	M8NB 4*P20M	**25060***	M8NB 4*M20M	**10183***
		25	3	M8NB 3P25M	**25052**	M8NB 3M25M	**10175**
			4	M8NB 4*P25M	**25061***	M8NB 4*M25M	**10184***
		32	3	M8NB 3P32M	**25053**	M8NB 3M32M	**10176**
			4	M8NB 4*P32M	**25062***	M8NB 4*M32M	**10185***
		40	3	M8NB 3P40M	**25054**	M8NB 3M40M	**10177**
			4	M8NB 4*P40M	**25063***	M8NB 4*M40M	**10186***
		50	3	M8NB 3P50M	**25055**	M8NB 3M50M	**10178**
			4	M8NB 4*P50M	**25064***	M8NB 4*M50M	**10187***
		63	3	M8NB 3P63M	**25056**	M8NB 3M63M	**10179**
			4	M8NB 4*P63M	**25065***	M8NB 4*M63M	**10188***
		80	3	M8NB 3P80M	**25057**	M8NB 3M8N0M	**10180**
			4	M8NB 4*P80M	**25066***	M8NB 4*M8N0M	**10189***
		100	3	M8NB 3P100M	**25058**	M8NB 3M100M	**10181**
			4	M8NB 4*P100M	**25067***	M8NB 4*M100M	**10190***





Series 3SM8N with thermal-magnetic trip unit

Selection and ordering data

	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
For 4 poles, please complete the code by adding N-pole code.							
Frame B **3SM8N-100** 	H 85 kA	16	3	M8NB 3P016H	**25068**	M8NB 3M016H	**10191**
		20	3	M8NB 3P020H	**25069**	M8NB 3M020H	**10192**
		25	3	M8NB 3P025H	**25070**	M8NB 3M025H	**10193**
		32	3	M8NB 3P032H	**25071**	M8NB 3M032H	**10194**
		40	3	M8NB 3P040H	**25072**	M8NB 3M040H	**10195**
		50	3	M8NB 3P050H	**25073**	M8NB 3M050H	**10196**
		63	3	M8NB 3P063H	**25074**	M8NB 3M063H	**10197**
		80	3	M8NB 3P080H	**25075**	M8NB 3M080H	**10198**
		100	3	M8NB 3P100H	**25076**	M8NB 3M100H	**10199**
Frame C **3SM8N-225**	L 35 kA	100	3	M8NC 3P100L	**25077**	M8NC 3M100L	**10200**
		125	3	M8NC 3P125L	**25078**	M8NC 3M125L	**10201**
		160	3	M8NC 3P160L	**25079**	M8NC 3M160L	**10202**
		180	3	M8NC 3P180L	**25080**	M8NC 3M180L	**10203**
		200	3	M8NC 3P200L	**25081**	M8NC 3M200L	**10204**
		225	3	M8NC 3P225L	**25082**	M8NC 3M225L	**10205**
	M 50 kA	100	3	M8NC 3P100M	**25083**	M8NC 3M100M	**10206**
			4	M8NC 4*P100M	**25089***	M8NC 4*M100M	**10212***
		125	3	M8NC 3P125M	**25084**	M8NC 3M125M	**10207**
			4	M8NC 4*P125M	**25090***	M8NC 4*M125M	**10213***
		160	3	M8NC 3P160M	**25085**	M8NC 3M160M	**10208**
			4	M8NC 4*P160M	**25091***	M8NC 4*M160M	**10214***
		180	3	M8NC 3P180M	**25086**	M8NC 3M180M	**10209**
			4	M8NC 4*P180M	**25092***	M8NC 4*M180M	**10215***
		200	3	M8NC 3P200M	**25087**	M8NC 3M200M	**10210**
			4	M8NC 4*P200M	**25093***	M8NC 4*M200M	**10216***
		225	3	M8NC 3P225M	**25088**	M8NC 3M225M	**10211**
			4	M8NC 4*P225M	**25094***	M8NC 4*M225M	**10217***
	H 85 kA	100	3	M8NC 3P100H	**25095**	M8NC 3M100H	**10218**
		125	3	M8NC 3P125H	**25096**	M8NC 3M125H	**10219**
		160	3	M8NC 3P160H	**25097**	M8NC 3M160H	**10220**
		180	3	M8NC 3P180H	**25098**	M8NC 3M180H	**10221**
		200	3	M8NC 3P200H	**25099**	M8NC 3M200H	**10222**
		225	3	M8NC 3P225H	**25100**	M8NC 3M225H	**10223**
Frame D **3SM8N-400** 	L 50 kA	225	3	M8ND 3P225L	**25101**	M8ND 3M225L	**10224**
		250	3	M8ND 3P250L	**25102**	M8ND 3M250L	**10225**
		315	3	M8ND 3P315L	**25103**	M8ND 3M315L	**10226**
		350	3	M8ND 3P350L	**25104**	M8ND 3M350L	**10227**
		400	3	M8ND 3P400L	**25105**	M8ND 3M400L	**10228**
	M 65 kA	225	3	M8ND 3P225M	**25106**	M8ND 3M225M	**10229**
			4	M8ND 4*P225M	**25111***	M8ND 4*M225M	**10234***
		250	3	M8ND 3P250M	**25107**	M8ND 3M250M	**10230**
			4	M8ND 4*P250M	**25112***	M8ND 4*M250M	**10235***
		315	3	M8ND 3P315M	**25108**	M8ND 3M315M	**10231**
			4	M8ND 4*P315M	**25113***	M8ND 4*M315M	**10236***
		350	3	M8ND 3P350M	**25109**	M8ND 3M350M	**10232**
			4	M8ND 4*P350M	**25114***	M8ND 4*M350M	**10237***
		400	3	M8ND 3P400M	**25110**	M8ND 3M400M	**10233**
			4	M8ND 4*P400M	**25115***	M8ND 4*M400M	**10238***

Selection and ordering data

	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
		For 4 poles, please complete the code by adding N-pole code.					
Frame D	H	225	3	M8ND 3P225H	**25116**	M8ND 3M225H	**10239**
3SM8N-400	100 kA	250	3	M8ND 3P250H	**25117**	M8ND 3M250H	**10240**
		315	3	M8ND 3P315H	**25118**	M8ND 3M315H	**10241**
		350	3	M8ND 3P350H	**25119**	M8ND 3M350H	**10242**
		400	3	M8ND 3P400H	**25120**	M8ND 3M400H	**10243**
Frame E	L	400	3	M8NE 3P400L	**25121**	-	-
3SM8N-630	50 kA	500	3	M8NE 3P500L	**25122**	-	-
		630	3	M8NE 3P630L	**25123**	-	-
	M	400	3	M8NE 3P400M	**25124**	-	-
	65 kA		4	M8NE 4*P400M	**25127***	-	-
		500	3	M8NE 3P500M	**25125**	-	-
			4	M8NE 4*P500M	**25128***	-	-
		630	3	M8NE 3P630M	**25126**	-	-
			4	M8NE 4*P630M	**25129***	-	-
	H	400	3	M8NE 3P400H	**25130**	-	-
	100 kA	500	3	M8NE 3P500H	**25131**	-	-
		630	3	M8NE 3P630H	**25132**	-	-
Frame F	M	630	3	M8NF 3P630M	**25133**	-	-
3SM8N-800	65 kA		4	M8NF 4*P630M	**25136***	-	-
		700	3	M8NF 3P700M	**25134**	-	-
			4	M8NF 4*P700M	**25137***	-	-
		800	3	M8NF 3P800M	**25135**	-	-
			4	M8NF 4*P800M	**25138***	-	-
	H	630	3	M8NF 3P630H	**25139**	-	-
	100 kA	700	3	M8NF 3P700H	**25140**	-	-
		800	3	M8NF 3P800H	**25141**	-	-

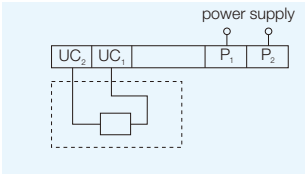


Accessories



- Under-voltage release

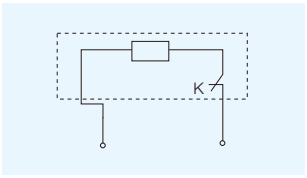
When voltage is 35 %-70 % of rated voltage, the under voltage release should make the breaker reliable operation.
When the voltage is more than 85 %~110 % of rated voltage, the under voltage release should make the breaker reliable operation.
When voltage is less than 35 % of rated voltage, the under voltage release should prevent breaker from making.



Frame		Rated voltage	Type code	Order code
A	3SM8N-63	230V AC	M8NA UR230A	**25154**
		400V AC	M8NA UR400A	**25160**
B	3SM8N-100	230V AC	M8NB UR230A	**25155**
		400V AC	M8NB UR400A	**25161**
C	3SM8N-225	230V AC	M8NC UR230A	**25156**
		400V AC	M8NC UR400A	**25162**
D	3SM8N-400	230V AC	M8ND UR230A	**25157**
		400V AC	M8ND UR400A	**25163**
E	3SM8N-630	230V AC	M8NE UR230A	**25158**
		400V AC	M8NE UR400A	**25164**
F	3SM8N-800	230V AC	M8NF UR230A	**25159**
		400V AC	M8NF UR400A	**25165**

Accessories





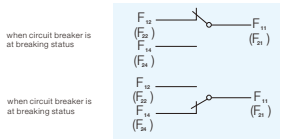
Shunt release

In 70% ~ 110% of the rated voltage, the breaker can reliably operate.

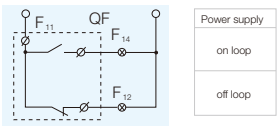
Frame		Rated voltage	Type code	Order code
A	3SM8N-63	230 V AC	M8NA SR230A	**25142**
		400 V AC	M8NA SR400A	**25148**
		110 V DC	M8NA SR110D	**10244**
		220 V DC	M8NA SR220D	**10250**
B	3SM8N-100	230 V AC	M8NB SR230A	**25143**
		400 V AC	M8NB SR400A	**25149**
		110 V DC	M8NB SR110D	**10245**
		220 V DC	M8NB SR220D	**10251**
C	3SM8N-225	230 V AC	M8NC SR230A	**25144**
		400 V AC	M8NC SR400A	**25150**
		110 V DC	M8NC SR110D	**10246**
		220 V DC	M8NC SR220D	**10252**
D	3SM8N-400	230 V AC	M8ND SR230A	**25145**
		400 V AC	M8ND SR400A	**25151**
		110 V DC	M8ND SR110D	**10247**
		220 V DC	M8ND SR220D	**10253**
E	3SM8N-630	230 V AC	M8NE SR230A	**25146**
		400 V AC	M8NE SR400A	**25152**
		110 V DC	M8NE SR110D	**10248**
		220 V DC	M8NE SR220D	**10254**
F	3SM8N-800	230 V AC	M8NF SR230A	**25147**
		400 V AC	M8NF SR400A	**25153**
		110 V DC	M8NF SR110D	**10249**
		220 V DC	M8NF SR220D	**10255**

Auxiliary contact





Connection chart

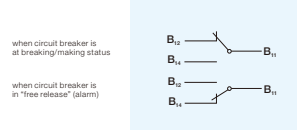


Indication of contacting status.

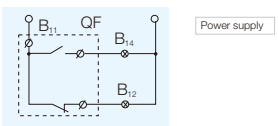
Frame			Type code	Order code
A	3SM8N-63	Left	M8NA ACL	**25166**
		Right	M8NA ACR	**10256**
B	3SM8N-100	Left	M8NB ACL	**25167**
		Right	M8NB ACR	**10257**
C	3SM8N-225	Left	M8NC ACL	**25168**
		Right	M8NC ACR	**10258**
D	3SM8N-400	Left	M8ND ACL	**25169**
		Right	M8ND ACR	**10259**
E	3SM8N-630	Left	M8NE ACL	**25170**
		Right	M8NE ACR	**10260**
F	3SM8N-800	Left	M8NF ACL	**25171**
		Right	M8NF ACR	**10261**

Alarm contact





Connection chart



Indication of contacting status.

Frame		Type code	Order code
A	3SM8N-63	M8NA AMC	**25172**
B	3SM8N-100	M8NB AMC	**25173**
C	3SM8N-225	M8NC AMC	**25174**
D	3SM8N-400	M8ND AMC	**25175**
E	3SM8N-630	M8NE AMC	**25176**
F	3SM8N-800	M8NF AMC	**25177**

Tripping Characteristic

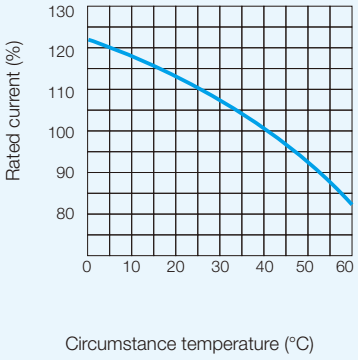
For power distribution

No.	Test current	I/In	Conventional time	Start status
1	Conventional non-trip current	1.05	2h (In > 63 A), 1h (In ≤ 63 A)	Cold status
2	Conventional trip current	1.3	2h (In > 63 A), 1h (In ≤ 63 A)	Right after test No.1

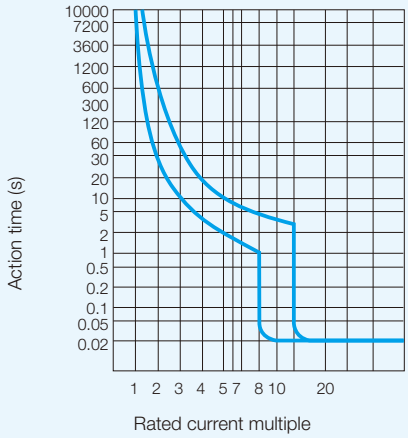
For motor protection

No.	Operational current	Conventional time	Start status	Remark
1	1.0 In	2 h	Cold status	-
2	1.2 In	≤ 2 h	Right after test No.1	-
3	1.5 In	≤ 4 min ≤ 8 min	Cold status Cold status	10 ≤ In ≤ 225 225 ≤ In ≤ 630
4	7.2 In	4 s ≤ T ≤ 0 s 6 s ≤ T≤ 20 s	Cold status Cold status	10 ≤ In ≤ 225 225 ≤ In ≤ 635

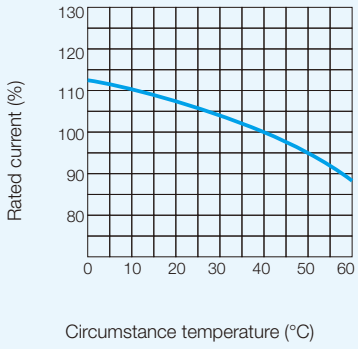
3SM8N-63,100 (10~32 A) Temperature emendation curve



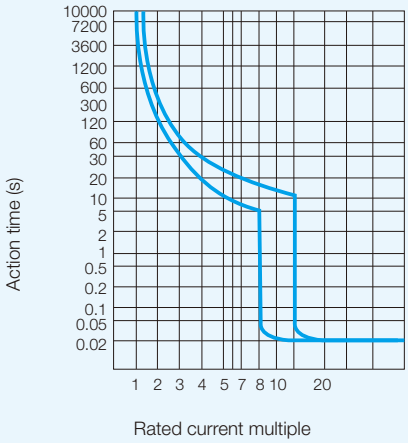
3SM8N-63,100 (10~32 A) Characteristic curve



3SM8N-63,100 (40~100 A) Temperature emendation curve



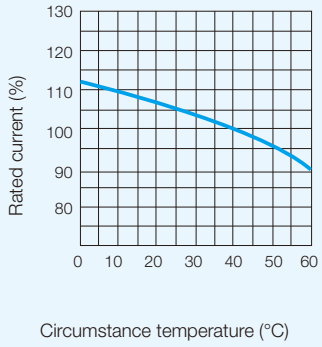
3SM8N-63,100 (40 ~100 A) Characteristic curve



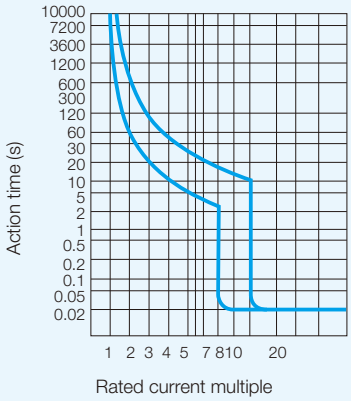
Series 3SM8N with thermal-magnetic trip unit

Temperature performance curve

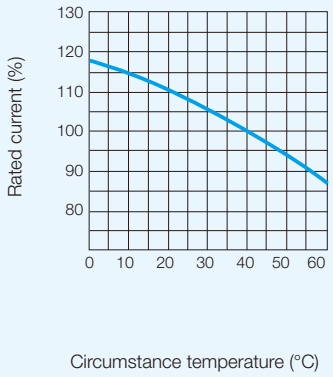
3SM8N-225 Temperature emendation curve



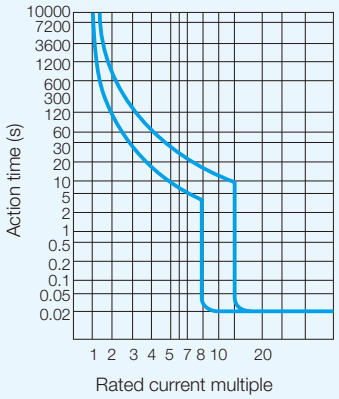
3SM8N-225 Characteristic curve



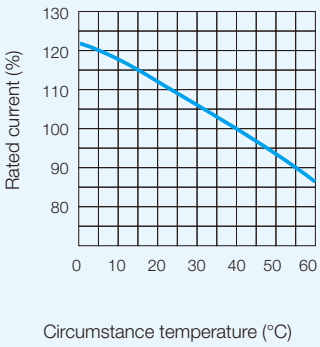
3SM8N-400 Temperature emendation curve



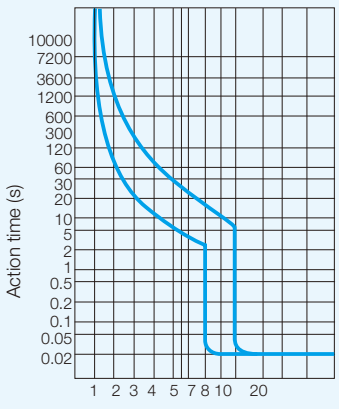
3SM8N-400 Characteristic curve



3SM8N-630,800 Temperature emendation curve

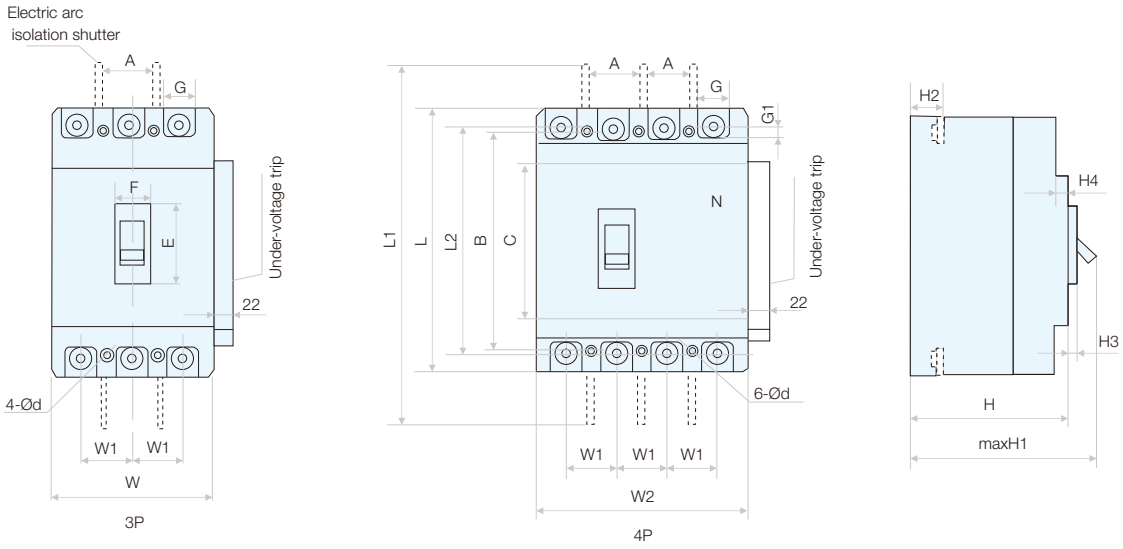


3SM8N-630,800 Characteristic curve



Outline and installation dimensions

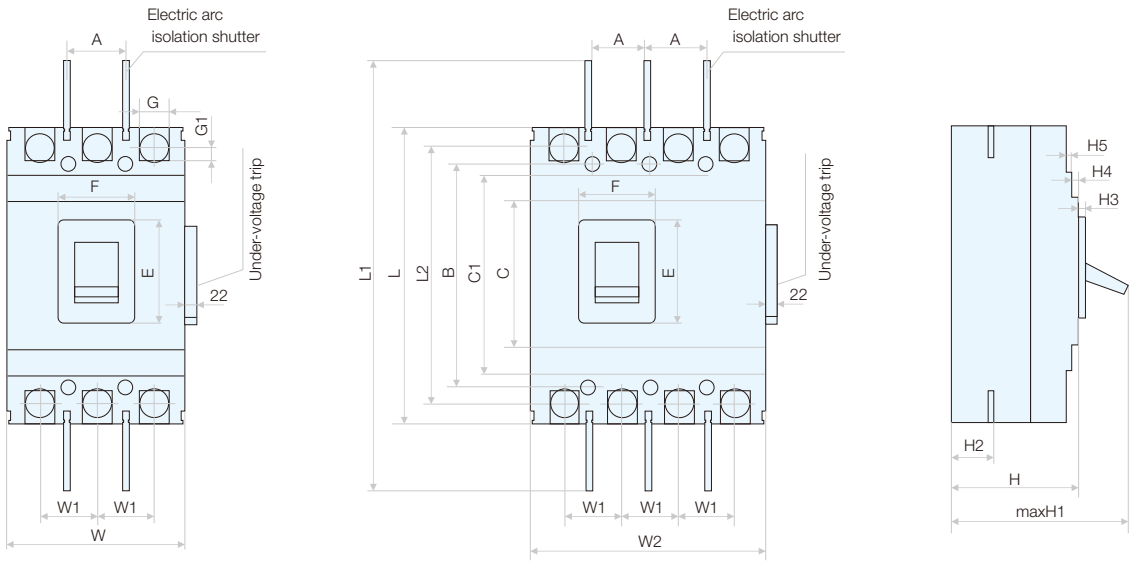
3SM8N-63, 100, 225 (front connection)



		Model					
		3SM8N-63L	3SM8N-63M	3SM8N-100L 3SM8N-100H	3SM8N-100M	3SM8N-225L 3SM8N-225H	3SM8N-225M
Dimensions	C	85	85	88.5	88.5	102	102
	E	52	52	58	58	64	64
	F	19.5	19.5	23	23	26	26
	G	14	14	17	17	22	22
	G1	6	6	7.5	7.5	16	10
	H	73.5	82.5	68	86	86.5	103
	H1	92	98.5	86	103	110	127
	H2	20	28	24	24	24	24
	H3	4.8	4.8	4.8	4	4	4
	H4	6.5	6.5	6.5	6.5	5	5
	L	135	135	150	150	165	165
	L1	172	172	255	255	360	360
	L2	114	114	132	132	144	144
	W	78	78	90	90	107	107
	W1	25	25	30	30	35	35
	W2	--	103	--	122	--	142
Installation Dimensions	A	25	25	30	30	35	35
	B	117	117	129	130	126	126
	Ød	4.2	4.2	4.5	4.5	4.5	4.5

Outline and installation dimensions

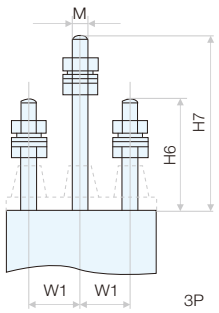
3SM8N-400, 630, 800 (front connection)

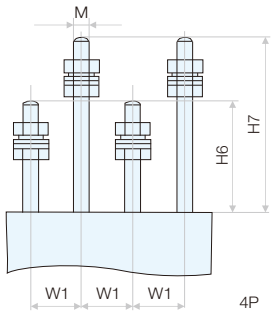


		Model				
		3SM8N-400L	3SM8N-400M	3SM8N-630L 3SM8N-630H	3SM8N-630M	3SM8N-800M 3SM8N-800H
Dimensions	C	120	120	134	134	154
	C1	174	174	184	184	204
	E	89	89	89	89	81
	F	50	50	60	60	66
	G	32	32	44	44	46
	G1	11	11	14	14	14
	H	107	107	112.5	112.5	111.5
	H1	146.5	146.5	160	160	155
	H2	38	38	43	43	44
	H3	9	9	10	10	10
	H4	7.5	7.5	10	10	10.5
	H5	4.5	4.5	4.5	4.5	4.5
	L	257	257	270	270	280
	L1	457	457	470	470	470
	L2	224	224	234	234	243
	W	150	150	182	182	210
	W1	44	44	58	58	70
	W2	-	198	-	240	280
Installation Dimensions	A	44	44	58	58	70
	B	194	194	200	200	243
	Ød	7	7	7	7	7

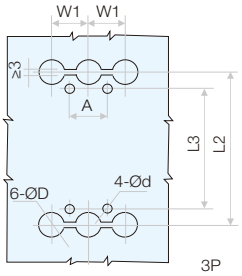
Outline and installation dimensions

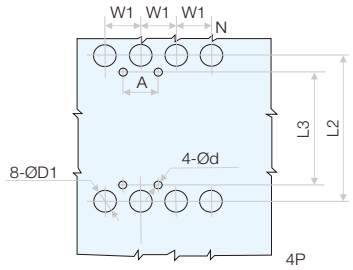
3SM8N-63, 100, 225 (Rear connection)



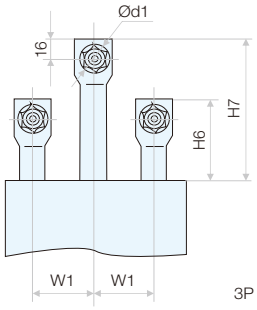


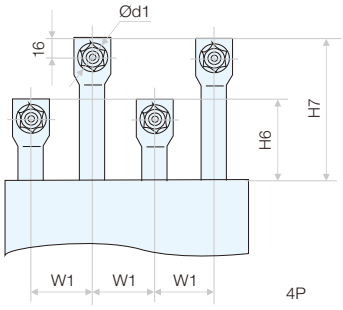
Rear connection stiletto chart



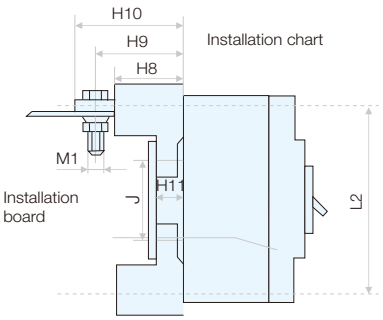


3SM8N-400, 630, 800 (Rear connection)

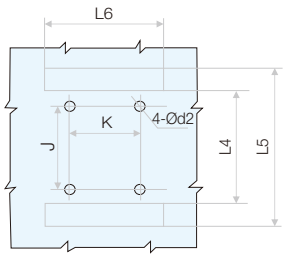




Insert style



Installation board stiletto chart



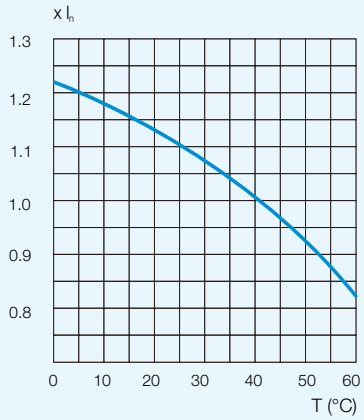
1

Outline and installation dimensions

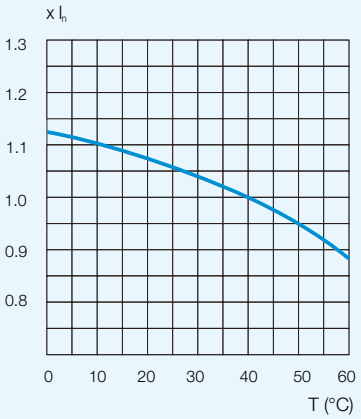
	3SM8-63L 3SM8-63M	3SM8-100L 3SM8-100M 3SM8-100H	3SM8-225L 3SM8-225M 3SM8-225H	3SM8-400L 3SM8-400M 3SM8-400H	3SM8-630L 3SM8-630M 3SM8-630H	3SM8-800M 3SM8-800H
A	25	30	35	44	58	70
Ød	Ø4.2	Ø4.5	Ø4.5	Ø6.5	Ø6.5	Ø7
Ød1	-	-		Ø12.5	Ø16.5	Ø16.5
Ød2	Ø5.5	Ø6.5	Ø6.5	Ø8.5	Ø8.5	Ø11.5
ØD	Ø14	Ø25	Ø25	Ø32	Ø40	Ø48
ØD1	Ø14	Ø25	Ø25	Ø32	Ø40	Ø48
H6	30	53	68	63.2	63.5	84
H7	50	88	89	104.5	104.5	84
H8	28	50	58	63.5	60	74
H9	36	64	65	80	92	-
H10	43	80	80	102	110	104
H11	10	15	17.5	20	21	30
L2	117	132	144	224	234	243
L3	117	107	126	194	200	243
L4	90	90	88	166	167	175
L5	146	172	190	282	303	305
L6	79	94	110	152	185	213
M	M5	M8	M8	-	-	-
K	50	60	70	60	100	90
J	60	56	54	129	123	123
M1	M5	M8	M8	M12	M12	M14
W1	25	30	35	48	58	70

Temperature performance curve

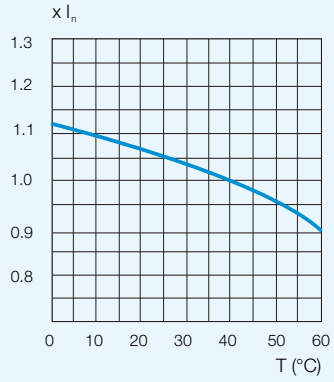
Size A/B
3SM8N-63/3SM8N-100
I_n = 10 ... 25 A



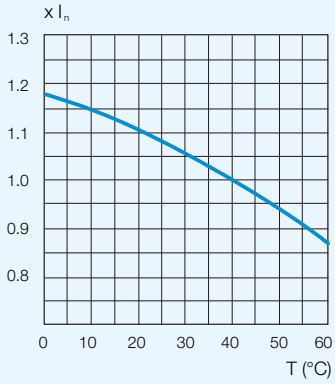
Size A/B
3SM8N-63/3SM8N-100
I_n = 32 ... 100 A



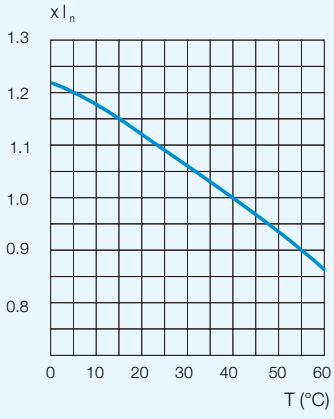
Size C
3SM8N-225
I_n = 100 ... 255 A



Size D
3SM8N-400
I_n = 225 ... 400 A



Size E/F
3SM8N-630/3SM8N-800
I_n = 400...800 A



Moulded Case Circuit Breakers
Series 3SM8E with electronic trip unit

Applications and functions

- Incoming and outgoing function in distribution systems
- Switching and protection devices for motors, transformers and capacitors
- Protect circuits and power supply devices against overload, short-circuit, under-voltage etc.
- Used in new energy, power, industry control, buildings,
- Available in the following versions
- Power protection
  The overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads
- Motor protection
  The overload and short-circuit releases are designed for optimized protection and direct-on-line starting of induction squirrel-cage motors.

Instruction of type code

M8E A 3 P 400 M

- M: Breaking capacity
  - M: Medium
  - H: High
- 400: Rated current
  - 32: 16...32 A
  - 63: 32...63 A
  - 125: 63...125 A
  - 250: 100...250 A
  - 400: 200...400 A
  - 630: 400...630 A
  - 800: 630...800 A
  - 1600: 640...1600 A
- P: Versions
  - P: Power distribution
  - M: Motor protection
- 3: Number of poles
  - 3: 3-pole
  - 4: 4-pole
- A: Code of size
  - A: 3SM8E-125
  - B: 3SM8E-250
  - C: 3SM8E-400
  - D: 3SM8E-630
  - E: 3SM8E-800
  - F: 3SM8E-1600
- M8E: Series code



Technical specifications

Size		A		B		C		D		E		F
Type		3SM8E-125		3SM8E-250		3SM8E-400		3SM8E-630		3SM8E-800		3SM8E-1600
Standard		IEC 60947-2 IEC 60947-4-1										
Rated current I_n adjustable	A	16-20-25-32, 32-36-40-45-50-55-60-63, 63-65-70-75-80-85-90-95-100-125		100-125-140-160-180-200-225-250		200-225-250-280-315-350-400		400-429-440-460-480-500-530-560-600-630		630-640-660-680-700-720-740-760-780-800		640-800-960-1120-1280-1440-1600
Breaking capacity		M	H	M	H	M	H	M	H	M	H	H
Number of poles	pole	3 4	3	3 4	3	3 4	3	3 4	3	3 4	3	3 4
Rated operating voltage U_e	V	AC 400										
Rated insulating voltage U_i	V	AC 800										
Rated impulsed withstand voltage U_{imp}	kV	8										
Rated frequency	Hz	50/60										
Rated ultimate short-circuit breaking capacity at AC 400 V 50/60 Hz I_{cu}	kA	50	85	50	85	65	100	65	100	65	100	80
Rated operating short-circuit breaking capacity at AC 400 V 50/60 Hz I_{cs}	kA	35	50	35	50	42	65	42	65	42	65	40
Rated short-time withstand current for 1 s at AC 400 V 50/60 Hz I_{cw}	kA					5		8		10		20
Category		A		A		B		B		B		B
Mechanical life	cycles	7000		7000		4000		3000		3000		2500
Electrical life	cycles	3000		3000		2000		1500		1500		1000
Flashover distance	mm	≤ 50		≤ 50		≤ 100		≤ 100		≤ 100		≤ 120

Normal working environment

Altitude
The rated performance of the circuit breaker does not change up to 2000 meters.
Beyond this altitude, the performance of the circuit breaker is subjest to derating, see the derating coefficients table on page A/00 .

Temperature
Storage: -40 °C to + 70 °C
Operating: -5 °C to + 40 °C
In case the circuit breaker operates at higher temperatures than +40 °C, the current-carrying capacity of the circuit breaker may be lower than the rated current-carry capacity at the reference temperature, therefore the derating coefficients must be applied. see the derating coefficients table on page A/00.

Relative humidity
When maximum temperature is 40 °C, relative humidity shall be less than 50%.
When the temperature is relative low, the relative humidity is allowed to be higher.
Condensation caused by change of temperature shall be taken special measures.

Pollution level
3

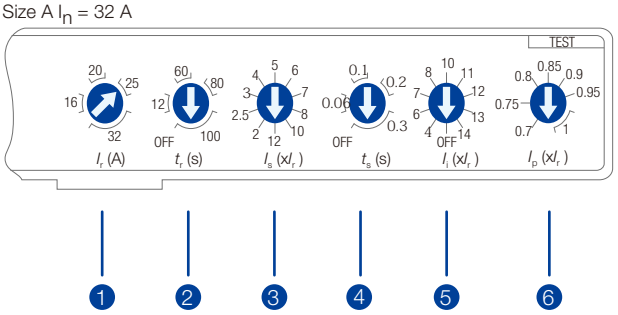
Installation category
Main circuit: III
Auxiliary circuit and control circuit: II

Installation environment
Horizontal or vertical, maximum inclination: 22.5 °.
Resistance to moist air, salt mist and oil mist.
Installed in an environment which is not enough to erode the metal or to destroy the insulating gas and without explosive danger.
Installed in an environment without attack from rain and snow.

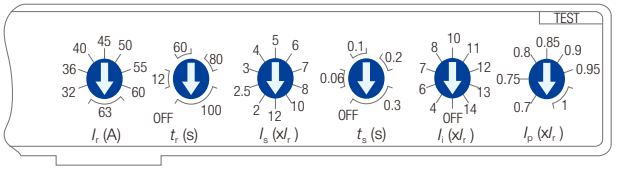
1

Electonic trip unit

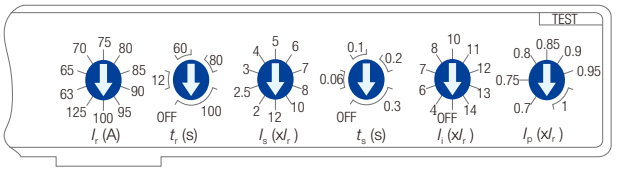
Size A I_n = 32 A



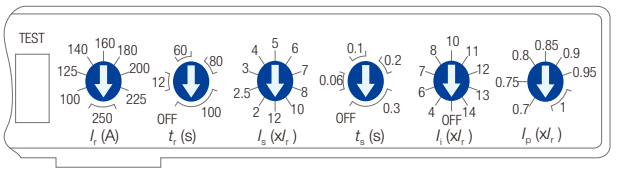
Size A I_n = 63 A



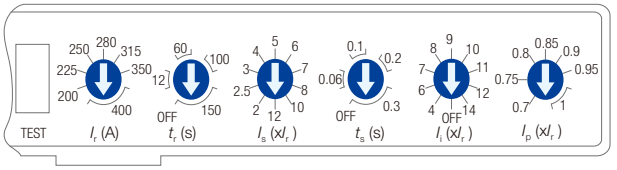
Size A I_n = 125 A



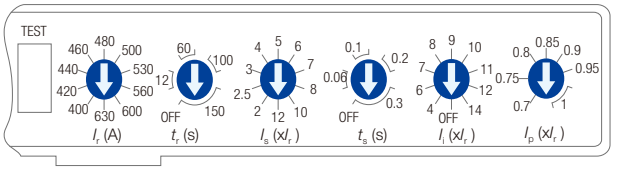
Size B I_n = 250 A



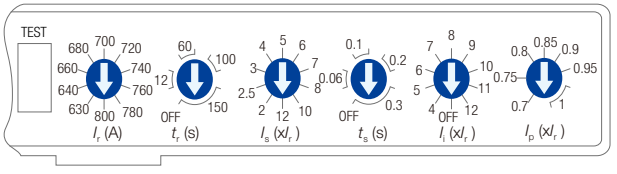
Size C I_n = 400A



Size D I_n = 630 A



Size E I_n = 800 A



Due to the configurated electronic trip units, 3SM8E moulded case circuit breaker is enable to supply following the reliable protection and act correctly:

- Overload protection (L)
- Short-time delayed short-circuit protection (S)
- Instantaneous short-circuit protection (I)

1 I_r

Current setting range of long-time delayed overload protection

Size A	up to 32 A	16-20-25-32 A
	up to 63 A	32-36-40-45-50-55-60 A
	up to 100 A	63-65-70-75-80-85-90-95-100 A
Size B	up to 225 A	100-125-140-160-180-200-225 A
Size C	up to 400 A	200-225-250-280-315-350-400 A
Size D	up to 630 A	400-420-440-460-480-500-530-560-600-630 A
Size E	up to 800 A	630-640-660-680-700-720-740-760-780-800 A

2 t_r

Setting range of time-lag class for overload protection

Size A/B	up to 225 A	OFF, 12-60-80-100 s
Size C/D/E	up to 800 A	OFF, 12-60-100-150 s

3 $I_s = I_r$ x ...

Current setting range of short-time delayed short-circuit protection

Size A/B/C/D/E	up to 800 A	2-2.5-3-4-5-6-7-8-10-12

4 t_s

Setting range of time-lag class for short-circuit protection

Size A/B/C/D/E	up to 800 A	OFF, 0.06-0.1-0.2-0.3 s

5 $I_i = I_r$ x ...

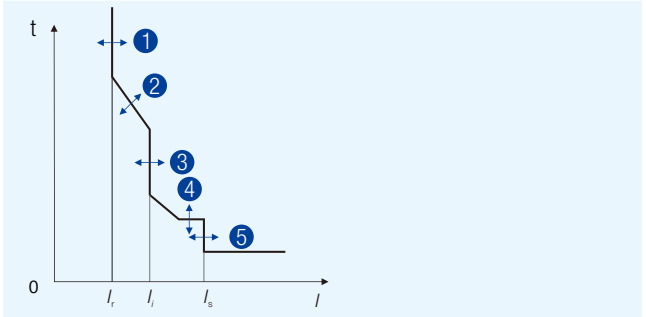
Current setting range of instantaneous short-circuit protection

Size A/B	up to 225 A	OFF, 4-6-7-8-10-11-12-13-14
Size C/D	up to 630 A	OFF, 4-6-7-8-9-10-11-12-14
Size E	up to 800 A	OFF, 4-5-6-7-8-9-10-11-12

6 $I_p = I_r$ x ...

Current setting range of pre-alarm function

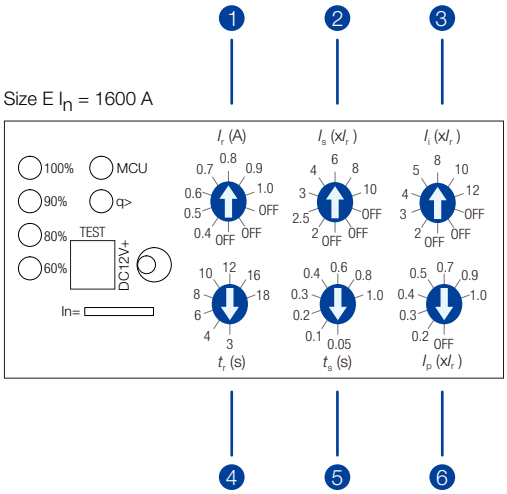
Size A/B/C/D/E	up to 800 A	0.7-0.75-0.8-0.85-0.9-0.95-1



Note

"TEST" is used to test the trip performance.

Electonic trip unit



Due to the configurated electronic trip units, 3SM8E molded case circuit breaker is enable to supply following the reliable protection and act correctly:

- Overload protection (L)
- Short-time delayed short-circuit protection (S)
- Instantaneous short-circuit protection (I)

1 I_r

Current setting range of long-time delayed overload protection

Size F	up to 1600 A	640-800-960-1120-1280-1440-1600 A

2 $I_s = I_r$ x ...

Current setting range of short-time delayed short-circuit protection

Size F	up to 1600 A	2-2.5-3-4-6-8-10

3 $I_i = I_r$ x ...

Current setting range of instantaneous short-circuit protection

Size F	up to 1600 A	OFF, 2-3-4-5-8-10-12

4 t_r

Setting range of time-lag class for overload protection

Size F	up to 1600 A	OFF, 3-4-6-8-10-12-16-18 s

5 t_s

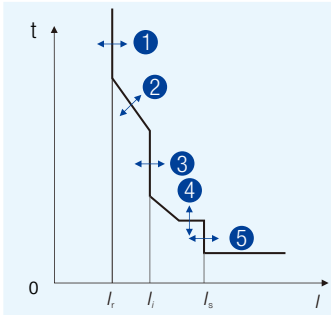
Setting range of time-lag class for short-circuit protection

Size F	up to 1600 A	OFF, 0.05-0.1-0.2-0.3-0.4-0.5-0.6-0.8-1.0 s

6 $I_p = I_r$ x ...

Current setting range of pre-alarm function

Size F	up to 1600 A	0.7-0.75-0.8-0.85-0.9-0.95-1

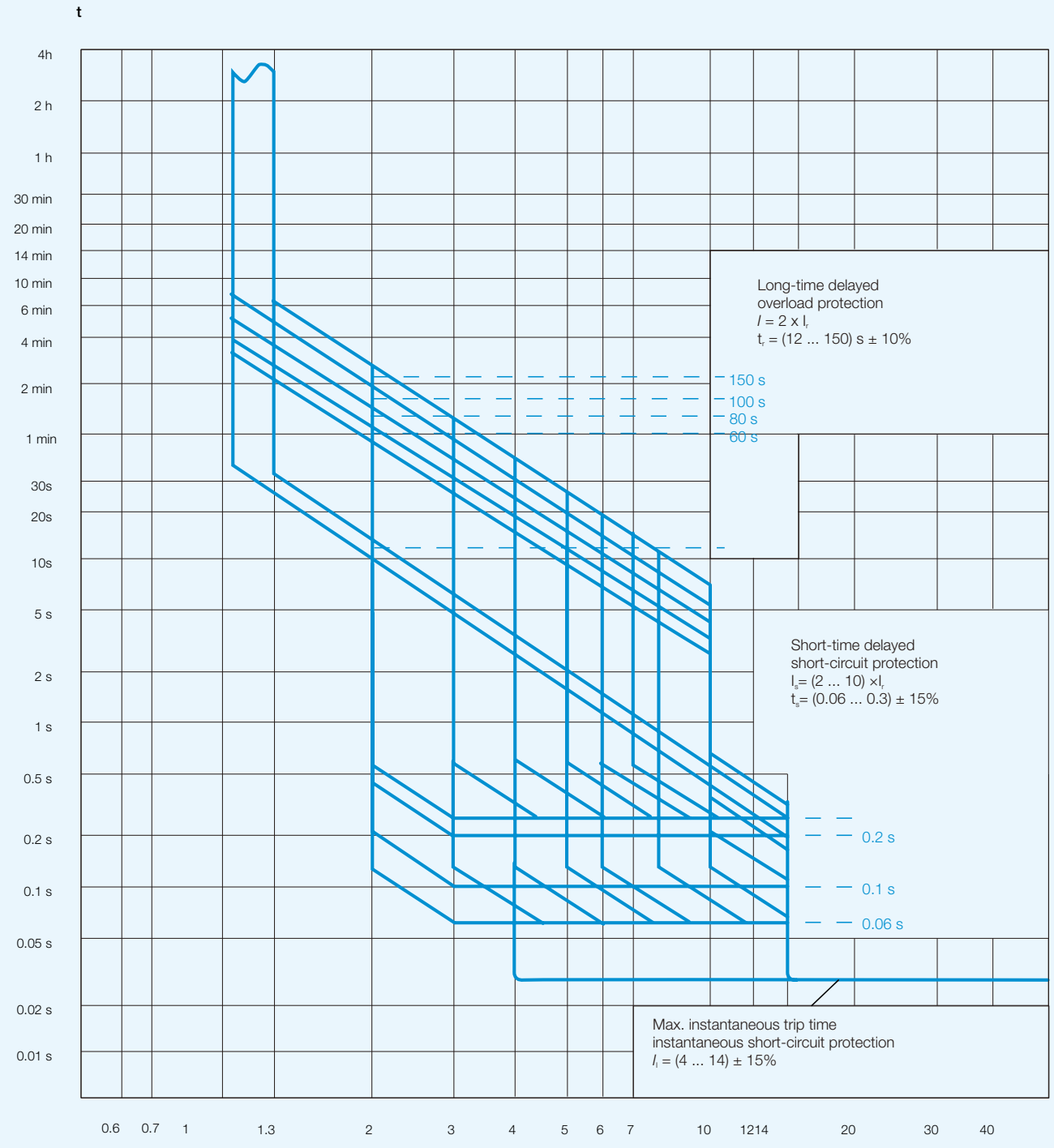


Note

"TEST" is used to test the trip performance.

1

Characteristic curve



Selection and ordering data

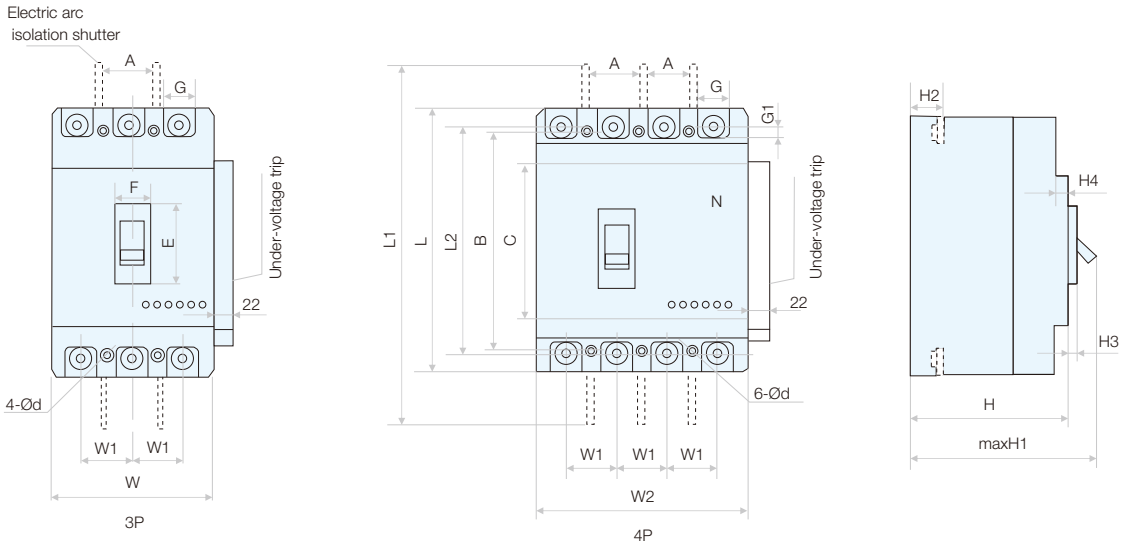


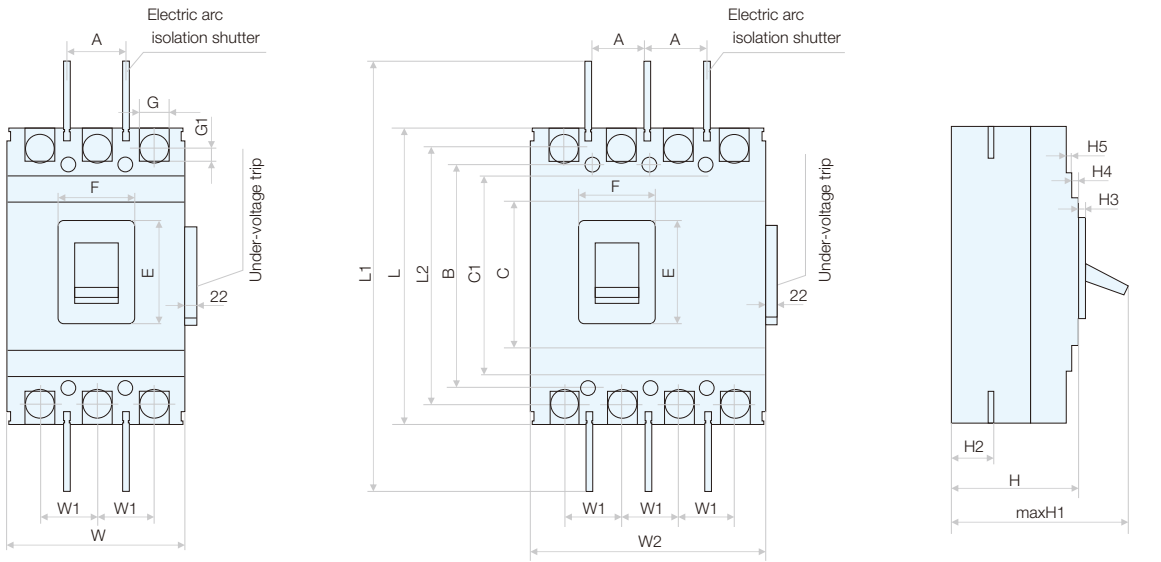
Rated current I_n (A)	Power distribution		Motor protection	
	Type code	Order code	Type code	Order code
3-pole				
Size A				
I_{cu} = 50 kA, I_{cs} = 35 kA				
16 ... 32	M8EA 3P32M	**39835**	M8EA 3M32M	**39844**
32 ... 63	M8EA 3P63M	**39836**	M8EA 3M63M	**39845**
63 ... 125	M8EA 3P125M	**39837**	M8EA 3M125M	**39846**
I_{cu} = 85 kA, I_{cs} = 50 kA				
16 ... 32	M8EA 3P32H	**39838**	M8EA 3M32H	**39847**
32 ... 63	M8EA 3P63H	**39839**	M8EA 3M63H	**39848**
63 ... 125	M8EA 3P125H	**39840**	M8EA 3M125H	**39849**
Size B				
I_{cu} = 50 kA, I_{cs} = 35 kA				
100 ... 250	M8EB 3P250M	**39853**	M8EB 3M250M	**39856**
I_{cu} = 85 kA, I_{cs} = 50 kA				
100 ... 250	M8EB 3P250H	**39854**	M8EB 3M250H	**39857**
Size C				
I_{cu} = 65 kA, I_{cs} = 42 kA				
200 ... 400	M8EC 3P400M	**39859**	M8EC 3M400M	**39862**
I_{cu} = 100 kA, I_{cs} = 65 kA				
200 ... 400	M8EC 3P400H	**39860**	M8EC 3M400H	**39863**
Size D				
I_{cu} = 65 kA, I_{cs} = 42 kA				
400 ... 630	M8ED 3P630M	**39865**	M8ED 3M630M	**39868**
I_{cu} = 100 kA, I_{cs} = 65 kA				
400 ... 630	M8ED 3P630H	**39866**	M8ED 3M630H	**39869**
Size E				
I_{cu} = 65 kA, I_{cs} = 42 kA				
630 ... 800	M8EE 3P800M	**39871**	M8EE 3M800M	**39874**
I_{cu} = 100 kA, I_{cs} = 65 kA				
630 ... 800	M8EE 3P800H	**39872**	M8EE 3M800H	**39875**
Size F				
I_{cu} = 80 kA, I_{cs} = 40 kA				
640 ... 1600	M8EF 3P1600H	**39131**		
4-pole				
Size A				
I_{cu} = 50 kA, I_{cs} = 35 kA				
16 ... 32	M8EA 4P32M	**39841**	M8EA 4M32M	**39850**
32 ... 63	M8EA 4P63M	**39842**	M8EA 4M63M	**39851**
63 ... 125	M8EA 4P125M	**39843**	M8EA 4M125M	**39852**
Size B				
I_{cu} = 50 kA, I_{cs} = 35 kA				
100 ... 225	M8EB 4P250M	**39855**	M8EB 4M250M	**39858**
Size C				
I_{cu} = 65 kA, I_{cs} = 42 kA				
200 ... 400	M8EC 4P400M	**39861**	M8EC 4M400M	**39864**
Size D				
I_{cu} = 65 kA, I_{cs} = 42 kA				
400 ... 630	M8ED 4P630M	**39867**	M8ED 4M630M	**39870**
Size E				
I_{cu} = 65 kA, I_{cs} = 42 kA				
630 ... 800	M8EE 4P800M	**39873**	M8EE 4M800M	**39876**
Size F				
I_{cu} = 80 kA, I_{cs} = 40 kA				
640 ... 1600	M8EF 4P1600H	**39132**		

1

Outline and installation dimensions

3SM8E-100, 225, 400, 630, 800, 1600 (front connection)





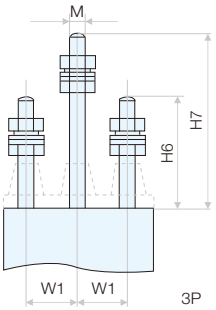
Outline and installation dimensions

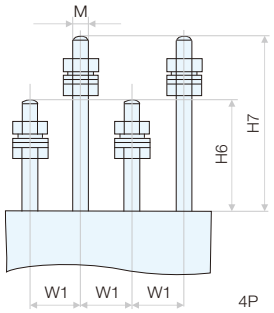
		Model					
		3SM8E-100	3SM8E-225	3SM8E-400	3SM8E-630	3SM8E-800	3SM8E-1600
Dimensions	C	88	102	126	128.5	128.5	
	C1			174	204	204	
	E	50	57.5	90.5	81	81	
	F	22	24	60	66	66	
	G	19.2	22	32	46	46	
	G1	7.5	10	11	14	14	
	H	91.7	91.2	107.5	112	112	137
	H1	109.4	106.7	149	155	155	191
	H2	28	22.8	38	37.5	37.5	41
	H3	4	4	9	10	10	15
	H4	10	5.5	4	10.5	10.5	
	H5			5.6	8.5	8.5	
	L	150	165	258	280	280	330
	L1	255	360	457	470	470	506
	L2	132	145	225	243	243	
	W	92	127	150	210	210	210
	W1	30	35	48	70	70	70
	W2	122	162	198	280	280	280
Installation	A	35	35	48	70	70	70
Dimensions	B	129	126	195	244	244	299
	Ød	4.5	4.5	7	7	7	9

1

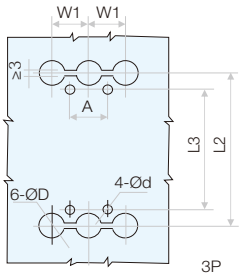
Outline and installation dimensions

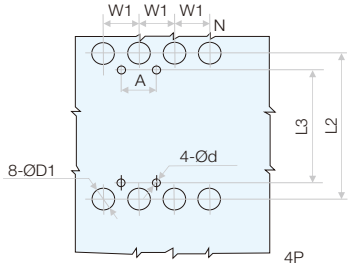
3SM8E-63, 100, 225 (Rear connection)



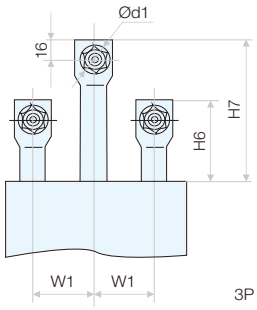


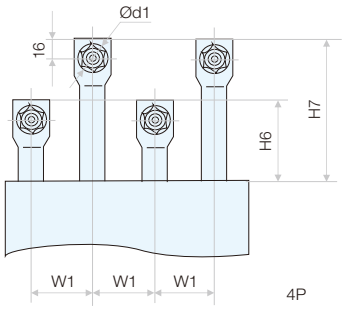
Rear connection stiletto chart



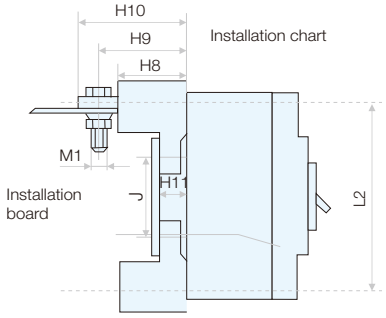


3SM8E-400, 630, 800 (Rear connection)

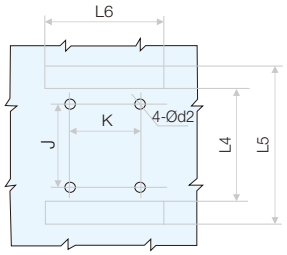




Insert style



Installation board stiletto chart



Outline and installation dimensions

	3SM8E-100	3SM8E-225	3SM8E-400	3SM8E-630	3SM8E-800
A	30	35	44	70	70
Ød	Ø4.5	Ø4.5	Ø6.5	Ø7	Ø7
Ød1	--	--	Ø12.5	Ø16.5	Ø16.5
Ød2	Ø6.5	Ø6.5	Ø8.5	Ø11.5	Ø11.5
ØD	Ø25	Ø25	Ø32	Ø48	Ø48
ØD1	Ø25	Ø25	Ø32	Ø48	Ø48
H6	53	58	63.5	84	84
H7	88	89	104.5	84	84
H8	50	50	60	88	88
H9	64	65.5	80	--	--
H10	82	85	102	105	105
H11	17.5	16	21	30	30
L2	132	144	224	243	243
L3	107	126	194	243	243
L4	90	88	166	175	175
L5	172	190	282	305	305
L6	94	110	152	213	213
M	M8	M8	--	--	--
K	60	70	60	90	90
J	56	54	129	123	123
M1	M8	M8	M12	M14	M14
W1	30	35	48	70	70

Photovoltaic DC Circuit Breakers
Series 3SM8D

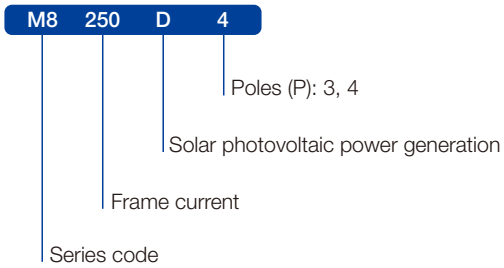
1

Product profile

- 3SM8D series photovoltaic DC circuit breakers are suitable for DC network circuit which rated voltage to DC 1000 V and rated current to 800 A . DC circuit breaker with overload long delay protection function, which used to distribute electricity and protect the line and power supply equipment from overload, short circuit and other hazards.
- The operating mechanism of the DC circuit breaker has the functions of quick closing and quick breaking, and has the advantages of compact structure, small volume and convenient use.



Instruction of type code



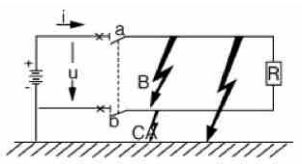
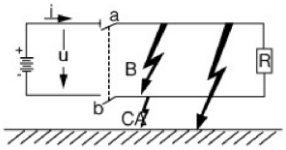
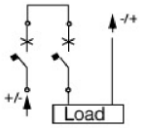
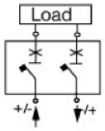
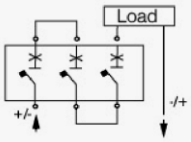
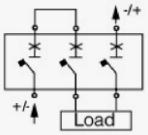
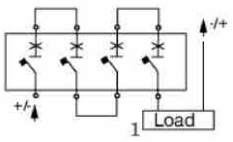
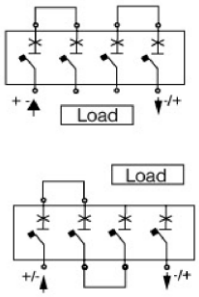
Normal working environment

- The altitude is 2000 m and below. If it is higher than 2000 m, it needs to be derated. For other special requirements, please contact the manufacturer.
- In a medium that is not in danger of explosion and where there is no gas or conductive dust that is sufficient to corrode metals and destroy insulation.

Technical specifications

Model type		3SM8D-125	3SM8D-250	3SM8D-400	3SM8D-630	3SM8D-800
Standard		IEC 60947-2				
Rated frame current Inm (A)		125	250	400	630	800
Rated current In (A)		20, 25, 32, 40, 50, 63, 80, 100, 125	125, 140, 160, 180, 200, 225, 250	250, 315, 350, 400	400, 500, 630	630, 700, 800
Rated voltage Ue (V) DC		250, 500, 750, 1000	500, 750, 1000	500, 750, 1000	500, 750, 1000	500, 750, 1000
Rated insulation voltage Ui (V)		1000	1000	1500	1500	1500
Rated impulse withstand voltage Uimp (kV)		8	8	8	8	8
Test voltage of one minute (V)		3550	3550	3550	3550	3550
Rated switching capacity Icu (kA)	250 V	20	20	35	35	50
(Ics = 75% Icu)	500 V	20	20	35	35	50
	750 V	20	20	35	35	50
	1000 V	20	20	35	35	50
Mechanical life (times)		7000	7000	4000	4000	2500
Electrical life (times)		2000	2000	1000	1000	800
Total breaking time (ms)		20				
Installation position						
Isolation characteristics		Yes				
Ambient temperature (°C)		-25 °C ~ +50 °C				
Degree of protection		IP20				
Accessories available						
Arcing distance (mm)		≤ 50		≤ 100		
Instantaneous action value		12 In				7 In
Installing category		Fixed type, Plug-in type				

Grounding type

Grounding type	Grounding system		Ungrounded system	
Circuit diagram				
Fault influence	Fault A	Max. short-circuit current	Fault A	No influence
	Fault B	Max. short-circuit current	Fault B	Max short-circuit current
	Fault C	Max. short-circuit current	Fault C	No influence
≤ DC 500 V	 Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.		 Note: 1. it can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults	
DC 500 ~ 750 V	 Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.		 Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults	
DC 750 ~ 1000 V	 Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.		 Note: 1. it can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults	

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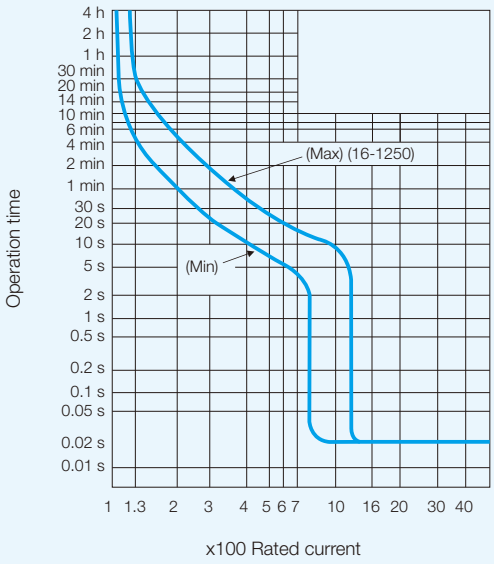
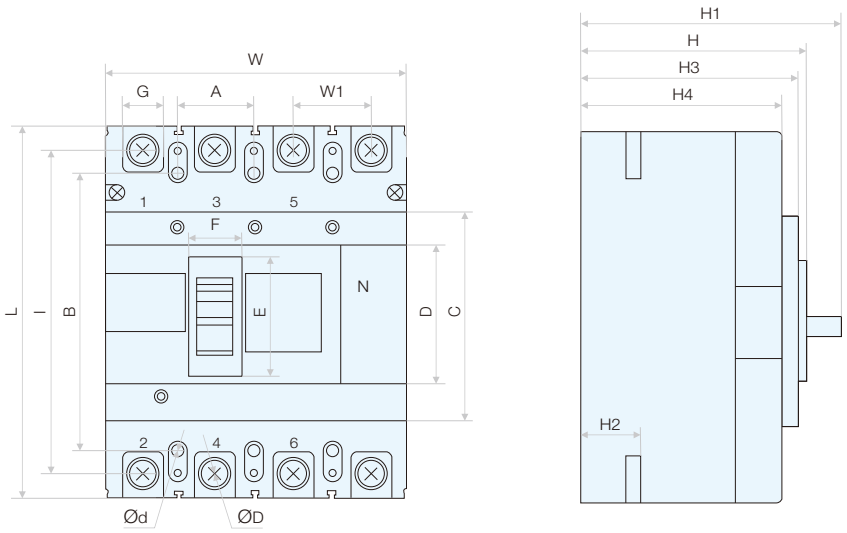
Temperature performance curve



Outline and installation dimensions

unit in mm



Model	A	B	Ød	L	W	C	D	G	I	W1	E	F	ØD	H	H1	H2	H3	H4
3SM8D-125	30	129	4.5	150	122	101	61	18	131	30	50	00	8	88	107	22	81	77
3SM8D-250	35	126	4.5	165	142	117	61	23	146	35	50	00	8	108	125	23	102	98
3SM8D 400	44	195	7	257	199	173	128	30	228	44	89	32	10	108	153	36	103	99
3SM8D-630	58	200	7	270	240	184	134	43	235	58	89	32	12	112	158	40	109	104
3SM8D-800	70	243	7	280	280	205	155	46	243	70	106	33	12	108	158	32	103	99

Selection and ordering data

Frame	Rated current In (A)	3 Poles		4 Poles	
		Type code	Order code	Type code	Order code
3SM8D-125	20	M8DA 3020	**15155**	M8DA 4020	**15164**
	25	M8DA 3025	**15156**	M8DA 4025	**15165**
	32	M8DA 3032	**15157**	M8DA 4032	**15166**
	40	M8DA 3040	**15158**	M8DA 4040	**15167**
	50	M8DA 3050	**15159**	M8DA 4050	**15168**
	63	M8DA 3063	**15160**	M8DA 4063	**15169**
	80	M8DA 3080	**15161**	M8DA 4080	**15170**
	100	M8DA 3100	**15162**	M8DA 4100	**15171**
	125	M8DA 3125	**15163**	M8DA 4125	**15172**
3SM8D-250	125	M8DB 3125	**15173**	M8DB 4125	**15180**
	140	M8DB 3140	**15174**	M8DB 4140	**15181**
	160	M8DB 3160	**15175**	M8DB 4160	**15182**
	180	M8DB 3180	**15176**	M8DB 4180	**15183**
	200	M8DB 3200	**15177**	M8DB 4200	**15184**
	225	M8DB 3225	**15178**	M8DB 4225	**15185**
	250	M8DB 3250	**15179**	M8DB 4250	**15186**
3SM8D-400	250	M8DC 3250	**15187**	M8DD 4250	**15191**
	315	M8DC 3315	**15188**	M8DD 4315	**15192**
	350	M8DC 3350	**15189**	M8DD 4350	**15193**
	400	M8DC 3400	**15190**	M8DD 4400	**15194**
3SM8D-630	400	M8DE 3400	**15195**	M8DE 4400	**15198**
	500	M8DE 3500	**15196**	M8DE 4500	**15199**
	630	M8DE 3630	**15197**	M8DE 4630	**15200**
3SM8D-800	630	M8DF 3630	**15201**	M8DF 4630	**15204**
	700	M8DF 3700	**15202**	M8DF 4700	**15205**
	800	M8DF 3800	**15203**	M8DF 4800	**15206**

Moulded Case Circuit Breakers with Earth Leakage Protection
Series 3SM8L

Applications and functions

- Protection of plant and equipment against overload or damage by ground faults (ground-fault protection)
- Protection against fire hazard caused by insulation faults
- Switching and protection devices for motors, transformersand capacitors
- Disconnector units with features for stopping and switching off in an emergency in conjunction with lockable rotary operating mechanisms and terminal covers.



Instruction of type code

M8L A 3 P 016 1

- Rated residual current (mA)
  1: 100; 3: 300
  5: 500; 10: 1000
- Rated current (A)
  16, 20, 25, 32, 40, 50, 63, 80, 100 (Frame A)
  100, 125, 140, 160, 180, 200, 225 (Frame B)
  225, 250, 315, 350, 400 (Frame C)
  400, 500, 630 (Frame D)
- Protection type
  P: Power protection; M: Motor protection
- Poles (P): 3: 3P; 4: 4P
- Frame
  A: 3SM8L-100; B: 3SM8L-225
  C: 3SM8L-400; D: 3SM8L-630
- Series code

- Here is code of N−pole type for 4 pole circuit breaker:
  A: N-pole fixed without over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.
  B: N-pole fixed without over-current release unit, it acts with other three poles.

Technical specifications

Frame type		A	B	C	D
Standards		IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1
Number of poles		3, 4	3, 4	3, 4	3, 4
Frame Current Inm	A	100	225	400	630
Rated current In	A	16, 20, 25, 32, 40 50, 63, 80, 100	100, 125, 140, 160 180, 200, 225	225, 250, 315 350, 400	400, 500, 630
Rated residual currents IΔn	mA	100, 300, 500, 1000	100, 300, 500, 1000	100, 300, 500	100, 300, 500, 100
Rated insulating voltage Ui	V	800	800	800	800
Rated operating voltage, Ue	V	400	400	400	400
Rated frequency	Hz	50/60	50/60	50/60	50/60
Rated impulsed withstand voltage, Uimp	kV	8	8	8	8
Rated ultimate short-circuit breaking capacity, Icu (AC) 50-60 Hz 400 V O-CO	kA	50	50	65	65
Rated operating short-circuit breaking capacity,Ics (AC) 50-60 Hz 400 V O-CO-CO	kA	35	35	42	42
Mechanical life	times	8500	7000	4000	4000
Electrical life	times	1500	1000	1000	1000
Flashover distance	mm	≤50	≤50	≤100	≤100
Utilization category (IEC60947-2)		A	A	A	A
Ambient temperature		-5 to +40 °C, max. 95% humidity			
Storage temperature		-40 to +75 °C			
Altitude	Max	2000			

Tripping characteristic

- For power distribution

Test No.	Test current	I/In	Conventional time	Start status	Ambient temperature
1	Conventional non-action time	1.05	1 h (In ≤ 63 A) 2 h (In > 63 A)	Cold status	+ 40 °C
2	Conventional action time	1.30	1 h (In ≤ 63 A) 2 h (In > 63 A)	Right after test No.1	+ 40 °C

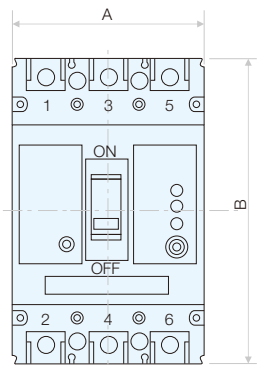
- For motor protection

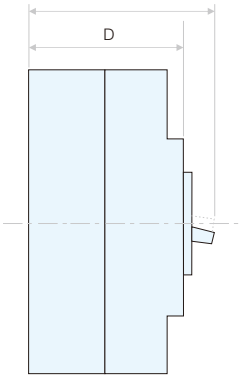
Test No.	Setting current	Conventional time		Start status	Ambient temperature
1	1.05 In	Inm = 100 A	> 2 h no action	Cold status	+40 °C
		Inm = 225 A/400 A	> 2 h no action		
		Inm = 630 A	> 2 h no action		
2	1.2 In	Inm = 100 A	≤ 2 h action	Right after test No.1	+40 °C
		Inm = 225 A/400 A	≤ 2 h action		
		Inm = 630 A	≤ 2 h action		
3	1.5 In	Inm = 100 A	≤ 4 min action	Heat status	+40 °C
		Inm = 225 A	≤ 4 min action		
		Inm = 400/630 A	≤ 8 min action		
4	7.2 In	Inm = 100 A	≥ 1 s action	Cold status	+40 °C
		Inm = 225 A	4 s < T ≤ 10 s action		
		Inm = 400/630 A	6 s < T ≤ 20 s action		

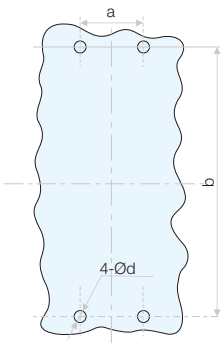
Action time of residual current protection

Residual current		1 IΔn	2 IΔn	5 IΔn	10 IΔn
Non time-delay type	Max. breaking time (s)	0.2	0.1	0.04	0.04
Time-delay type	Max. breaking time (s)	0.5/1.15/2.15	0.35/1/2	0.25/0.9/1.9	0.25/0.9/1.9
	Ultimate non-driven time Δt (s)	-	0.1/0.5/1	-	-

Outline and installation dimension.







Type	Number of poles	Outline dimensions (mm) A	B	C	D	Installation dimensions (mm) a	b	d
Frame A	3	92	150	110	92	30	129	4.5
3SM8L-100	4	122	150	110	92	60	129	4.5
Frame B	3	107	165	110	90	35	126	4.5
3SM8L-225	4	142	165	110	90	70	126	4.5
Frame C	3	150	257	146.5	106.5	44	194	7
3SM8L-400	4	198	257	146.5	106.5	88	194	7
Frame D	3	210	280	155	115.5	70	243	7
3SM8L-630	4	280	280	155	115.5	70	243	7

For power distribution

	Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
3SM8L-100	**30 - 100 - 300 mA adjustable**				
	16A	M8LA 3P016/1	**25214**	M8LA 4BP016/1	**10412**
	20A	M8LA 3P020/1	**25215**	M8LA 4BP020/1	**10413**
	25A	M8LA 3P025/1	**25216**	M8LA 4BP025/1	**10414**
	32A	M8LA 3P032/1	**25217**	M8LA 4BP032/1	**10415**
	40A	M8LA 3P040/1	**25218**	M8LA 4BP040/1	**10416**
	50A	M8LA 3P050/1	**25219**	M8LA 4BP050/1	**10417**
	63A	M8LA 3P063/1	**25220**	M8LA 4BP063/1	**10418**
	80A	M8LA 3P080/1	**25221**	M8LA 4BP080/1	**10419**
	100A	M8LA 3P100/1	**25222**	M8LA 4BP100/1	**10420**
	100 - 300 - 500 mA adjustable				
	16A	M8LA 3P016/3	**25223**	M8LA 4BP016/3	**10421**
	20A	M8LA 3P020/3	**25224**	M8LA 4BP020/3	**10422**
	25A	M8LA 3P025/3	**25225**	M8LA 4BP025/3	**10423**
	32A	M8LA 3P032/3	**25226**	M8LA 4BP032/3	**10424**
	40A	M8LA 3P040/3	**25227**	M8LA 4BP040/3	**10425**
	50A	M8LA 3P050/3	**25228**	M8LA 4BP050/3	**10426**
	63A	M8LA 3P063/3	**25229**	M8LA 4BP063/3	**10427**
	80A	M8LA 3P080/3	**25230**	M8LA 4BP080/3	**10428**
	100A	M8LA 3P100/3	**25231**	M8LA 4BP100/3	**10429**
3SM8L-225	**30 - 100 - 300 mA adjustable**				
	100A	M8LB 3P100/1	**25232**	M8LB 4BP100/1	**10430**
	125A	M8LB 3P125/1	**25233**	M8LB 4BP125/1	**10431**
	140A	M8LB 3P140/1	**25234**	M8LB 4BP140/1	**10432**
	160A	M8LB 3P160/1	**25235**	M8LB 4BP160/1	**10433**
	180A	M8LB 3P180/1	**25236**	M8LB 4BP180/1	**10434**
	200A	M8LB 3P200/1	**25237**	M8LB 4BP200/1	**10435**
	225A	M8LB 3P225/1	**25238**	M8LB 4BP225/1	**10436**
	100 - 300 - 500 mA adjustable				
	100A	M8LB 3P100/3	**25239**	M8LB 4BP100/3	**10437**
	125A	M8LB 3P125/3	**25240**	M8LB 4BP125/3	**10438**
	140A	M8LB 3P140/3	**25241**	M8LB 4BP140/3	**10439**
	160A	M8LB 3P160/3	**25242**	M8LB 4BP160/3	**10440**
	180A	M8LB 3P180/3	**25243**	M8LB 4BP180/3	**10441**
	200A	M8LB 3P200/3	**25244**	M8LB 4BP200/3	**10442**
	225A	M8LB 3P225/3	**25245**	M8LB 4BP225/3	**10443**
3SM8L-400	**100 - 300 - 500 mA adjustable**				
	200A	M8LC 3P200/3	**25246**	M8LC 4BP200/3	**10444**
	225A	M8LC 3P225/3	**25247**	M8LC 4BP225/3	**10445**
	250A	M8LC 3P250/3	**25248**	M8LC 4BP250/3	**10446**
	315A	M8LC 3P315/3	**25249**	M8LC 4BP315/3	**10447**
	350A	M8LC 3P350/3	**25250**	M8LC 4BP350/3	**10448**
	400A	M8LC 3P400/3	**25251**	M8LC 4BP400/3	**10449**
	300 - 500 - 1000 mA adjustable				
	200A	M8LC 3P200/5	**25252**	M8LC 4BP200/5	**10450**
	225A	M8LC 3P225/5	**25253**	M8LC 4BP225/5	**10451**
	250A	M8LC 3P250/5	**25254**	M8LC 4BP250/5	**10452**
	315A	M8LC 3P315/5	**25255**	M8LC 4BP315/5	**10453**
	350A	M8LC 3P350/5	**25256**	M8LC 4BP350/5	**10454**
	400A	M8LC 3P400/5	**25257**	M8LC 4BP400/5	**10455**
3SM8L-630	**100 - 300 - 500 mA adjustable**				
	400A	M8LD 3P400/3	**25258**	M8LD 4BP400/3	**10456**
	500A	M8LD 3P500/3	**25259**	M8LD 4BP500/3	**10457**
	630A	M8LD 3P630/3	**25260**	M8LD 4BP630/3	**10458**
	300 - 500 - 1000 mA adjustable				
	400A	M8LD 3P400/5	**25261**	M8LD 4BP400/5	**10459**
	500A	M8LD 3P500/5	**25262**	M8LD 4BP500/5	**10460**
	630A	M8LD 3P630/5	**25263**	M8LD 4BP630/5	**10461**

For motor protection

	Rated current In (A)	3-pole Type code	3-pole Order code	4-pole Type code	4-pole Order code
3SM8L-100	**30 - 100 - 300 mA adjustable**				
	16A	M8LA 3M016/1	**25264**	M8LA 4BM016/1	**10462**
	20A	M8LA 3M020/1	**25265**	M8LA 4BM020/1	**10463**
	25A	M8LA 3M025/1	**25266**	M8LA 4BM025/1	**10464**
	32A	M8LA 3M032/1	**25267**	M8LA 4BM032/1	**10465**
	40A	M8LA 3M040/1	**25268**	M8LA 4BM040/1	**31386**
	50A	M8LA 3M050/1	**25269**	M8LA 4BM050/1	**31387**
	63A	M8LA 3M063/1	**25270**	M8LA 4BM063/1	**31388**
	80A	M8LA 3M080/1	**25271**	M8LA 4BM080/1	**31389**
	100A	M8LA 3M100/1	**25272**	M8LA 4BM100/1	**31390**
	100 - 300 - 500 mA adjustable				
	16A	M8LA 3M016/3	**25273**	M8LA 4BM016/3	**31391**
	20A	M8LA 3M020/3	**25274**	M8LA 4BM020/3	**31392**
	25A	M8LA 3M025/3	**25275**	M8LA 4BM025/3	**31393**
	32A	M8LA 3M032/3	**25276**	M8LA 4BM032/3	**31394**
	40A	M8LA 3M040/3	**25277**	M8LA 4BM040/3	**31395**
	50A	M8LA 3M050/3	**25278**	M8LA 4BM050/3	**31396**
	63A	M8LA 3M063/3	**25279**	M8LA 4BM063/3	**31397**
	80A	M8LA 3M080/3	**25280**	M8LA 4BM080/3	**31398**
	100A	M8LA 3M100/3	**25281**	M8LA 4BM100/3	**31399**
3SM8L-225	**30 - 100 - 300 mA adjustable**				
	100A	M8LB 3M100/1	**25282**	M8LB 4BM100/1	**31400**
	125A	M8LB 3M125/1	**25283**	M8LB 4BM125/1	**31401**
	140A	M8LB 3M140/1	**25284**	M8LB 4BM140/1	**31402**
	160A	M8LB 3M160/1	**25285**	M8LB 4BM160/1	**31403**
	180A	M8LB 3M180/1	**21538**	M8LB 4BM180/1	**31404**
	200A	M8LB 3M200/1	**21539**	M8LB 4BM200/1	**31405**
	225A	M8LB 3M225/1	**21540**	M8LB 4BM225/1	**31406**
	100 - 300 - 500 mA adjustable				
	100A	M8LB 3M100/3	**21541**	M8LB 4BM100/3	**31407**
	125A	M8LB 3M125/3	**21542**	M8LB 4BM125/3	**31408**
	140A	M8LB 3M140/3	**21543**	M8LB 4BM140/3	**31409**
	160A	M8LB 3M160/3	**21544**	M8LB 4BM160/3	**31410**
	180A	M8LB 3M180/3	**21545**	M8LB 4BM180/3	**31411**
	200A	M8LB 3M200/3	**21546**	M8LB 4BM200/3	**31412**
	225A	M8LB 3M225/3	**21547**	M8LB 4BM225/3	**31413**
3SM8L-400	**100 - 300 - 500 mA adjustable**				
	200A	M8LC 3M200/3	**21548**	M8LC 4BM200/3	**31414**
	225A	M8LC 3M225/3	**21549**	M8LC 4BM225/3	**31415**
	250A	M8LC 3M250/3	**10396**	M8LC 4BM250/3	**31416**
	315A	M8LC 3M315/3	**10397**	M8LC 4BM315/3	**31417**
	350A	M8LC 3M350/3	**10398**	M8LC 4BM350/3	**31418**
	400A	M8LC 3M400/3	**10399**	M8LC 4BM400/3	**31419**
	300 - 500 - 1000 mA adjustable				
	200A	M8LC 3M200/5	**10400**	M8LC 4BM200/5	**31420**
	225A	M8LC 3M225/5	**10401**	M8LC 4BM225/5	**31421**
	250A	M8LC 3M250/5	**10402**	M8LC 4BM250/5	**31422**
	315A	M8LC 3M315/5	**10403**	M8LC 4BM315/5	**10387**
	350A	M8LC 3M350/5	**10404**	M8LC 4BM350/5	**10388**
	400A	M8LC 3M400/5	**10405**	M8LC 4BM400/5	**10389**
3SM8L-630	**100 - 300 - 500 mA adjustable**				
	400A	M8LD 3M400/3	**10406**	M8LD 4BM400/3	**10390**
	500A	M8LD 3M500/3	**10407**	M8LD 4BM500/3	**10391**
	630A	M8LD 3M630/3	**10408**	M8LD 4BM630/3	**10392**
	300 - 500 - 1000 mA adjustable				
	400A	M8LD 3M400/5	**10409**	M8LD 4BM400/5	**10393**
	500A	M8LD 3M500/5	**10410**	M8LD 4BM500/5	**10394**
	630A	M8LD 3M630/5	**10411**	M8LD 4BM630/5	**10395**

Switch Disconnectors
Series 3SM8G

Functions

- Making and breaking under load condition
- Providing safety isolation for terminal distribution system
- Standard: IEC 60947-3



Instruction of type code

M8G A 3 400

- 400 — Rated current (A)
  - 63 (Frame A)
  - 125 (Frame B)
  - 250 (Frame C)
  - 400 (Frame D)
  - 630 (Frame E)
  - 800 (Frame F)
- 3 — Poles (P): 3: 3P; 4: 4P
- A — Frame
  - A: 3SM8G-63; B: 3SM8G-125; C: 3SM8G-250
  - D: 3SM8G-400; E: 3SM8G-630; F: 3SM8G-800
- M8G — Series code

Technical Specifications

Type		3SM8G-63	3SM8G-125	3SM8G-250	3SM8G-400	3SM8G-630	3SM8G-800
Standards		IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3
Frame type		A	B	C	D	E	F
Frame Current Inm	A	63	125	250	400	630	800
Rated current In	A	63	125	250	400	630	800
Rated insulating voltage Ui	V	500	800	800	800	800	800
Rated operating voltage, Ue	V	400	400	400	400	400	400
Rated frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60
Rated impulsed withstand voltage, Uimp	kV	6	8	8	8	8	8
Rated short-time withstand current Icw/1s	A	760	1200	2700	4800	7600	9600
Mechanical life	times	8000	8000	8000	7500	7500	7500
Electrical life	times	1500	1500	1000	1000	1000	500
Utilization category (IEC 60947-3)		AC-23 A	AC-23 A	AC-23 A	AC-23 A	AC-23 A	AC-23 A
Under-voltage release ①		■	■	■	■	■	■
Shunt-release ①		■	■	■	■	■	■
Auxiliary contact ①		■	■	■	■	■	■
Alarm Contact ①		■	■	■	■	■	■
Ambient temperature		-5 to +40 °C , max. 95% humidity					
Storage temperature		-40 to +75 °C					
Altitude	Max	2000					

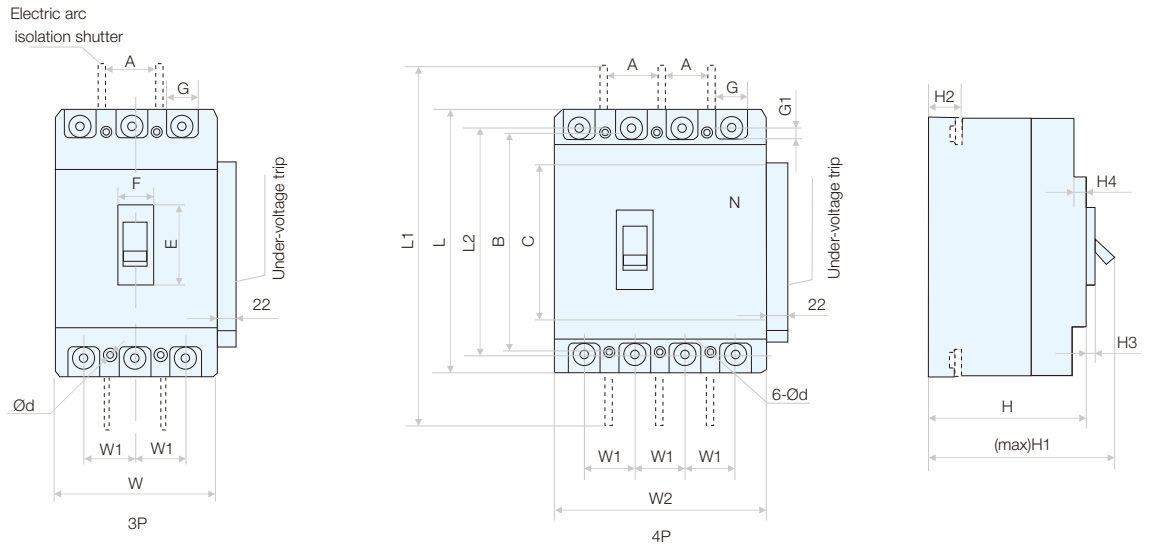
Note: ① The same with 3SM8 series auxiliaries.

Selection and ordering data

	Rated current In (A)	3 Poles		4 Poles	
		Type code	Order code	Type code	Order code
3SM8G	63	M8G A363	**39138**	M8G A463	**39146**
	125	M8G B3125	**39155**	M8G B4125	**39164**
	250	M8G C3250	**39170**	M8G C4250	**39176**
	400	M8G D3400	**39181**	M8G D4400	**39186**
	630	M8G E3630	**39189**	M8G E4630	**39192**
	800	M8G F3800	**39195**	M8G F4800	**39198**

Outline and installation dimensions

3SM8G-63, 125, 250 (front connection)



		Model		
		3SM8G-63	3SM8G-125	3SM8G-250
Dimensions	C	85	88.5	102
	E	48.5	50.5	52
	F	22	22.7	29
	G	14	17.5	24
	G1	6	7.5	10
	H	73	68	84.5
	H1	92	86	110
	H2	20	24	24
	H3	4.6	4	2.2
	H4	7	7	5
	L	135	150	165
	L1	172	255	295
	L2	114	132	144
	W	78	92	107
	W1	25	30	35
	W2	103	122	142
Installation Dimensions	A	25	30	35
	B	117	130	126
	Ø d	4.2	4.5	4.5

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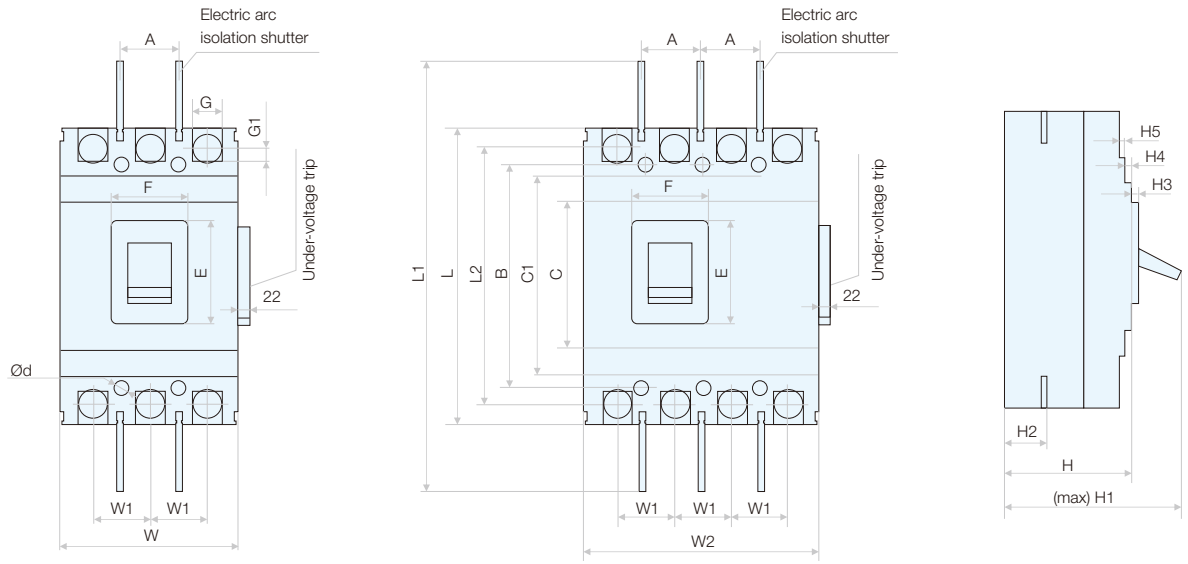
Outline and installation dimensions

3SM8G-400, 630, 800 (front connection)



		Model		
		3SM8G-400	3SM8G-630	3SM8G-800
Dimensions	C	128	133.6	154
	C1	174	184	204
	E	89	89	81
	F	65	65	66
	G	30	44	44
	G1	11	14	11
	H	106.5	111	115.5
	H1	146.5	160	155
	H2	38	43	44
	H3	6	6.8	4.5
	H4	3.5	3.5	4.5
	H5	4.5	4.5	8
	L	257	270	280
	L1	457	470	480
	L2	224	234	243
	W	150	182	210
	W1	44	58	70
	W2	198	240	280
Installation	A	44	58	70
Dimensions	B	194	200	243
	Ød	7	7	7

General introduction

Continuous and reliable power distribution

- With the diversification of industrial process and IT applications, a secure and reliable electricity supply has become an important asset which is playing an important role in reducing production and maintenance costs. In emergency situations, it can become complex with mechanical devices looking after connecting, breaking, conducting and isolating power. In addition, when electricity use is restricted or the power supply is overloaded, the load may need to be transfered from one supply to another. With superior performance, SASSIN dual power automatic transfer switches meet all the above requirements to ensure continuity and security of power supply.

Reliability assurance of the device

- Automatic transfer switching equipment controller can maximize the affordability of various types of electromagnetic interference in industrial environments, and can as well as ensure the operation reliability of automatic switch by the motor drive conversion mechanism via reliability test.

Reliability assurance of electricity supply system

- When the major power supply encounters power failure, phase failure and undervoltage fault, the automatic switching equipment under the control of the controllerwill automatically switch to the backup power supply to ensure power system reliability.

Security assurance of electricity supply system

- Specially designed automatic transfer switch controller can automatically identify the over-current faults , the implementation original welding and mechanical failure in power supply system and place the implementation original in a safe location to ensure the security of power supply system.

Communication and signal system

- Power conversion under the conditions of non-fire special hazard should be considered in the design;
- Public power grid can be used as backup power;
- Need to use CB automatic switch device with over-current protection;
- C curve protection products in line with IEC 60896 are suggested to be used as the end conversion electrical appliances;
- Power conversion time should be less than 5 s. For critical load, please install uninterrupted power supply equipment like UPS.

Air condition and temperature control device

- Power control under the conditions of non-fire special hazard should be considered in design;
- Public power grid can be used as backup power;
- Need to use CB automatic switch device with over-current protection;
- D curve protection products in line with IEC 60898 are suggested to be used as the end lighting electrical appliances;
- Power conversion time should be less than 5 s.

Fire fighting system

- Fire design includes power supply protection for terminal
- conditions like fire pumps, exhaust fans and fire elevators in particular disaster conditions;
- Need to use special power source like generators as backup power;
- Need to use products with neutral line of 2-pole or 4-poles in volved in the transformation Need to use PC automatic switch device without over-current protection whose rated current should be 125 % greater than its load current;
- Need to use the switch products with the fire control function
- Power conversion delay time should be set to 0.

Emergency lighting in general location

- Emergency lighting under the conditions of non-fire special hazard should be considered in the distribution design;
- Another branch of public power grid can be used as backup power supply if the backup power is from same power transformer, neutral line will not participate in conversion;
- Need to use CB automatic switch device with over-current protection;
- C curve protection products in line with IEC 60898 are suggested to be used as the end lighting electrical appliances; Power conversion time should be less than 5 s.

Automatic Transfer Switches
Series 3SAQ1 CB Class

1

Features

- Small size with simple structure
- Easy operation, long service life
- Both 3P and 4P are available
- Single electric drive, smooth and noise-free, small impact
- With mechanical interlock and electrical interlock, reliable switching, both manual and automatic switching are available
- Switch is wired with connection terminal in the internal for users, reflecting the circuit breaker status (open or closed)
- There are a variety of indicators listed on panel



Structure and performance

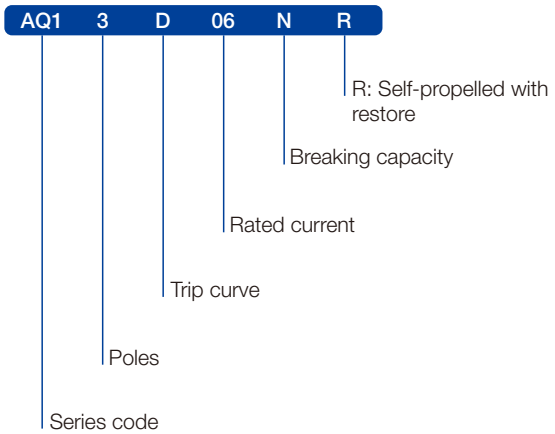
Structure

The automatic transfer switch consists of MCB, a single electric motor operating mechanism, mechanical interlocking, auxiliary systems, control circuit and other components and are closed with plastic shell. All components are installed on the same floor. There is a status indicator on the panel that accurately indicates the state of the MCB and the whole set of instructions.

Structure

- Automatic controllers (only R-type:automatic transfer with automatic restore) detect the voltage of two-way power (commonly used power and backup power) at the same time. Common power will work under the normal state. When the common power supply failure occurs, namely loss of pressure or A phase-off, the controller will automatically make the command switch switch to the backup power supply;
- When common power is restored to normal, the controller will automatically make the command switch switch to the backup power supply, and no delay;
- Simultaneous two-way power anomalies are not allowed;
- When tripping occurs due to a small circuit breaker failure, the device will remain in the trip state and let out a warning signal. Wait for maintenance, and the handle should be reset and re-closed manually after troubleshooting;
- In automatic mode, when there inputs DC 24 V fire signal, the controller will command all the disconnect switch, and then if undo the fire signal, restore the original state.

Instruction of type code

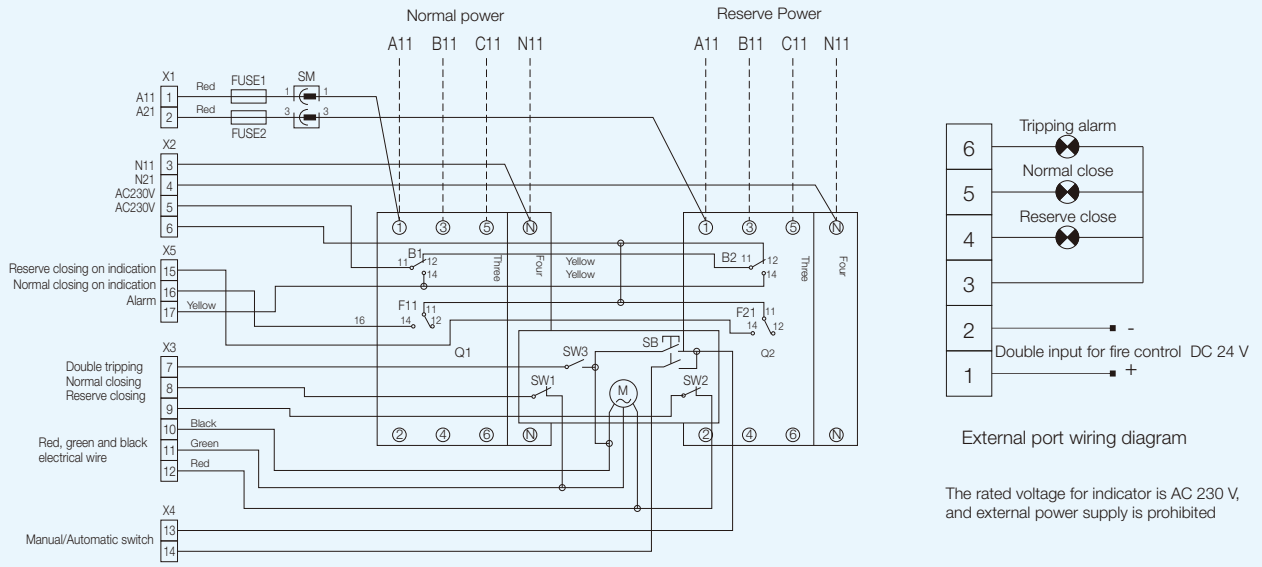


- There is only R type for 3SAQ1 series ATS at present.
- Automatic transfer with automatic restore:
  If deviation of common power is monitored , ATS will automatically switch the load from the common power to backup power; if the power returns to normal, it will automatically return to common power supply.

Technical Specifications

Type	3SAQ1-63	
Execution circuit breaker	3SB71-63	
Number of poles (P)	3, 4	
Rated operating current (A)	6, 10, 16, 20, 25, 32, 40, 50, 63	
Rated operating voltage (VAC)	230/400	
Rated control voltage (VAC)	230	
Rated insulation voltage (VAC)	500	
Rated ultimate short circuit breaking capacity at 400V AC (kA)	6	10
Rated short circuit making capacity (kA)	17	
Use category	AC-33iB	
Mechanical life (times)	10,000	
Electrical life (times)	4,000	
Ambient temperature	-5 ~ 40 °C, max. 95% humidity	
Storage temperature	-40 ~ +75 °C	
Altitude (Max.)	2,000	

Wiring diagram

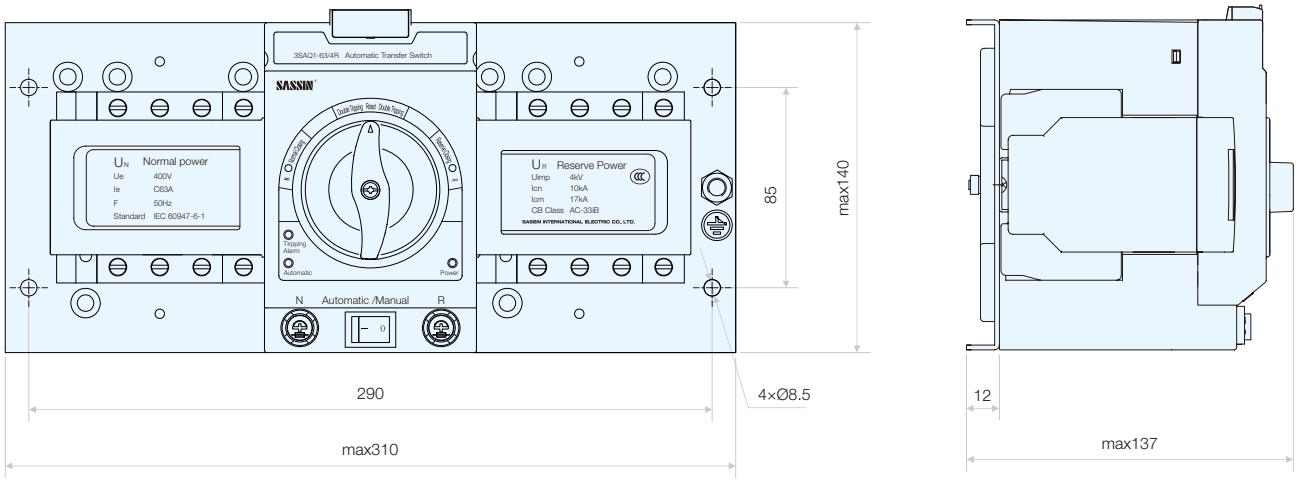


a) Q1, Q2: MCB (Double points for the location of the icon)
F21, B2: The right auxiliary and alarm head of circuit breaker
SW1: Common closing limit switch in place
SW3: Double points limit switch in place
FUSE1, FUSE2: Fuses
SM: Three-pin connector
b) Dotted line is for the user to connect and the remaining for factory, for user's reference

F11, B1: The right auxiliary and alarm head of circuit breaker
M: Electric motor
SW2: Backup closing limit switch in place
X1 X2 X3 X4 X5: Connectors
SB: Rocker Switch

Outline and installation dimensions

unit in mm



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Selection and ordering data

	Rated breaking capacity (kA)	Poles (p)	Rated current (A)	Curve B		Curve C		Curve D	
				Type code	Order code	Type code	Order code	Type code	Order code
	6	3	6	AQ1 3B06NR	**19809**	AQ1 3C06NR	**19818**	AQ1 3D06NR	**19827**
			10	AQ1 3B10NR	**19810**	AQ1 3C10NR	**19819**	AQ1 3D10NR	**19828**
			16	AQ1 3B16NR	**19811**	AQ1 3C16NR	**19820**	AQ1 3D16NR	**19829**
			20	AQ1 3B20NR	**19812**	AQ1 3C20NR	**19821**	AQ1 3D20NR	**19830**
			25	AQ1 3B25NR	**19813**	AQ1 3C25NR	**19822**	AQ1 3D25NR	**19831**
			32	AQ1 3B32NR	**19814**	AQ1 3C32NR	**19823**	AQ1 3D32NR	**19832**
			40	AQ1 3B40NR	**19815**	AQ1 3C40NR	**19824**	AQ1 3D40NR	**19833**
			50	AQ1 3B50NR	**19816**	AQ1 3C50NR	**19825**	AQ1 3D50NR	**19834**
			63	AQ1 3B63NR	**19817**	AQ1 3C63NR	**19826**	AQ1 3D63NR	**19835**
		4	6	AQ1 4B06NR	**19836**	AQ1 4C06NR	**19845**	AQ1 4D06NR	**19854**
			10	AQ1 4B10NR	**19837**	AQ1 4C10NR	**19846**	AQ1 4D10NR	**19855**
			16	AQ1 4B16NR	**19838**	AQ1 4C16NR	**19847**	AQ1 4D16NR	**19856**
			20	AQ1 4B20NR	**19839**	AQ1 4C20NR	**19848**	AQ1 4D20NR	**19857**
			25	AQ1 4B25NR	**19840**	AQ1 4C25NR	**19849**	AQ1 4D25NR	**19858**
			32	AQ1 4B32NR	**19841**	AQ1 4C32NR	**19850**	AQ1 4D32NR	**19859**
			40	AQ1 4B40NR	**19842**	AQ1 4C40NR	**19851**	AQ1 4D40NR	**19860**
			50	AQ1 4B50NR	**19843**	AQ1 4C50NR	**19852**	AQ1 4D50NR	**19861**
			63	AQ1 4B63NR	**19844**	AQ1 4C63NR	**19853**	AQ1 4D63NR	**19862**
	10	3	6	AQ1 3B06HR	**19755**	AQ1 3C06HR	**19764**	AQ1 3D06HR	**19773**
			10	AQ1 3B10HR	**19756**	AQ1 3C10HR	**19765**	AQ1 3D10HR	**19774**
			16	AQ1 3B16HR	**19757**	AQ1 3C16HR	**19766**	AQ1 3D16HR	**19775**
			20	AQ1 3B20HR	**19758**	AQ1 3C20HR	**19767**	AQ1 3D20HR	**19776**
			25	AQ1 3B25HR	**19759**	AQ1 3C25HR	**19768**	AQ1 3D25HR	**19777**
			32	AQ1 3B32HR	**19760**	AQ1 3C32HR	**19769**	AQ1 3D32HR	**19778**
			40	AQ1 3B40HR	**19761**	AQ1 3C40HR	**19770**	AQ1 3D40HR	**19779**
			50	AQ1 3B50HR	**19762**	AQ1 3C50HR	**19771**	AQ1 3D50HR	**19780**
			63	AQ1 3B63HR	**19763**	AQ1 3C63HR	**19772**	AQ1 3D63HR	**19781**
		4	6	AQ1 4B06HR	**19782**	AQ1 4C06HR	**19791**	Aq1 4D06HR	**19800**
			10	AQ1 4B10HR	**19783**	AQ1 4C10HR	**19792**	AQ1 4D10HR	**19801**
			16	AQ1 4B16HR	**19784**	AQ1 4C16HR	**19793**	AQ1 4D16HR	**19802**
			20	AQ1 4B20HR	**19785**	AQ1 4C20HR	**19794**	AQ1 4D20HR	**19803**
			25	AQ1 4B25HR	**19786**	AQ1 4C25HR	**19795**	AQ1 4D25HR	**19804**
			32	AQ1 4B32HR	**19787**	AQ1 4C32HR	**19796**	AQ1 4D32HR	**19805**
			40	AQ1 4B40HR	**19788**	AQ1 4C40HR	**19797**	AQ1 4D40HR	**19806**
			50	AQ1 4B50HR	**19789**	AQ1 4C50HR	**19798**	AQ1 4D50HR	**19807**
			63	AQ1 4B63HR	**19790**	AQ1 4C63HR	**19799**	AQ1 4D63HR	**19808**

Utilization categories:

- AC-33iB: for system loads including cage motor and resistive loads.
- AC-33B: for motor load or mixture load including motors, resistive load and 30% incandescent load.
- Standard: IEC 60947-6-1

Application

3SAQ2 series automatic transfer switches are made up of two pieces of 3-pole or 4-pole MCCB and accessories (including auxiliary and alarm contacts), mechanical interlocking and electronic trip unit etc. As the terminal automatic switching devices, they are applied for the grid with double power supply of AC 50 Hz or 60 Hz, the rated current up to 800 A of three phase four line (available for one phase one line also). When one power supply fails due to faults of over-voltage, under-voltage or phase loss, one or more circuits will be automatically switched from one power supply to another one, to ensure normal power supply for the circuit.

3SAQ2 series automatic transfer switches are widely used in hospitals, shopping malls, banks, chemical industry, metallurgy, high-rise buildings, military facilities and any other important places that do not allow power off. They are important electric devices to ensure continuous power supply.

There are two structures available:
Integral type: the controller and the actuator are mounted on the same base. Split type: the controller is mounted on the cabinet panel, the executive mechanism is mounted on the base and installed inside of the cabinet by user. The controller and the executive mechanism are connected by a cable with length about 2 meters.

Standards

IEC 60947-6-1



Instruction of type code

AQ2 A 3 400 M NB R U

- **AQ2** — Series
- **A** — Rated current
  - A: Size A 3SAQ2-100
  - B: Size B 3SAQ2-225
  - C: Size C 3SAQ2-400
  - D: Size D 3SAQ2-630
  - E: Size E 3SAQ2-800
- **3** — Number of pole
  - 3: 3-pole
  - 4: 4-pole
- **400** — Rated current

Size A	Size B	Size C	Size D	Size E
16	100	225	400	630
20	125	250	500	700
25	160	315	360	800
32	180	350		
40	200	400		
50	225			
63				
80				
100				

- **M** — Breaking capacity:

	Size A	Size B	Size C	Size D	Size E
L:	35	35	50	50	
M:	50	35	65	65	75
H:	85	85	100	100	100

- **NB** — Type of installation
  - NB: Grid-grid
  - NG: Grid-generator
- **R** — Control mode
  - R: Automatic transfer and restoration
  - S: Automatic transfer without restoration
- **U** — Type of structure
  - U: Integral type
  - S: Split type

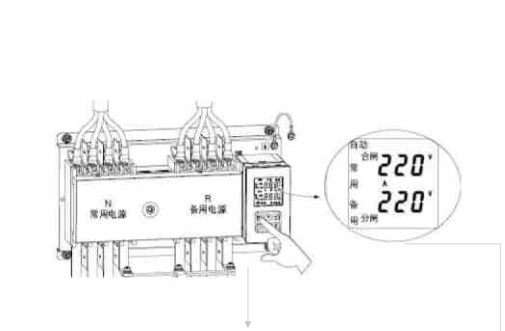
Automatic Transfer Switches
Series 3SAQ2 CB Class

Features

- Small size, easy to install
- Advanced digital electronic control technology
- Driven by single motor
- Double interlock protection
- Double protection of mechanical interlock and electrical interlock prevents the two power supply from being connected at the same time. The electrical interlock adopts the way of directly indicating fuse contact position of automatic switch to achieve true electric interlock-to prevent the automatic transfer
- under conditions such as contact fusion welding, breaker handle damaged, circuit-breaker fault trip etc.
- Low power consumption and lower level noise

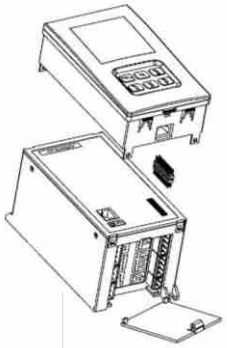
Frame	Power consumption
3SAQ2-1003	20 W
SAQ2-2253	40 W
SAQ2-400/630/800	20 W

- Complete functions as shown in the following pictures

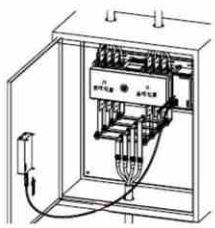


Transfer parameters is settable
Value of under-voltage transfer (fault setting is 187 V)
Time-delay of transfer
Grid-grid: mode R, mode S
Grid-generator: mode R, mode S

Visual management
Display voltage value of three phase
Display of status of open and closed



Kinds of auxiliary function
External terminals for indication of open and closed
Fire linkage
Signal of generator
External power supply



Integrated or split controller, easy to install

- Isolation function

Technical parameter

Size		A				B				C				D				E		
Type		3SAQ2-100				3SAQ2-225				3SAQ2-400				3SAQ2-630				3SAQ2-800		
Standard		IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1		
Execution circuit-breaker		3SM8N-100				3SM8N-225				3SM8N-400				3SM8N-630				3SM8N-800		
Rated current I_n	A	16 25 32 40 50 63 80 100				100 125 160 180 200 225				225 250 315 350 400				400 500 360				630 700 800		
Rated operating voltage U_e	V a.c.	400				400				400				400						
Rated operating frequency	Hz	50/60				50/60				50/60				50/60						
Rated insulation voltage	V a.c.	800				800				800				800				800		
Rated impulse withstand voltage U_{imp}	kV	8				8				8				8				8		
Poles	pole	3			4	3			4	3			4	3			4	3		4
Breaking capacity		L	M	H	M	L	M	H	M	L	M	H	M	L	M	H	M	M	H	M
Rated short-circuit breaking capacity I_{cn}	kA	35	50	85	50	35	50	85	50	50	65	100	65	50	65	100	65	75	100	75
Rated short-circuit making capacity I_{cm}	kA	73.5	105	187	105	73.5	105	187	105	105	143	220	143	105	143	220	143	165	220	165
Mechanical life	cycle	6000				6000				4000				3000				3000		
Use category		AC-33B																		
Product type		CB class																		
Protection level		IP30 (except terminals of main circuit)																		
Protection																				
Overload protection		√				√				√				√				√		
Short-circuit protection		√				√				√				√				√		

Controller

function

Manual and automatic transfer mode	√
Working position of main contact (execute circuit breaker)	
Normal power supply closed	√
Standby power supply closed	√
Double open	√
Automatic control	
Monitoring of normal power supply (three phase detection)	√
Monitoring of standby power supply (three phase detection)	√
Automatic transfer and restoration	√
Automatic transfer without restoration	√
Grid-grid	√
Grid-generator	√
Short phase or voltage loss transfer	√
Under voltage transfer	√
Over voltage transfer	√
Adjustable time-delay	√
Time-delayed transfer	0-30 s continuous adjustment
Return delay	0-30 s continuous adjustment
Generator control	√
Fire linkage	√
Indication	
Indication of closed, open and double open	√
Indication of normal power supply	√
Indication of standby power supply	√
Indication of fault trip	√
External signal terminal of indication	√
Indication of parameter setting	√
Interlock protection	
Electrical interlock	√

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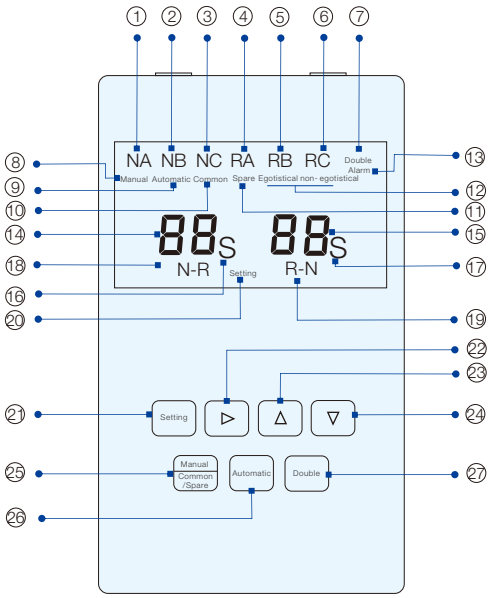
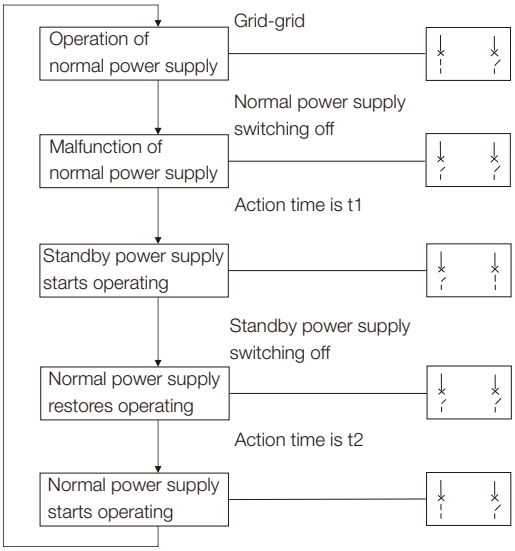
LCD display of controller



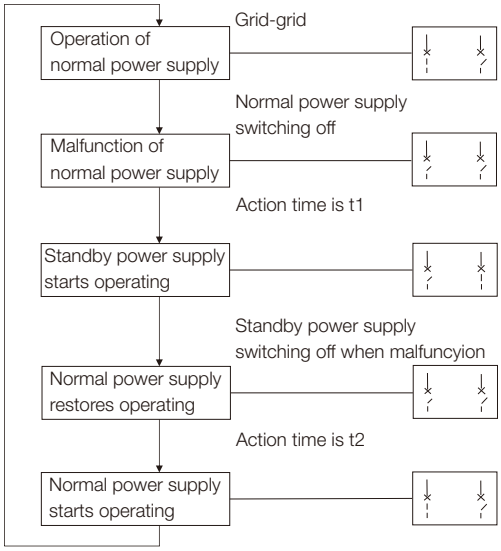
① Displaying the status of A phase for normal power supply. No display if abnormal.
② Displaying the status of B phase for normal power supply. No display if abnormal.
③ Displaying the status of C phase for normal power supply. No display if abnormal.
④ Displaying the status of A phase for standby power supply. No display if abnormal.
⑤ Displaying the status of B phase for standby power supply. No display if abnormal.
⑥ Displaying the status of C phase for standby power supply. No display if abnormal.
⑦ Displaying the double open status
⑧ Indicating the controller is in manual control mode
⑨ Indicating the controller is in automatic control mode
⑩ Indicating the normal power supply is closed
⑪ Indicating the standby power supply is closed
⑫ Display the control mode
⑬ Display the ATS in tripped status
⑭ Parameter display area of normal power supply
⑮ Parameter display area of standby power supply
⑯ Unit of time: second
⑰ Unit of time: second
⑱ Indication of time-delayed transfer
⑲ Indication of time-delayed return
⑳ Indication of settings of controller
㉑ Setting button: press to enter setting menu
㉒ Shift button: check voltage in normal use, move backwards in setting status
㉓ Up button: increase number in setting status
㉔ Down button: decrease number in setting status
㉕ Manual button: press to switch to manual control in normal use, and transfer between normal power supply and standby power supply if in manual control status.
㉖ Automatic button: press to switch to automatic control mode.
㉗ Double open button: press to switch to double open status in manual control mode, save and exit in setting status.

Diagram of control logic

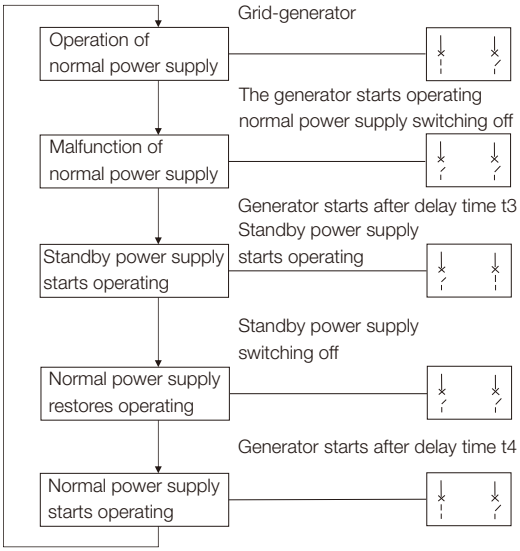
- Automatic transfer and restoration between the normal and standby power supply



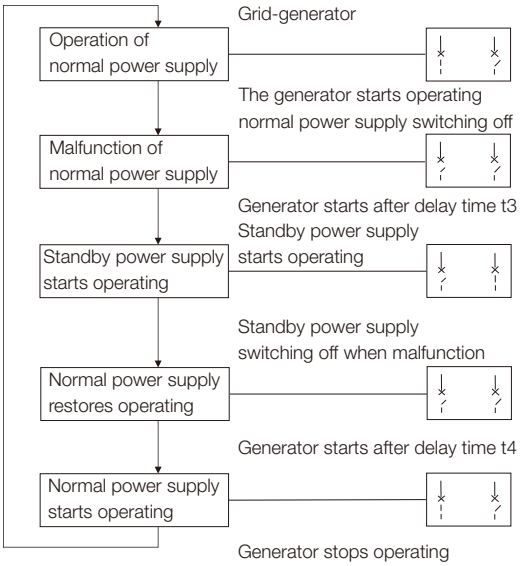
- Automatic transfer without restoration between the normal and standby power supply



- Automatic transfer and restoration between the normal and generating power supply



- Automatic transfer without restoration between the normal and generatingpower supply



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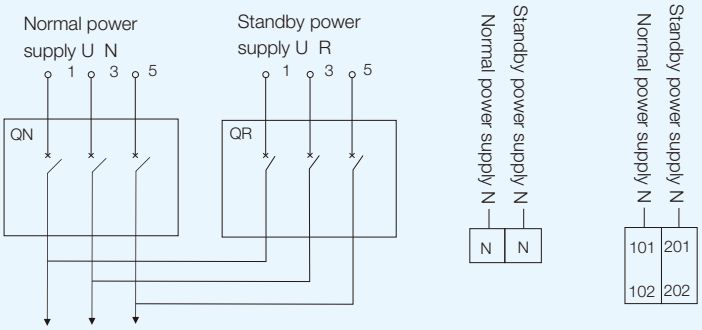
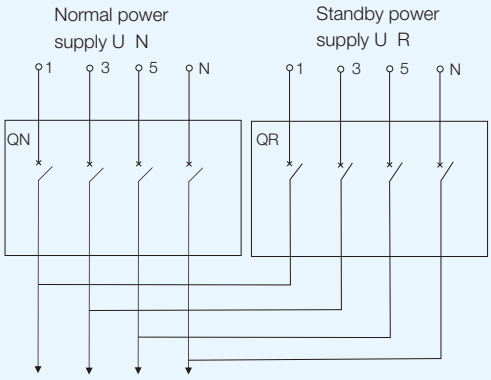
External wiring diagram

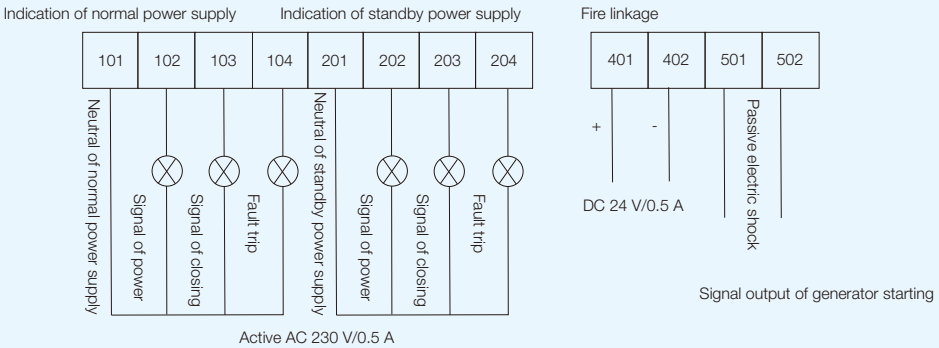
3-pole



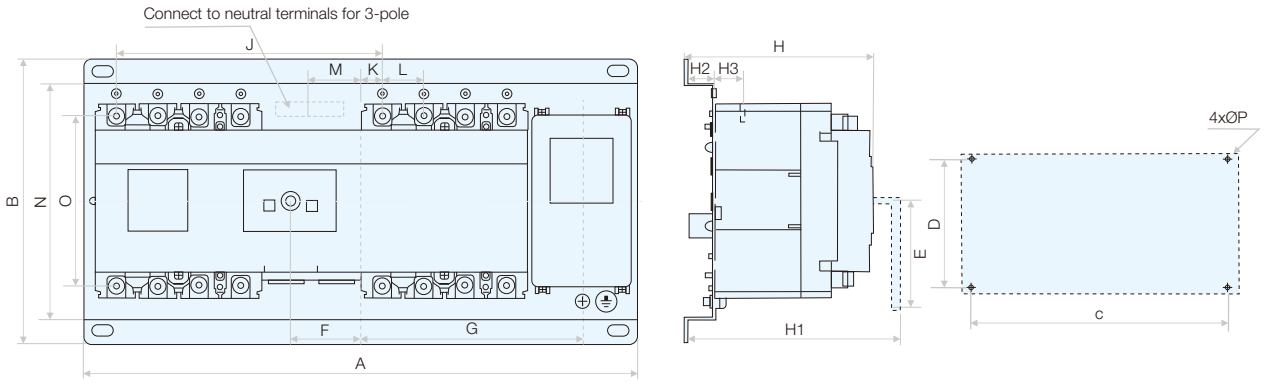
4-pole



External connection of controller



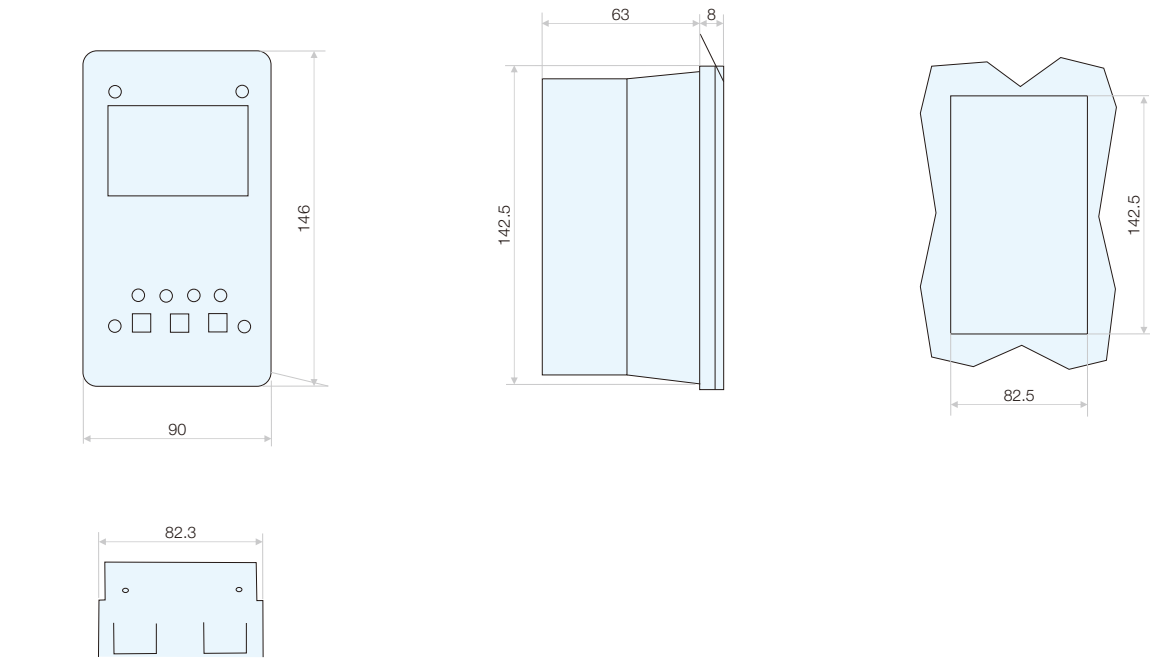
Outline and installation dimension diagram



	A		B	C		D	H	H1	P
	3-pole	4-pole		3-pole	4-pole				
3SAQ2-100	420	420	240	420	420	220	140	180	Ø8
3SAQ2-225	470	470	240	470	470	220	160	190	Ø8
3SAQ2-400	615	615	330	615	615	300	200	227	Ø10
3SAQ2-630	740	740	330	740	740	300	200	231	Ø10
3SAQ2-800	725	790	330	725	790	300	210	240	Ø10

Drilling dimensions of control panel

unit in mm



Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer and restoration between normal and standby power supply (NBR)

1

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
				Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-100L	35 kA	16	AQ2A 3016LNBRU	**19944**	AQ2A 3016LNBRS	**30341**
			20	AQ2A 3020LNBRU	**19945**	AQ2A 3020LNBRS	**30342**
			25	AQ2A 3025LNBRU	**19946**	AQ2A 3025LNBRS	**30343**
			32	AQ2A 3032LNBRU	**19947**	AQ2A 3032LNBRS	**30344**
			40	AQ2A 3040LNBRU	**19948**	AQ2A 3040LNBRS	**30345**
			50	AQ2A 3050LNBRU	**19949**	AQ2A 3050LNBRS	**30346**
			63	AQ2A 3063LNBRU	**19950**	AQ2A 3063LNBRS	**30347**
			80	AQ2A 3080LNBRU	**19951**	AQ2A 3080LNBRS	**30348**
			100	AQ2A 3100LNBRU	**19952**	AQ2A 3100LNBRS	**30349**
	3SM8N-100M	50 kA	16	AQ2A 3016MNBRU	**19971**	AQ2A 3016MNBRS	**30368**
			20	AQ2A 3020MNBRU	**19972**	AQ2A 3020MNBRS	**30369**
			25	AQ2A 3025MNBRU	**19973**	AQ2A 3025MNBRS	**30370**
			32	AQ2A 3032MNBRU	**19974**	AQ2A 3032MNBRS	**30371**
			40	AQ2A 3040MNBRU	**19975**	AQ2A 3040MNBRS	**30372**
			50	AQ2A 3050MNBRU	**19976**	AQ2A 3050MNBRS	**30373**
			63	AQ2A 3063MNBRU	**19977**	AQ2A 3063MNBRS	**30374**
			80	AQ2A 3080MNBRU	**19978**	AQ2A 3080MNBRS	**30375**
			100	AQ2A 3100MNBRU	**19979**	AQ2A 3100MNBRS	**30376**
	3SM8N-100H	85 kA	16	AQ2A 3016HNBRU	**30026**	AQ2A 3016HNBRS	**30422**
			20	AQ2A 3020HNBRU	**30027**	AQ2A 3020HNBRS	**30423**
			25	AQ2A 3025HNBRU	**30028**	AQ2A 3025HNBRS	**30424**
			32	AQ2A 3032HNBRU	**30029**	AQ2A 3032HNBRS	**30425**
			40	AQ2A 3040HNBRU	**30030**	AQ2A 3040HNBRS	**30426**
			50	AQ2A 3050HNBRU	**30031**	AQ2A 3050HNBRS	**30427**
			63	AQ2A 3063HNBRU	**30032**	AQ2A 3063HNBRS	**30428**
			80	AQ2A 3080HNBRU	**30033**	AQ2A 3080HNBRS	**30429**
			100	AQ2A 3100HNBRU	**30034**	AQ2A 3100HNBRS	**30430**
	4-pole						
	3SM8N-100M	50 kA	16	AQ2A 4016MNBRU	**19998**	AQ2A 4016MNBRS	**30395**
			20	AQ2A 4020MNBRU	**19999**	AQ2A 4020MNBRS	**30396**
			25	AQ2A 4025MNBRU	**30001**	AQ2A 4025MNBRS	**30397**
			32	AQ2A 4032MNBRU	**30002**	AQ2A 4032MNBRS	**30398**
			40	AQ2A 4040MNBRU	**30003**	AQ2A 4040MNBRS	**30399**
			50	AQ2A 4050MNBRU	**30004**	AQ2A 4050MNBRS	**30400**
			63	AQ2A 4063MNBRU	**30005**	AQ2A 4063MNBRS	**30401**
			80	AQ2A 4080MNBRU	**30006**	AQ2A 4080MNBRS	**30402**
			100	AQ2A 4100MNBRU	**30007**	AQ2A 4100MNBRS	**30403**

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer without restoration between normal and standby power supply (NBS)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
				Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-100L	35 kA	16	AQ2A 3016LNBSU	**19953**	AQ2A 3016LNBSS	**30350**
			20	AQ2A 3020LNBSU	**19954**	AQ2A 3020LNBSS	**30351**
			25	AQ2A 3025LNBSU	**19955**	AQ2A 3025LNBSS	**30352**
			32	AQ2A 3032LNBSU	**19956**	AQ2A 3032LNBSS	**30353**
			40	AQ2A 3040LNBSU	**19957**	AQ2A 3040LNBSS	**30354**
			50	AQ2A 3050LNBSU	**19958**	AQ2A 3050LNBSS	**30355**
			63	AQ2A 3063LNBSU	**19959**	AQ2A 3063LNBSS	**30356**
			80	AQ2A 3080LNBSU	**19960**	AQ2A 3080LNBSS	**30357**
			100	AQ2A 3100LNBSU	**19961**	AQ2A 3100LNBSS	**30358**
	3SM8N-100M	50 kA	16	AQ2A 3016MNBSU	**19980**	AQ2A 3016MNBSS	**30377**
			20	AQ2A 3020MNBSU	**19981**	AQ2A 3020MNBSS	**30378**
			25	AQ2A 3025MNBSU	**19982**	AQ2A 3025MNBSS	**30379**
			32	AQ2A 3032MNBSU	**19983**	AQ2A 3032MNBSS	**30380**
			40	AQ2A 3040MNBSU	**19984**	AQ2A 3040MNBSS	**30381**
			50	AQ2A 3050MNBSU	**19985**	AQ2A 3050MNBSS	**30382**
			63	AQ2A 3063MNBSU	**19986**	AQ2A 3063MNBSS	**30383**
			80	AQ2A 3080MNBSU	**19987**	AQ2A 3080MNBSS	**30384**
			100	AQ2A 3100MNBSU	**19988**	AQ2A 3100MNBSS	**30385**
	3SM8N-100H	85 kA	16	AQ2A 3016HNBSU	**30035**	AQ2A 3016HNBSS	**30431**
			20	AQ2A 3020HNBSU	**30036**	AQ2A 3020HNBSS	**30432**
			25	AQ2A 3025HNBSU	**30037**	AQ2A 3025HNBSS	**30433**
			32	AQ2A 3032HNBSU	**30038**	AQ2A 3032HNBSS	**30434**
			40	AQ2A 3040HNBSU	**30039**	AQ2A 3040HNBSS	**30435**
			50	AQ2A 3050HNBSU	**30040**	AQ2A 3050HNBSS	**30436**
			63	AQ2A 3063HNBSU	**30041**	AQ2A 3063HNBSS	**30437**
			80	AQ2A 3080HNBSU	**30042**	AQ2A 3080HNBSS	**30438**
			100	AQ2A 3100HNBSU	**30043**	AQ2A 3100HNBSS	**30439**
	4-pole						
	3SM8N-100M	50 kA	16	AQ2A 4016MNBSU	**30008**	AQ2A 4016MNBSS	**30404**
			20	AQ2A 4020MNBSU	**30009**	AQ2A 4020MNBSS	**30405**
			25	AQ2A 4025MNBSU	**30010**	AQ2A 4025MNBSS	**30406**
			32	AQ2A 4032MNBSU	**30011**	AQ2A 4032MNBSS	**30407**
			40	AQ2A 4040MNBSU	**30012**	AQ2A 4040MNBSS	**30408**
			50	AQ2A 4050MNBSU	**30013**	AQ2A 4050MNBSS	**30409**
			63	AQ2A 4063MNBSU	**30014**	AQ2A 4063MNBSS	**30410**
			80	AQ2A 4080MNBSU	**30015**	AQ2A 4080MNBSS	**30411**
			100	AQ2A 4100MNBSU	**30016**	AQ2A 4100MNBSS	**30412**

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer and restoration between normal and generating power supply (NGR)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
				Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-100L	35 kA	16	AQ2A 3016LNGRU	**19962**	AQ2A 3016LNGRS	**30359**
			20	AQ2A 3020LNGRU	**19963**	AQ2A 3020LNGRS	**30360**
			25	AQ2A 3025LNGRU	**19964**	AQ2A 3025LNGRS	**30361**
			32	AQ2A 3032LNGRU	**19965**	AQ2A 3032LNGRS	**30362**
			40	AQ2A 3040LNGRU	**19966**	AQ2A 3040LNGRS	**30363**
			50	AQ2A 3050LNGRU	**19967**	AQ2A 3050LNGRS	**30364**
			63	AQ2A 3063LNGRU	**19968**	AQ2A 3063LNGRS	**30365**
			80	AQ2A 3080LNGRU	**19969**	AQ2A 3080LNGRS	**30366**
			100	AQ2A 3100LNGRU	**19970**	AQ2A 3100LNGRS	**30367**
	3SM8N-100M	50 kA	16	AQ2A 3016MNGRU	**19989**	AQ2A 3016MNGRS	**30386**
			20	AQ2A 3020MNGRU	**19990**	AQ2A 3020MNGRS	**30387**
			25	AQ2A 3025MNGRU	**19991**	AQ2A 3025MNGRS	**30388**
			32	AQ2A 3032MNGRU	**19992**	AQ2A 3032MNGRS	**30389**
			40	AQ2A 3040MNGRU	**19993**	AQ2A 3040MNGRS	**30390**
			50	AQ2A 3050MNGRU	**19994**	AQ2A 3050MNGRS	**30391**
			63	AQ2A 3063MNGRU	**19995**	AQ2A 3063MNGRS	**30392**
			80	AQ2A 3080MNGRU	**19996**	AQ2A 3080MNGRS	**30393**
			100	AQ2A 3100MNGRU	**19997**	AQ2A 3100MNGRS	**30394**
	3SM8N-100H	85 kA	16	AQ2A 3016HNGRU	**30044**	AQ2A 3016HNGRS	**30440**
			20	AQ2A 3020HNGRU	**30045**	AQ2A 3020HNGRS	**30441**
			25	AQ2A 3025HNGRU	**30046**	AQ2A 3025HNGRS	**30442**
			32	AQ2A 3032HNGRU	**30047**	AQ2A 3032HNGRS	**30443**
			40	AQ2A 3040HNGRU	**30048**	AQ2A 3040HNGRS	**30444**
			50	AQ2A 3050HNGRU	**30049**	AQ2A 3050HNGRS	**30445**
			63	AQ2A 3063HNGRU	**30050**	AQ2A 3063HNGRS	**30446**
			80	AQ2A 3080HNGRU	**30051**	AQ2A 3080HNGRS	**30447**
			100	AQ2A 3100HNGRU	**30052**	AQ2A 3100HNGRS	**30448**
	4-pole						
	3SM8N-100M	50 kA	16	AQ2A 4016MNGRU	**30017**	AQ2A 4016MNGRS	**30413**
			20	AQ2A 4020MNGRU	**30018**	AQ2A 4020MNGRS	**30414**
			25	AQ2A 4025MNGRU	**30019**	AQ2A 4025MNGRS	**30415**
			32	AQ2A 4032MNGRU	**30020**	AQ2A 4032MNGRS	**30416**
			40	AQ2A 4040MNGRU	**30021**	AQ2A 4040MNGRS	**30417**
			50	AQ2A 4050MNGRU	**30022**	AQ2A 4050MNGRS	**30418**
			63	AQ2A 4063MNGRU	**30023**	AQ2A 4063MNGRS	**30419**
			80	AQ2A 4080MNGRU	**30024**	AQ2A 4080MNGRS	**30420**
			100	AQ2A 4100MNGRU	**30025**	AQ2A 4100MNGRS	**30421**

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer without restoration between normal and generating power supply (NGS)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
				Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-100L	35 kA	16	AQ2A 3016LNGSU	**19863**	AQ2A 3016LNGSS	**30284**
			20	AQ2A 3020LNGSU	**19864**	AQ2A 3020LNGSS	**30285**
			25	AQ2A 3025LNGSU	**19865**	AQ2A 3025LNGSS	**30286**
			32	AQ2A 3032LNGSU	**19866**	AQ2A 3032LNGSS	**30287**
			40	AQ2A 3040LNGSU	**19867**	AQ2A 3040LNGSS	**30288**
			50	AQ2A 3050LNGSU	**19868**	AQ2A 3050LNGSS	**30289**
			63	AQ2A 3063LNGSU	**19869**	AQ2A 3063LNGSS	**30290**
			80	AQ2A 3080LNGSU	**19870**	AQ2A 3080LNGSS	**30291**
			100	AQ2A 3100LNGSU	**19871**	AQ2A 3100LNGSS	**30292**
	3SM8N-100M	50 kA	16	AQ2A 3016MNGSU	**19872**	AQ2A 3016MNGSS	**30293**
			20	AQ2A 3020MNGSU	**19873**	AQ2A 3020MNGSS	**30294**
			25	AQ2A 3025MNGSU	**19874**	AQ2A 3025MNGSS	**30295**
			32	AQ2A 3032MNGSU	**19875**	AQ2A 3032MNGSS	**30296**
			40	AQ2A 3040MNGSU	**19876**	AQ2A 3040MNGSS	**30297**
			50	AQ2A 3050MNGSU	**19877**	AQ2A 3050MNGSS	**30298**
			63	AQ2A 3063MNGSU	**19878**	AQ2A 3063MNGSS	**30299**
			80	AQ2A 3080MNGSU	**19879**	AQ2A 3080MNGSS	**30300**
			100	AQ2A 3100MNGSU	**19880**	AQ2A 3100MNGSS	**30301**
	3SM8N-100H	85 kA	16	AQ2A 3016HNGSU	**19890**	AQ2A 3016HNGSS	**30311**
			20	AQ2A 3020HNGSU	**19891**	AQ2A 3020HNGSS	**30312**
			25	AQ2A 3025HNGSU	**19892**	AQ2A 3025HNGSS	**30313**
			32	AQ2A 3032HNGSU	**19893**	AQ2A 3032HNGSS	**30314**
			40	AQ2A 3040HNGSU	**19894**	AQ2A 3040HNGSS	**30315**
			50	AQ2A 3050HNGSU	**19895**	AQ2A 3050HNGSS	**30316**
			63	AQ2A 3063HNGSU	**19896**	AQ2A 3063HNGSS	**30317**
			80	AQ2A 3080HNGSU	**19897**	AQ2A 3080HNGSS	**30318**
			100	AQ2A 3100HNGSU	**19898**	AQ2A 3100HNGSS	**30319**
	4-pole						
	3SM8N-100M	50 kA	16	AQ2A 4016MNGSU	**19881**	AQ2A 4016MNGSS	**30302**
			20	AQ2A 4020MNGSU	**19882**	AQ2A 4020MNGSS	**30303**
			25	AQ2A 4025MNGSU	**19883**	AQ2A 4025MNGSS	**30304**
			32	AQ2A 4032MNGSU	**19884**	AQ2A 4032MNGSS	**30305**
			40	AQ2A 4040MNGSU	**19885**	AQ2A 4040MNGSS	**30306**
			50	AQ2A 4050MNGSU	**19886**	AQ2A 4050MNGSS	**30307**
			63	AQ2A 4063MNGSU	**19887**	AQ2A 4063MNGSS	**30308**
			80	AQ2A 4080MNGSU	**19888**	AQ2A 4080MNGSS	**30309**
			100	AQ2A 4100MNGSU	**19889**	AQ2A 4100MNGSS	**30310**

Selection and ordering data

Size B: 3SAQ2-225

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNBRU	**30053**	AQ2B 3100LNBRS	**30449**
		125	AQ2B 3125LNBRU	**30054**	AQ2B 3125LNBRS	**30450**
		140	AQ2B 3140LNBRU	**30055**	AQ2B 3140LNBRS	**30451**
		160	AQ2B 3160LNBRU	**30056**	AQ2B 3160LNBRS	**30452**
		180	AQ2B 3180LNBRU	**30057**	AQ2B 3180LNBRS	**30453**
		200	AQ2B 3200LNBRU	**30058**	AQ2B 3200LNBRS	**30454**
		225	AQ2B 3225LNBRU	**30059**	AQ2B 3225LNBRS	**30455**
3SM8N-225M	50 kA	100	AQ2B 3100MNBRU	**30074**	AQ2B 3100MNBRS	**30470**
		125	AQ2B 3125MNBRU	**30075**	AQ2B 3125MNBRS	**30471**
		140	AQ2B 3140MNBRU	**30076**	AQ2B 3140MNBRS	**30472**
		160	AQ2B 3160MNBRU	**30077**	AQ2B 3160MNBRS	**30473**
		180	AQ2B 3180MNBRU	**30078**	AQ2B 3180MNBRS	**30474**
		200	AQ2B 3200MNBRU	**30079**	AQ2B 3200MNBRS	**30475**
		225	AQ2B 3225MNBRU	**30080**	AQ2B 3225MNBRS	**30476**
3SM8N-225H	85 kA	100	AQ2B 3100HNBRU	**30116**	AQ2B 3100HNBRS	**30512**
		125	AQ2B 3125HNBRU	**30117**	AQ2B 3125HNBRS	**30513**
		140	AQ2B 3140HNBRU	**30118**	AQ2B 3140HNBRS	**30514**
		160	AQ2B 3160HNBRU	**30119**	AQ2B 3160HNBRS	**30515**
		180	AQ2B 3180HNBRU	**30120**	AQ2B 3180HNBRS	**30516**
		200	AQ2B 3200HNBRU	**30121**	AQ2B 3200HNBRS	**30517**
		225	AQ2B 3225HNBRU	**30122**	AQ2B 3225HNBRS	**30518**
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNBRU	**30095**	AQ2B 4100MNBRS	**30491**
		125	AQ2B 4125MNBRU	**30096**	AQ2B 4125MNBRS	**30492**
		140	AQ2B 4140MNBRU	**30097**	AQ2B 4140MNBRS	**30493**
		160	AQ2B 4160MNBRU	**30098**	AQ2B 4160MNBRS	**30494**
		180	AQ2B 4180MNBRU	**30099**	AQ2B 4180MNBRS	**30495**
		200	AQ2B 4200MNBRU	**30100**	AQ2B 4200MNBRS	**30496**
		225	AQ2B 4225MNBRU	**30101**	AQ2B 4225MNBRS	**30497**

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNBSU	**30060**	AQ2B 3100LNBSS	**30456**
		125	AQ2B 3125LNBSU	**30061**	AQ2B 3125LNBSS	**30457**
		140	AQ2B 3140LNBSU	**30062**	AQ2B 3140LNBSS	**30458**
		160	AQ2B 3160LNBSU	**30063**	AQ2B 3160LNBSS	**30459**
		180	AQ2B 3180LNBSU	**30064**	AQ2B 3180LNBSS	**30460**
		200	AQ2B 3200LNBSU	**30065**	AQ2B 3200LNBSS	**30461**
		225	AQ2B 3225LNBSU	**30066**	AQ2B 3225LNBSS	**30462**
3SM8N-225M	50 kA	100	AQ2B 3100MNBSU	**30081**	AQ2B 3100MNBSS	**30477**
		125	AQ2B 3125MNBSU	**30082**	AQ2B 3125MNBSS	**30478**
		140	AQ2B 3140MNBSU	**30083**	AQ2B 3140MNBSS	**30479**
		160	AQ2B 3160MNBSU	**30084**	AQ2B 3160MNBSS	**30480**
		180	AQ2B 3180MNBSU	**30085**	AQ2B 3180MNBSS	**30481**
		200	AQ2B 3200MNBSU	**30086**	AQ2B 3200MNBSS	**30482**
		225	AQ2B 3225MNBSU	**30087**	AQ2B 3225MNBSS	**30483**
3SM8N-225H	85 kA	100	AQ2B 3100HNBSU	**30123**	AQ2B 3100HNBSS	**30519**
		125	AQ2B 3125HNBSU	**30124**	AQ2B 3125HNBSS	**30520**
		140	AQ2B 3140HNBSU	**30125**	AQ2B 3140HNBSS	**30521**
		160	AQ2B 3160HNBSU	**30126**	AQ2B 3160HNBSS	**30522**
		180	AQ2B 3180HNBSU	**30127**	AQ2B 3180HNBSS	**30523**
		200	AQ2B 3200HNBSU	**30128**	AQ2B 3200HNBSS	**30524**
		225	AQ2B 3225HNBSU	**30129**	AQ2B 3225HNBSS	**30525**
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNBSU	**30102**	AQ2B 4100MNBSS	**30498**
		125	AQ2B 4125MNBSU	**30103**	AQ2B 4125MNBSS	**30499**
		140	AQ2B 4140MNBSU	**30104**	AQ2B 4140MNBSS	**30500**
		160	AQ2B 4160MNBSU	**30105**	AQ2B 4160MNBSS	**30501**
		180	AQ2B 4180MNBSU	**30106**	AQ2B 4180MNBSS	**30502**
		200	AQ2B 4200MNBSU	**30107**	AQ2B 4200MNBSS	**30503**
		225	AQ2B 4225MNBSU	**30108**	AQ2B 4225MNBSS	**30504**

Selection and ordering data

Size B: 3SAQ2-225

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNGRU	**30067**	AQ2B 3100LNGRS	**30463**
		125	AQ2B 3125LNGRU	**30068**	AQ2B 3125LNGRS	**30464**
		140	AQ2B 3140LNGRU	**30069**	AQ2B 3140LNGRS	**30465**
		160	AQ2B 3160LNGRU	**30070**	AQ2B 3160LNGRS	**30466**
		180	AQ2B 3180LNGRU	**30071**	AQ2B 3180LNGRS	**30467**
		200	AQ2B 3200LNGRU	**30072**	AQ2B 3200LNGRS	**30468**
		225	AQ2B 3225LNGRU	**30073**	AQ2B 3225LNGRS	**30469**
3SM8N-225M	50 kA	100	AQ2B 3100MNGRU	**30088**	AQ2B 3100MNGRS	**30484**
		125	AQ2B 3125MNGRU	**30089**	AQ2B 3125MNGRS	**30485**
		140	AQ2B 3140MNGRU	**30090**	AQ2B 3140MNGRS	**30486**
		160	AQ2B 3160MNGRU	**30091**	AQ2B 3160MNGRS	**30487**
		180	AQ2B 3180MNGRU	**30092**	AQ2B 3180MNGRS	**30488**
		200	AQ2B 3200MNGRU	**30093**	AQ2B 3200MNGRS	**30489**
		225	AQ2B 3225MNGRU	**30094**	AQ2B 3225MNGRS	**30490**
3SM8N-225H	85 kA	100	AQ2B 3100HNGRU	**30130**	AQ2B 3100HNGRS	**30526**
		125	AQ2B 3125HNGRU	**30131**	AQ2B 3125HNGRS	**30527**
		140	AQ2B 3140HNGRU	**30132**	AQ2B 3140HNGRS	**30528**
		160	AQ2B 3160HNGRU	**30133**	AQ2B 3160HNGRS	**30529**
		180	AQ2B 3180HNGRU	**30134**	AQ2B 3180HNGRS	**30530**
		200	AQ2B 3200HNGRU	**30135**	AQ2B 3200HNGRS	**30531**
		225	AQ2B 3225HNGRU	**30136**	AQ2B 3225HNGRS	**30532**
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNGRU	**30109**	AQ2B 4100MNGRS	**30505**
		125	AQ2B 4125MNGRU	**30110**	AQ2B 4125MNGRS	**30506**
		140	AQ2B 4140MNGRU	**30111**	AQ2B 4140MNGRS	**30507**
		160	AQ2B 4160MNGRU	**30112**	AQ2B 4160MNGRS	**30508**
		180	AQ2B 4180MNGRU	**30113**	AQ2B 4180MNGRS	**30509**
		200	AQ2B 4200MNGRU	**30114**	AQ2B 4200MNGRS	**30510**
		225	AQ2B 4225MNGRU	**30115**	AQ2B 4225MNGRS	**30511**

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNGSU	**19899**	AQ2B 3100LNGSS	**30320**
		125	AQ2B 3125LNGSU	**19900**	AQ2B 3125LNGSS	**30321**
		140	AQ2B 3140LNGSU	**19901**	AQ2B 3140LNGSS	**30322**
		160	AQ2B 3160LNGSU	**19902**	AQ2B 3160LNGSS	**30323**
		180	AQ2B 3180LNGSU	**19903**	AQ2B 3180LNGSS	**30324**
		200	AQ2B 3200LNGSU	**19904**	AQ2B 3200LNGSS	**30325**
		225	AQ2B 3225LNGSU	**19905**	AQ2B 3225LNGSS	**30326**
3SM8N-225M	50 kA	100	AQ2B 3100MNGSU	**19906**	AQ2B 3100MNGSS	**30327**
		125	AQ2B 3125MNGSU	**19907**	AQ2B 3125MNGSS	**30328**
		140	AQ2B 3140MNGSU	**19908**	AQ2B 3140MNGSS	**30329**
		160	AQ2B 3160MNGSU	**19909**	AQ2B 3160MNGSS	**30330**
		180	AQ2B 3180MNGSU	**19910**	AQ2B 3180MNGSS	**30331**
		200	AQ2B 3200MNGSU	**19911**	AQ2B 3200MNGSS	**30332**
		225	AQ2B 3225MNGSU	**19912**	AQ2B 3225MNGSS	**30333**
3SM8N-225H	85 kA	100	AQ2B 3100HNGSU	**19920**	AQ2B 3100HNGSS	**14011**
		125	AQ2B 3125HNGSU	**19921**	AQ2B 3125HNGSS	**14012**
		140	AQ2B 3140HNGSU	**19922**	AQ2B 3140HNGSS	**14013**
		160	AQ2B 3160HNGSU	**19923**	AQ2B 3160HNGSS	**14014**
		180	AQ2B 3180HNGSU	**19924**	AQ2B 3180HNGSS	**14015**
		200	AQ2B 3200HNGSU	**19925**	AQ2B 3200HNGSS	**14016**
		225	AQ2B 3225HNGSU	**19926**	AQ2B 3225HNGSS	**14017**
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNGSU	**19913**	AQ2B 4100MNGSS	**30334**
		125	AQ2B 4125MNGSU	**19914**	AQ2B 4125MNGSS	**30335**
		140	AQ2B 4140MNGSU	**19915**	AQ2B 4140MNGSS	**30336**
		160	AQ2B 4160MNGSU	**19916**	AQ2B 4160MNGSS	**30337**
		180	AQ2B 4180MNGSU	**19917**	AQ2B 4180MNGSS	**30338**
		200	AQ2B 4200MNGSU	**19918**	AQ2B 4200MNGSS	**30339**
		225	AQ2B 4225MNGSU	**19919**	AQ2B 4225MNGSS	**30340**

Selection and ordering data

Size C: 3SAQ2-400

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNBRU	**30137**	AQ2C 3225LNBRS	**30533**
		250	AQ2C 3250LNBRU	**30138**	AQ2C 3250LNBRS	**30534**
		315	AQ2C 3315LNBRU	**30139**	AQ2C 3315LNBRS	**30535**
		350	AQ2C 3350LNBRU	**30140**	AQ2C 3350LNBRS	**30536**
		400	AQ2C 3400LNBRU	**30141**	AQ2C 3400LNBRS	**30537**
3SM8N-400M	65 kA	225	AQ2C 3225MNBRU	**30152**	AQ2C 3225MNBRS	**30548**
		250	AQ2C 3250MNBRU	**30153**	AQ2C 3250MNBRS	**30549**
		315	AQ2C 3315MNBRU	**30154**	AQ2C 3315MNBRS	**30550**
		350	AQ2C 3350MNBRU	**30155**	AQ2C 3350MNBRS	**30551**
		400	AQ2C 3400MNBRU	**30156**	AQ2C 3400MNBRS	**30552**
3SM8N-400H	100 kA	225	AQ2C 3225HNBRU	**30182**	AQ2C 3225HNBRS	**30578**
		250	AQ2C 3250HNBRU	**30183**	AQ2C 3250HNBRS	**30579**
		315	AQ2C 3315HNBRU	**30184**	AQ2C 3315HNBRS	**30580**
		350	AQ2C 3350HNBRU	**30185**	AQ2C 3350HNBRS	**30581**
		400	AQ2C 3400HNBRU	**30186**	AQ2C 3400HNBRS	**30582**
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNBRU	**30167**	AQ2C 4225MNBRS	**30563**
		250	AQ2C 4250MNBRU	**30168**	AQ2C 4250MNBRS	**30564**
		315	AQ2C 4315MNBRU	**30169**	AQ2C 4315MNBRS	**30565**
		350	AQ2C 4350MNBRU	**30170**	AQ2C 4350MNBRS	**30566**
		400	AQ2C 4400MNBRU	**30171**	AQ2C 4400MNBRS	**30567**

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNBSU	**30142**	AQ2C 3225LNBSS	**30538**
		250	AQ2C 3250LNBSU	**30143**	AQ2C 3250LNBSS	**30539**
		315	AQ2C 3315LNBSU	**30144**	AQ2C 3315LNBSS	**30540**
		350	AQ2C 3350LNBSU	**30145**	AQ2C 3350LNBSS	**30541**
		400	AQ2C 3400LNBSU	**30146**	AQ2C 3400LNBSS	**30542**
3SM8N-400M	65 kA	225	AQ2C 3225MNBSU	**30157**	AQ2C 3225MNBSS	**30553**
		250	AQ2C 3250MNBSU	**30158**	AQ2C 3250MNBSS	**30554**
		315	AQ2C 3315MNBSU	**30159**	AQ2C 3315MNBSS	**30555**
		350	AQ2C 3350MNBSU	**30160**	AQ2C 3350MNBSS	**30556**
		400	AQ2C 3400MNBSU	**30161**	AQ2C 3400MNBSS	**30557**
3SM8N-400H	100 kA	225	AQ2C 3225HNBSU	**30187**	AQ2C 3225HNBSS	**30583**
		250	AQ2C 3250HNBSU	**30188**	AQ2C 3250HNBSS	**30584**
		315	AQ2C 3315HNBSU	**30189**	AQ2C 3315HNBSS	**30585**
		350	AQ2C 3350HNBSU	**30190**	AQ2C 3350HNBSS	**30586**
		400	AQ2C 3400HNBSU	**30191**	AQ2C 3400HNBSS	**30587**
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNBSU	**30172**	AQ2C 4225MNBSS	**30568**
		250	AQ2C 4250MNBSU	**30173**	AQ2C 4250MNBSS	**30569**
		315	AQ2C 4315MNBSU	**30174**	AQ2C 4315MNBSS	**30570**
		350	AQ2C 4350MNBSU	**30175**	AQ2C 4350MNBSS	**30571**
		400	AQ2C 4400MNBSU	**30176**	AQ2C 4400MNBSS	**30572**

Selection and ordering data

Size C: 3SAQ2-400

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNGRU	**30147**	AQ2C 3225LNGRS	**30543**
		250	AQ2C 3250LNGRU	**30148**	AQ2C 3250LNGRS	**30544**
		315	AQ2C 3315LNGRU	**30149**	AQ2C 3315LNGRS	**30545**
		350	AQ2C 3350LNGRU	**30150**	AQ2C 3350LNGRS	**30546**
		400	AQ2C 3400LNGRU	**30151**	AQ2C 3400LNGRS	**30547**
3SM8N-400M	65 kA	225	AQ2C 3225MNGRU	**30162**	AQ2C 3225MNGRS	**30558**
		250	AQ2C 3250MNGRU	**30163**	AQ2C 3250MNGRS	**30559**
		315	AQ2C 3315MNGRU	**30164**	AQ2C 3315MNGRS	**30560**
		350	AQ2C 3350MNGRU	**30165**	AQ2C 3350MNGRS	**30561**
		400	AQ2C 3400MNGRU	**30166**	AQ2C 3400MNGRS	**30562**
3SM8N-400H	100 kA	225	AQ2C 3225HNGRU	**30192**	AQ2C 3225HNGRS	**30588**
		250	AQ2C 3250HNGRU	**30193**	AQ2C 3250HNGRS	**30589**
		315	AQ2C 3315HNGRU	**30194**	AQ2C 3315HNGRS	**30590**
		350	AQ2C 3350HNGRU	**30195**	AQ2C 3350HNGRS	**30591**
		400	AQ2C 3400HNGRU	**30196**	AQ2C 3400HNGRS	**30592**
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNGRU	**30177**	AQ2C 4225MNGRS	**30573**
		250	AQ2C 4250MNGRU	**30178**	AQ2C 4250MNGRS	**30574**
		315	AQ2C 4315MNGRU	**30179**	AQ2C 4315MNGRS	**30575**
		350	AQ2C 4350MNGRU	**30180**	AQ2C 4350MNGRS	**30576**
		400	AQ2C 4400MNGRU	**30181**	AQ2C 4400MNGRS	**30577**

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNGSU	**19927**	AQ2C 3225LNGSS	**14018**
		250	AQ2C 3250LNGSU	**19928**	AQ2C 3250LNGSS	**14019**
		315	AQ2C 3315LNGSU	**19929**	AQ2C 3315LNGSS	**14020**
		350	AQ2C 3350LNGSU	**19930**	AQ2C 3350LNGSS	**14021**
		400	AQ2C 3400LNGSU	**19931**	AQ2C 3400LNGSS	**14022**
3SM8N-400M	65 kA	225	AQ2C 3225MNGSU	**19932**	AQ2C 3225MNGSS	**14023**
		250	AQ2C 3250MNGSU	**19933**	AQ2C 3250MNGSS	**14024**
		315	AQ2C 3315MNGSU	**19934**	AQ2C 3315MNGSS	**14025**
		350	AQ2C 3350MNGSU	**19935**	AQ2C 3350MNGSS	**14026**
		400	AQ2C 3400MNGSU	**19936**	AQ2C 3400MNGSS	**14027**
3SM8N-400H	100 kA	225	AQ2C 3225HNGSU	**19942**	AQ2C 3225HNGSS	**14033**
		250	AQ2C 3250HNGSU	**19943**	AQ2C 3250HNGSS	**14034**
		315	AQ2C 3315HNGSU	**30260**	AQ2C 3315HNGSS	**14035**
		350	AQ2C 3350HNGSU	**30261**	AQ2C 3350HNGSS	**14036**
		400	AQ2C 3400HNGSU	**30262**	AQ2C 3400HNGSS	**14037**
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNGSU	**19937**	AQ2C 4225MNGSS	**14028**
		250	AQ2C 4250MNGSU	**19938**	AQ2C 4250MNGSS	**14029**
		315	AQ2C 4315MNGSU	**19939**	AQ2C 4315MNGSS	**14030**
		350	AQ2C 4350MNGSU	**19940**	AQ2C 4350MNGSS	**14031**
		400	AQ2C 4400MNGSU	**19941**	AQ2C 4400MNGSS	**14032**

Selection and ordering data

Size D: 3SAQ2-630

Automatic transfer and restoration between normal and standby power supply (NBR)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-630L	50 kA	400	AQ2D 3400LNBRU	**30197**	AQ2D 3400LNBRS	**30593**
			500	AQ2D 3500LNBRU	**30198**	AQ2D 3500LNBRS	**30594**
			630	AQ2D 3630LNBRU	**30199**	AQ2D 3630LNBRS	**30595**
	3SM8N-630M	65 kA	400	AQ2D 3400MNBRU	**30206**	AQ2D 3400MNBRS	**30602**
			500	AQ2D 3500MNBRU	**30207**	AQ2D 3500MNBRS	**30603**
			630	AQ2D 3630MNBRU	**30208**	AQ2D 3630MNBRS	**30604**
	3SM8N-630H	100 kA	400	AQ2D 3400HNBRU	**30224**	AQ2D 3400HNBRS	**30620**
			500	AQ2D 3500HNBRU	**30225**	AQ2D 3500HNBRS	**30621**
			630	AQ2D 3630HNBRU	**30226**	AQ2D 3630HNBRS	**30622**
	4-pole						
	3SM8N-630M	65 kA	400	AQ2D 4400MNBRU	**30215**	AQ2D 4400MNBRS	**30611**
			500	AQ2D 4500MNBRU	**30216**	AQ2D 4500MNBRS	**30612**
			630	AQ2D 4630MNBRU	**30217**	AQ2D 4630MNBRS	**30613**

Automatic transfer without restoration between normal and standby power supply (NBS)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-630L	50 kA	400	AQ2D 3400LNBSU	**30200**	AQ2D 3400LNBSS	**30596**
			500	AQ2D 3500LNBSU	**30201**	AQ2D 3500LNBSS	**30597**
			630	AQ2D 3630LNBSU	**30202**	AQ2D 3630LNBSS	**30598**
	3SM8N-630M	65 kA	400	AQ2D 3400MNBSU	**30209**	AQ2D 3400MNBSS	**30605**
			500	AQ2D 3500MNBSU	**30210**	AQ2D 3500MNBSS	**30606**
			630	AQ2D 3630MNBSU	**30211**	AQ2D 3630MNBSS	**30607**
	3SM8N-630H	100 kA	400	AQ2D 3400HNBSU	**30227**	AQ2D 3400HNBSS	**30623**
			500	AQ2D 3500HNBSU	**30228**	AQ2D 3500HNBSS	**30624**
			630	AQ2D 3630HNBSU	**30229**	AQ2D 3630HNBSS	**30625**
	4-pole						
	3SM8N-630M	65 kA	400	AQ2D 4400MNBSU	**30218**	AQ2D 4400MNBSS	**30614**
			500	AQ2D 4500MNBSU	**30219**	AQ2D 4500MNBSS	**30615**
			630	AQ2D 4630MNBSU	**30220**	AQ2D 4630MNBSS	**30616**

Selection and ordering data

Size D: 3SAQ2-630

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNGRU	**30203**	AQ2D 3400LNGRS	**30599**
		500	AQ2D 3500LNGRU	**30204**	AQ2D 3500LNGRS	**30600**
		630	AQ2D 3630LNGRU	**30205**	AQ2D 3630LNGRS	**30601**
3SM8N-630M	65 kA	400	AQ2D 3400MNGRU	**30212**	AQ2D 3400MNGRS	**30608**
		500	AQ2D 3500MNGRU	**30213**	AQ2D 3500MNGRS	**30609**
		630	AQ2D 3630MNGRU	**30214**	AQ2D 3630MNGRS	**30610**
3SM8N-630H	100 kA	400	AQ2D 3400HNGRU	**30230**	AQ2D 3400HNGRS	**30626**
		500	AQ2D 3500HNGRU	**30231**	AQ2D 3500HNGRS	**30627**
		630	AQ2D 3630HNGRU	**30232**	AQ2D 3630HNGRS	**30628**
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNGRU	**30221**	AQ2D 4400MNGRS	**30617**
		500	AQ2D 4500MNGRU	**30222**	AQ2D 4500MNGRS	**30618**
		630	AQ2D 4630MNGRU	**30223**	AQ2D 4630MNGRS	**30619**

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNGSU	**30263**	AQ2D 3400LNGSS	**14038**
		500	AQ2D 3500LNGSU	**30264**	AQ2D 3500LNGSS	**14039**
		630	AQ2D 3630LNGSU	**30265**	AQ2D 3630LNGSS	**14040**
3SM8N-630M	65 kA	400	AQ2D 3400MNGSU	**30266**	AQ2D 3400MNGSS	**14041**
		500	AQ2D 3500MNGSU	**30267**	AQ2D 3500MNGSS	**14042**
		630	AQ2D 3630MNGSU	**30268**	AQ2D 3630MNGSS	**14043**
3SM8N-630H	100 kA	400	AQ2D 3400HNGSU	**30272**	AQ2D 3400HNGSS	**14047**
		500	AQ2D 3500HNGSU	**30273**	AQ2D 3500HNGSS	**14048**
		630	AQ2D 3630HNGSU	**30274**	AQ2D 3630HNGSS	**14049**
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNGSU	**30269**	AQ2D 4400MNGSS	**14044**
		500	AQ2D 4500MNGSU	**30270**	AQ2D 4500MNGSS	**14045**
		630	AQ2D 4630MNGSU	**30271**	AQ2D 4630MNGSS	**14046**

Selection and ordering data

Size E: 3SAQ2-800

Automatic transfer and restoration between normal and standby power supply (NBR)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-800M	75 kA	630	AQ2E 3630MNBRU	**30233**	AQ2E 3630MNBRS	**30629**
			700	AQ2E 3700MNBRU	**30234**	AQ2E 3700MNBRS	**30630**
			800	AQ2E 3800MNBRU	**30235**	AQ2E 3800MNBRS	**30631**
	3SM8N-800H	100 kA	630	AQ2E 3630HNBRU	**30251**	AQ2E 3630HNBRS	**30647**
			700	AQ2E 3700HNBRU	**30252**	AQ2E 3700HNBRS	**30648**
			800	AQ2E 3800HNBRU	**30253**	AQ2E 3800HNBRS	**30649**
	4-pole						
	3SM8N-800M	75 kA	630	AQ2E 4630MNBRU	**30242**	AQ2E 4630MNBRS	**30638**
			700	AQ2E 4700MNBRU	**30243**	AQ2E 4700MNBRS	**30639**
			800	AQ2E 4800MNBRU	**30244**	AQ2E 4800MNBRS	**30640**

Automatic transfer without restoration between normal and standby power supply (NBS)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-800M	75 kA	630	AQ2E 3630MNBSU	**30236**	AQ2E 3630MNBSS	**30632**
			700	AQ2E 3700MNBSU	**30237**	AQ2E 3700MNBSS	**30633**
			800	AQ2E 3800MNBSU	**30238**	AQ2E 3800MNBSS	**30634**
	3SM8N-800H	100 kA	630	AQ2E 3630HNBSU	**30254**	AQ2E 3630HNBSS	**30650**
			700	AQ2E 3700HNBSU	**30255**	AQ2E 3700HNBSS	**30651**
			800	AQ2E 3800HNBSU	**30256**	AQ2E 3800HNBSS	**30652**
	4-pole						
	3SM8N-800M	75 kA	630	AQ2E 4630MNBSU	**30245**	AQ2E 4630MNBSS	**30641**
			700	AQ2E 4700MNBSU	**30246**	AQ2E 4700MNBSS	**30642**
			800	AQ2E 4800MNBSU	**30247**	AQ2E 4800MNBSS	**30643**

Automatic transfer and restoration between normal and generating power supply (NGR)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-800M	75 kA	630	AQ2E 3630MNGRU	**30239**	AQ2E 3630MNGRS	**30635**
			700	AQ2E 3700MNGRU	**30240**	AQ2E 3700MNGRS	**30636**
			800	AQ2E 3800MNGRU	**30241**	AQ2E 3800MNGRS	**30637**
	3SM8N-800H	100 kA	630	AQ2E 3630HNGRU	**30257**	AQ2E 3630HNGRS	**30653**
			700	AQ2E 3700HNGRU	**30258**	AQ2E 3700HNGRS	**30654**
			800	AQ2E 3800HNGRU	**30259**	AQ2E 3800HNGRS	**14970**
	4-pole						
	3SM8N-800M	75 kA	630	AQ2E 4630MNGRU	**30248**	AQ2E 4630MNGRS	**30644**
			700	AQ2E 4700MNGRU	**30249**	AQ2E 4700MNGRS	**30645**
			800	AQ2E 4800MNGRU	**30250**	AQ2E 4800MNGRS	**30646**

Automatic transfer without restoration between normal and generating power supply (NGS)

	Circuit-breaker of main circuit	Breaking capacity Icn at 400 V AC	Rated current	Unitary type		Split type	
			(A)	Type code	Order code	Type code	Order code
	3-pole						
	3SM8N-800M	75 kA	630	AQ2E 3630MNGSU	**30275**	AQ2E 3630MNGSS	**14050**
			700	AQ2E 3700MNGSU	**30276**	AQ2E 3700MNGSS	**14051**
			800	AQ2E 3800MNGSU	**30277**	AQ2E 3800MNGSS	**14052**
	3SM8N-800H	100 kA	630	AQ2E 3630HNGSU	**30281**	AQ2E 3630HNGSS	**14056**
			700	AQ2E 3700HNGSU	**30282**	AQ2E 3700HNGSS	**14057**
			800	AQ2E 3800HNGSU	**30283**	AQ2E 3800HNGSS	**14058**
	4-pole						
	3SM8N-800M	75 kA	630	AQ2E 4630MNGSU	**30278**	AQ2E 4630MNGSS	**14053**
			700	AQ2E 4700MNGSU	**30279**	AQ2E 4700MNGSS	**14054**
			800	AQ2E 4800MNGSU	**30280**	AQ2E 4800MNGSS	**14055**

Features

- Small volume, convenient installation
- With the controller, the setting can transfer between the manual and automatic transfer with restoration or automatic transfer without restoration
- Under-voltage, over-voltage, phase-loss protection
- Reliable and safe interlock, operation parameter could be adjusted
- Rated voltage of 400 V, rated current is from 20 A to 5000 A
- Low malfunction, easy maintenance

Versions

There are two available versions:

- M2 I: 2-stage, Power supply A ⟵ ⟶ Power supply B; M2 I automatic transfer switch is instantaneously switch type (without internal or external controller unit). If the switches are under maintenance or damaged condition where contineous power supply is required, it is possible to operate the handle by manual and identify the failure point by ovserving the switching actions.
- M3 II: 3-stage, Power supply A ⟵ ⟶ Middle position ⟵ ⟶ Power supply B;
  M3 II automatic transfer switch has following functions:
- Interchange of automatic between manual operation;
- Voltage detection for three-phase four-line of power supply A and B;
- Over-voltage, under-voltage and phase-loss protection;
- Automatic switching between power supply A and B;
- Automatical fault handling;
- Remote start/stop generator;
- Over-current protection after connect; to an over-current relay via additional expansion interface

For both versions, if the automatic transfer switches are under maintenance or damaged condition while the contineous power supply is required, it is possible to operate the handle slowly by manual to identify the failure point by carefully ovserving the switching actions.



Instruction of type code

AQ3 M3II 3 NB R 125 L

- L — Type of controller unit
  - N: No controller unit
  - L: Built-in controller unit
  - C: LCD controller unit
  - J: J-type controller unit
- 125 — Rated current
  - 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 180, 200, 225, 250, 315, 350,400, 500, 630, 800, 1000, 1250, 1600, 2000, 3150, 4000, 5000
- R — Control model
  - R: Model R
  - S: Model S
- NB — Switch model
  - NB: Grid-grid
  - NG: Grid-generator
- 3 — Number of poles
  - 2: 2-pole
  - 3: 3-pole
  - 4: 4-pole
- M3II — Version
  - M2I: M2 I version
  - M3II: M3 II version
- AQ3 — Series code

Version	M2 I	M3 II
Rated operation current	20 ... 500 A	20 ... 5000 A
Rated limit short-circuit current (depending on the current)	12.5 ... 30 kA	12.5 ... 25 kA
Short-time withstand (currentdepending on the current)	5 ...12 kA	5 ... 50 kA
Transfer time (exclude the delay time)	20 - 90 ms	20 - 230 ms
Available controller unit		
Configurated inside	-	■
External LCD controller unit	-	■
External J-type controller unit	■	■
Start the generator automatically	-	■
Control model		
Model R: Automatic transfer with restoration	■	■
Model S: Automatic transfer without restoration	■	-
Connection type		
Front connection	■	■ (≤ 500 A)
Rear connection	-	■ (> 500 A)

■ Available
– Not available

Automatic Transfer Switches
Series 3SAQ3 PC Class

Technical specificatious

Version M2 I



3SAQ3-125 M2 I



External LCD controller unit



External J-type controller unit

Version		M2 I							
Standard		IEC 60947-6-1							
Rated frame current (A)		125			250			500	
Rated operating current (A)		20, 25, 32, 40, 50, 63, 80, 100, 125			160, 180, 200, 225, 250			315, 350, 400, 500	
Number of poles (P)		2	3	4	2	3	4	3	4
Operating current at AC 230V (A)		1.5	1.5	1.5	1.5	2	2.5	2.5	3.5
Rated operating voltage (VAC)		400			400			400	
Rated control voltage (VAC)		230			230			230	
Rated frequency (Hz)		50/60			50/60			50/60	
Rated limit short-circuit current (kA)		35			25			30	
Short-time withstand current (kA)		22			10			12	
Transfer time at side	Connect (ms)	55			55			60	
of power supply A	Disconnect (ms)	20			20			25	
Transfer time at side	Connect (ms)	80			80			90	
of power supply B	Disconnect (ms)	20			20			25	
Available controller unit	Built-in	-			-			-	
	LCD	-			-			-	
	J-type	■			■			■	
Control mode	Model R	■			■			■	
	Model S	■			■			■	
Making and breaking capacity		10 Ie making, 8 Ie breaking, cosØ=0.35							
Application category					AC-33B				
Mechanical life (Cycels)		10000			10000			3000	
Electrical life (Cycels)		2500			2500			1000	
Allowable operation cycles per hour (Cycels)		120			120			120	
Connection		Front connection			Front connection			Frong connection	
Capacity of auxiliary switch at AC 230 V (A)		250			250			250	
Weight (kg)		5	5.5	5.5	6	8	10	14	18
Ambient temperature (°C)		-5 to + 40, max. 95% humidity							
Storage temperature (°C)		-40 to + 75							
Altitude (Max.) (m)		2000							

■ Available
- Not available

Technical specifications

Version M3 II



3SAQ3-125 M3 II



External LCD controller unit



External J-type controller unit

Version		M3 II							
Standard		IEC 60947-6-1							
Rated frame current (A)		125			250			500	
Rated operating current (A)		20, 25, 32, 40, 50, 63, 80, 100, 125			160, 180, 200, 225, 250			315, 350, 400, 500	
Number of poles (P)		2	3	4	2	3	4	3	4
Operating current at AC 230V (A)		1.5	1.5	1.5	1.5	2	2.5	2.5	3.5
Trip current at AC 230 V		0.5			0.5			0.7	
Rated operating voltage (VAC)		400			400			400	
Rated control voltage (VAC)		230			230			230	
Rated frequency (Hz)		50/60			50/60			50/60	
Rated limit short-circuit current (kA)		35			25			30	
Short-time withstand current (kA)		22			10			12	
Transfer time at side	Connect (ms)	55			55			60	
of power supply A	Disconnect (ms)	20			20			25	
Transfer time at side	Connect (ms)	80			80			90	
of power supply B	Disconnect (ms)	20			20			25	
Available controller unit	Built-in	■			■			■	
	LCD	■			■			■	
	J-type	■			■			■	
Control mode	Model R	■			■			■	
	Model S	■			■			■	
Making and breaking capacity		10 I_e making, 8 I_e breaking, cosØ =0.35							
Application category		AC-33B							
Mechanical life (Cycels)		10000			10000			3000	
Electrical life (Cycels)		2500			2500			1000	
Allowable operation cycles per hour (Cycels)		60			60			60	
Connection		Front connection			Front connection			Frong connection	
Capacity of auxiliary switch at AC 230 V (A)		250			250			250	
Weight (kg)		5	5.5	5.5	6	8	10	14	18
Ambient temperature (°C)		-5 to + 40, max.95% humidity							
Storage temperature (°C)		-40 to + 75							
Altitude (Max.) (m)		2000							

■ Available
- Not available

Automatic Transfer Switches
Series 3SAQ3 PC Class

Technical specifications

Version M3 II

1



3SAQ3-125 M3 II



External LCD controller unit



External J-type controller unit

Version		M3 II																	
Standard		IEC 60947-6-1																	
Rated frame current (A)		800		1000		1250		1600		2000		3150		4000		5000			
Rated operating current (A)		630, 800		1000		1250		1600		2000		3150		4000		5000			
Number of poles (P)		3	4	3	4	3	4	3	3	3	4	3	4	3		3			
Operating current at AC 230V (A)		3	3	3	3	3	4	4	4	5	6	7	8	8		9			
Trip current at AC 230 V		1		1		1		1		1		1		1		1			
Rated operating voltage (VAC)		400		400		400		400		400		400		400		400			
Rated control voltage (VAC)		230		230		230		230		230		230		230		230			
Rated frequency (Hz)		50/60		50/60		50/60		50/60		50/60		50/60		50/60		50/60			
Rated limit short-circuit current (kA)		37.5		50		50		55		65		80		100		120			
Short-time withstand current (kA)		15		22		22		25		35		50		50		50			
Transfer time at side	Connect (ms)	100		115		115		115		140		180		200		200			
of power supply A	Disconnect (ms)	30		25		25		25		25		30		30		35			
Transfer time at side	Connect (ms)	135		145		145		150		190		220		220		230			
of power supply B	Disconnect (ms)	30		25		25		25		25		30		30		30			
Available controller unit	Built-in	■		■		■		■		■		■		■		■			
	LCD	■		■		■		■		■		■		■		■			
	J-type	■		■		■		■		■		■		■		■			
Control mode	Model R	■		■		■		■		■		■		■		■			
	Model S	■		■		■		■		■		■		■		■			
Making and breaking capacity		10 Ie making, 8 Ie breaking, cosØ =0.35																	
Application category		AC-33B																	
Mechanical life (Cycels)		3000		2500		2500		2500		1500		1500		1500		1500			
Electrical life (Cycels)		1000		500		500		500		500		500		500		500			
Allowable operation cycles per hour (Cycels)		60		20		20		20		10		10		10		10			
Connection		Rear connection																	
Capacity of auxiliary switch at AC 230 V (A)		250		250		250		250		250		250		250		250			
Weight (kg)		33	42	39	49	40	51	47	51	115	135	152	192	207		265			
Ambient temperature (°C)		-5 to + 40, max.95% humidty																	
Storage temperature (°C)		-40 to + 75																	
Altitude (Max.) (m)		2000																	

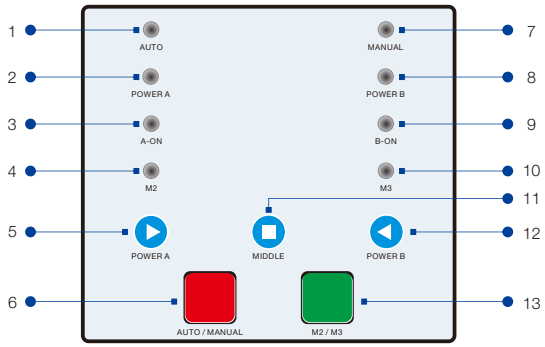
■ Available
- Not available

External controller unit

There are two types available external controller units

- **J-type external controller unit**
  J-type external controller unit is available for both versions of M2 I and M3 II.

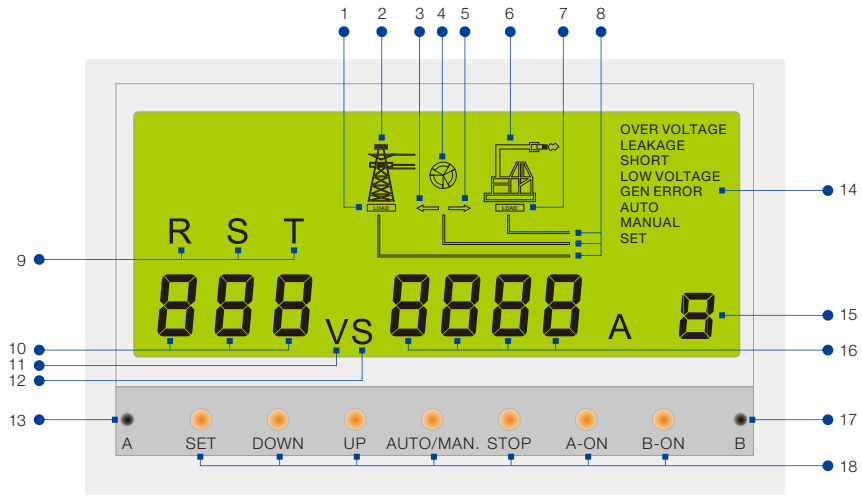




1. Automatic operating indicator
2. Power supply A indicator
3. A-ON indicator
4. M2 version indicator
5. Key for Power supply A
6. Button of AUTO/MANUAL exchange
7. Manual operating indicator
8. Power supply B indicator
9. B-ON indicator
10. M3 version indicator
11. Key for middle position
12. Key for Power supply B
13. Button of M2/M3 exchange

- **External controller unit with LCD display**

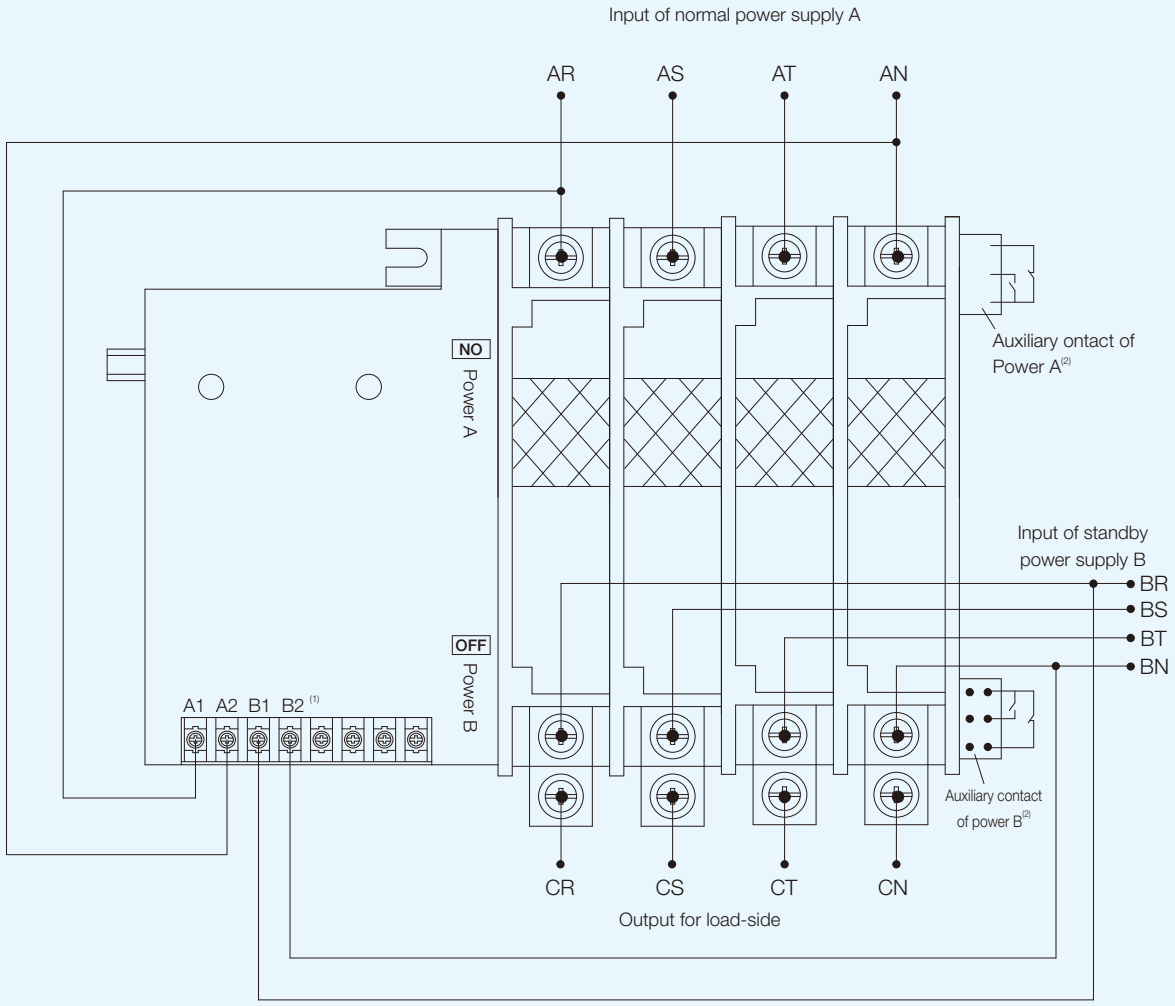




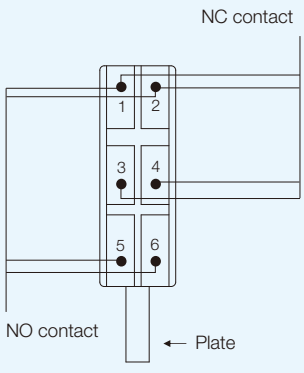
1. Flash when switching to normal power supply
2. Symbol of normal power supply A, light when running
3. Switching to normal power supply A
4. Middle position, rotates when switching
5. Switching to standby power supply B
6. Symbol of standby power supply, light when running
7. Flash when switching to standby power supply
8. Swtich is at OFF position
9. R/S/T poles in 3-phase 4-line system
10. Value of voltage or settings
11. Voltage unit
12. Second for delay time
13. Normal indicator of normal power supply A
14. Error info. and tips of settings and auto/man etc.
15. Code position for setting, 0 when normal
16. Error information and 3-D when normal
17. Normal indicator of standby power supply B
18. Setting buttons

Wiring diagram

- M2 I version without controller unit



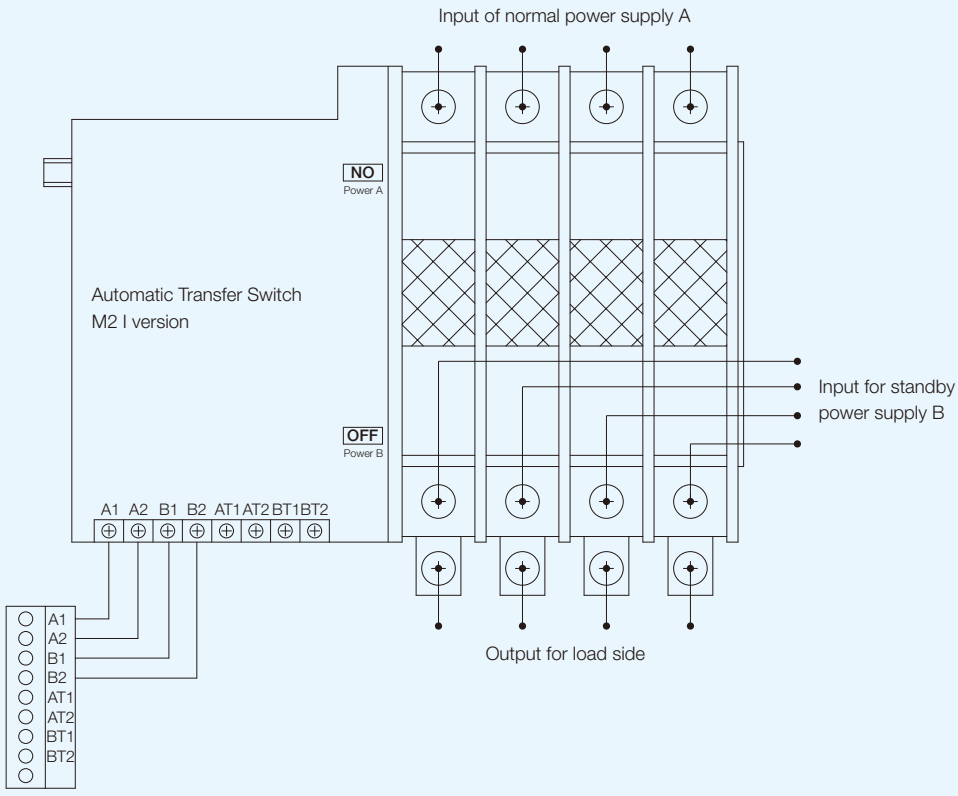
Auxiliary contact

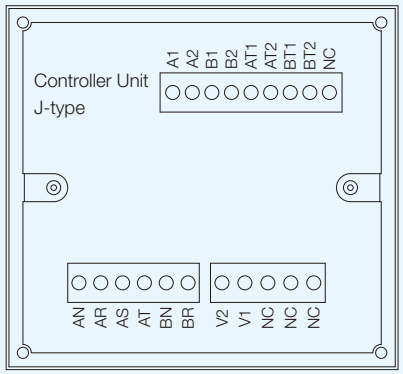


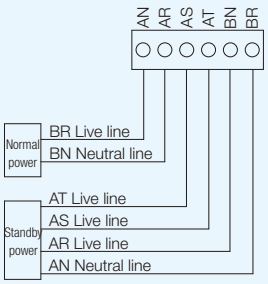
Note:
1. A1/A2 is for input signal of power supply A, AC 220 V;
   B1/B2 is for input signal of power supply B, AC 220 V;
2. Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

Wiring diagram

- M2 I version with external J-type controller unit







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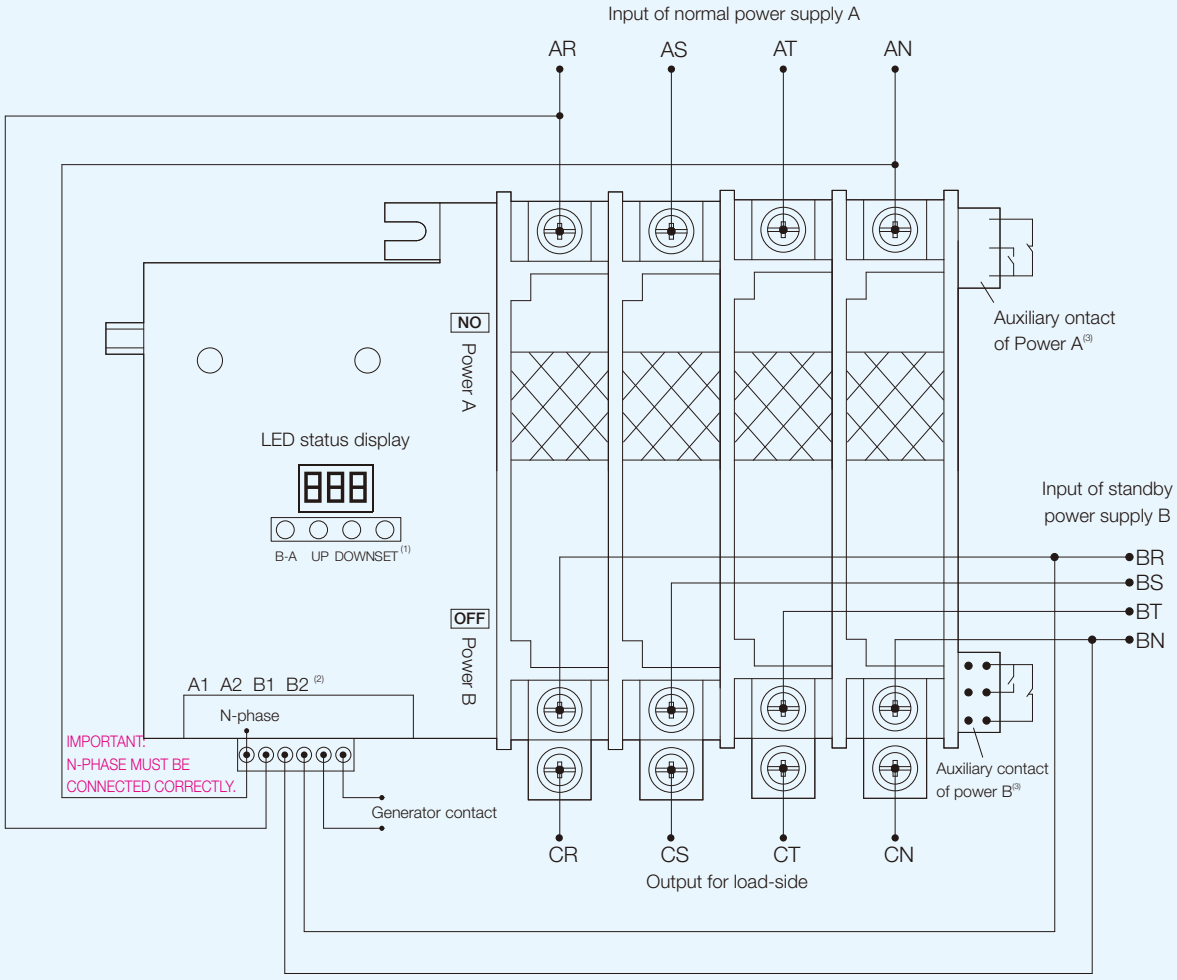
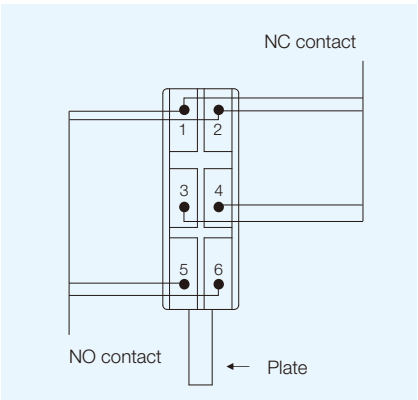
Wiring diagram

- M3 II version with internal controller unit



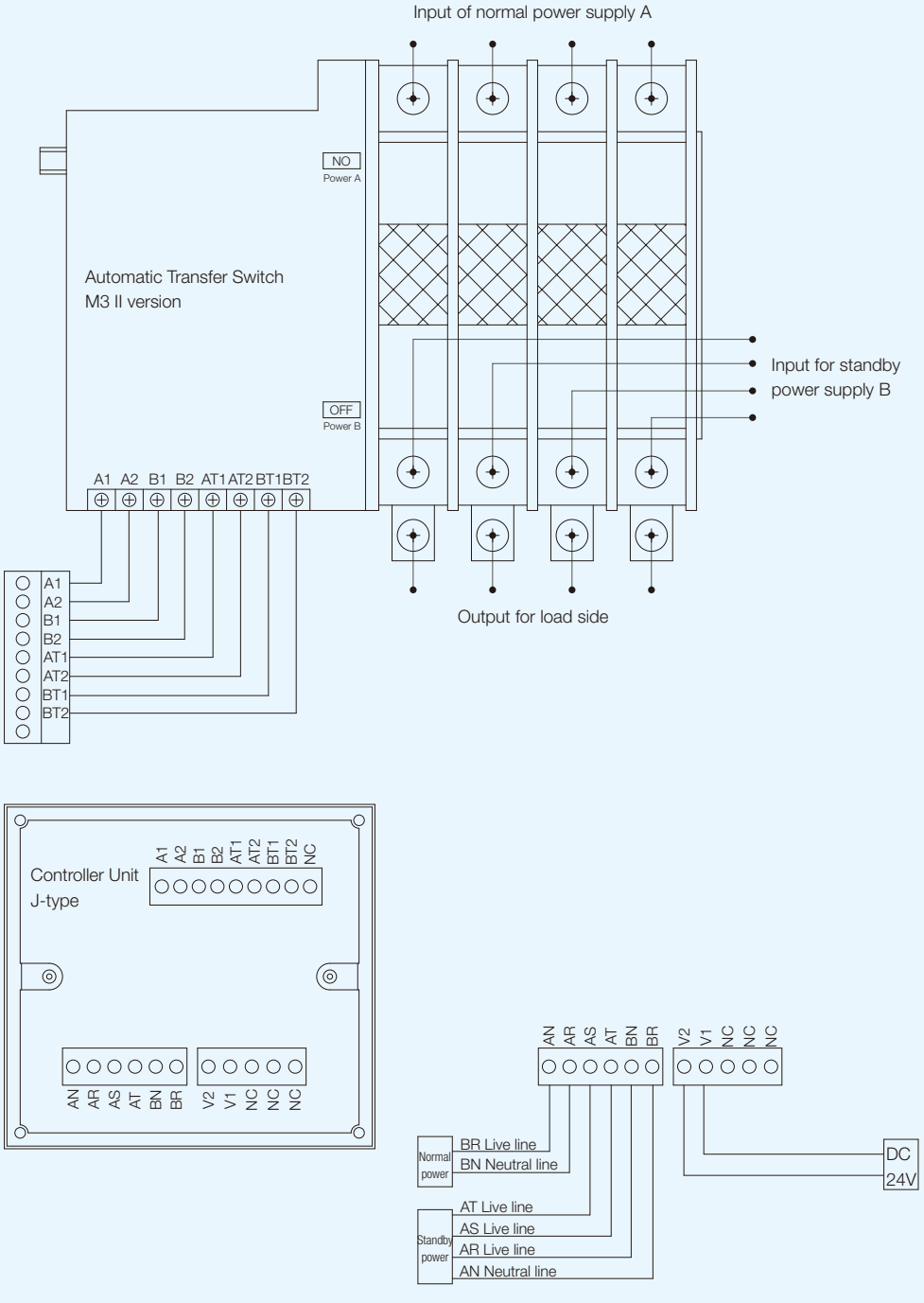
Auxiliary contact



Note:
1. Instruction of function buttons
Set: Settings for delay time of A-B, B-A or generator stop;
- Down: Reduction when setting;
Display B-phase voltage when automatical operating;
Switching to power supply B when manual operating;
- UP: Increase when setting;
Display A-phase voltage when automatical operating;
Switching to power supply A when manual operating;
- B-A: For exchange between Automatic operation and manual operation by pressing the buttons of SET and B-A at the same time (manual operation is available when LED flashing);
- Setting the reference voltage of power supply A and B (LED display U-A and U-B)
2. A1/A2 is for input signal of power supply A, AC 220 V;
3. B1/B2 is for input signal of power supply B, AC 220 V;
Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

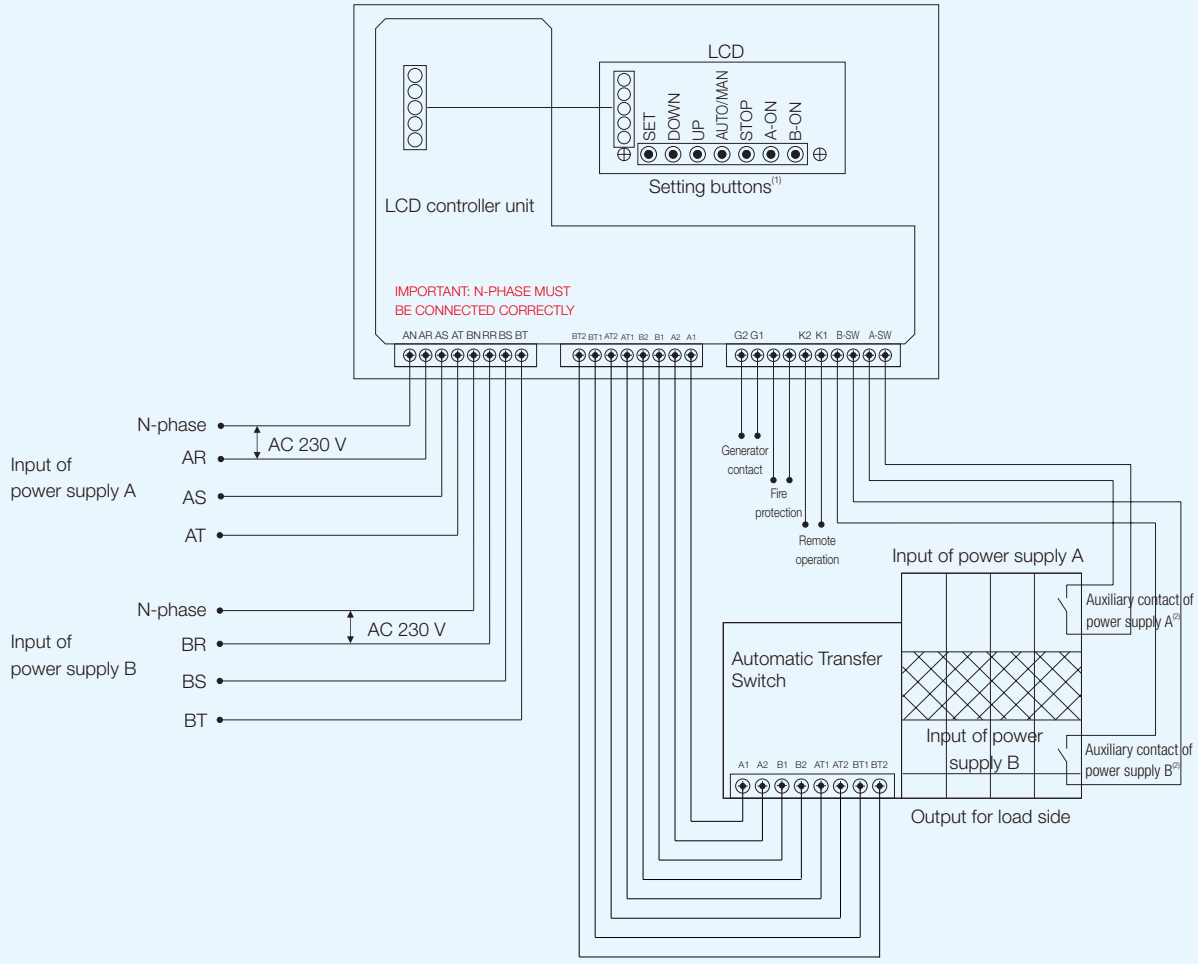
Wiring diagram

- M3 II version with external J-type controller unit

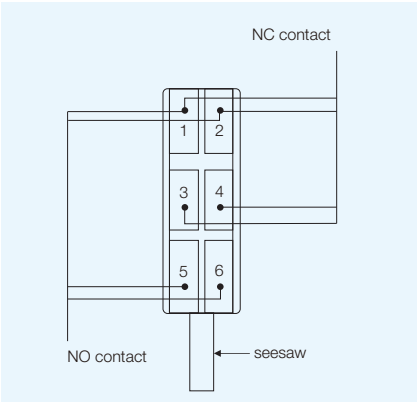


Wiring diagram

- M3 II version with external controller unit with LCD display



Auxiliary contact



Notice:
1. Instruction of function buttons
- SET: Settings for low and high voltage range of power supply A and B, delay time of OFF-A, OFF-B, B-OFF, generator stop, problem of A and B, timing for generator starting; Codes are 1, 2, ... 9, C and D.
- DOWN / UP: Reduction (or incurease) when setting;
- AUTO/MAN: For exchange between Automatic operation and manual operation;
  Setting the reference voltage of phase R/R/T for power supply A and B by pressing it for 3 seconds when manual operation.
- STOP: Cut off from power supply A and B, switch to OFF position and entering standby;
- A-ON: Switch to power supply A at manual mode;
  Display the voltage of phase R/S/T of power supply A at modes of automatic or stop;
- B-ON: Switch to power supply B at manual mode;
  Display the voltage of phase R/S/T of power supply B at modes of automatic or stop;
2. Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

Selection and ordering data

M2 I versions without controller unit



Rated current (A)	2P Type code	2P Order code	3P Type code	3P Order code	4P Type code	4P Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	AQ3 M2I 2NBR20N	**10761**	AQ3 M2I 3NBR20N	**10815**	AQ3 M2I 4NBR20N	**10869**
25	AQ3 M2I 2NBR25N	**10762**	AQ3 M2I 3NBR25N	**10816**	AQ3 M2I 4NBR25N	**10870**
32	AQ3 M2I 2NBR32N	**10763**	AQ3 M2I 3NBR32N	**10817**	AQ3 M2I 4NBR32N	**10871**
40	AQ3 M2I 2NBR40N	**10764**	AQ3 M2I 3NBR40N	**10818**	AQ3 M2I 4NBR40N	**10872**
50	AQ3 M2I 2NBR50N	**10765**	AQ3 M2I 3NBR50N	**10819**	AQ3 M2I 4NBR50N	**10873**
63	AQ3 M2I 2NBR63N	**10766**	AQ3 M2I 3NBR63N	**10820**	AQ3 M2I 4NBR63N	**10874**
80	AQ3 M2I 2NBR80N	**10767**	AQ3 M2I 3NBR80N	**10821**	AQ3 M2I 4NBR80N	**10875**
100	AQ3 M2I 2NBR100N	**10768**	AQ3 M2I 3NBR100N	**10822**	AQ3 M2I 4NBR100N	**10876**
125	AQ3 M2I 2NBR125N	**10769**	AQ3 M2I 3NBR125N	**10823**	AQ3 M2I 4NBR125N	**10877**
160	AQ3 M2I 2NBR160N	**30954**	AQ3 M2I 3NBR160N	**30984**	AQ3 M2I 4NBR160N	**31014**
180	AQ3 M2I 2NBR180N	**30955**	AQ3 M2I 3NBR180N	**30985**	AQ3 M2I 4NBR180N	**31015**
200	AQ3 M2I 2NBR200N	**30956**	AQ3 M2I 3NBR200N	**30986**	AQ3 M2I 4NBR200N	**31016**
225	AQ3 M2I 2NBR225N	**30957**	AQ3 M2I 3NBR225N	**30987**	AQ3 M2I 4NBR225N	**31017**
250	AQ3 M2I 2NBR250N	**30958**	AQ3 M2I 3NBR250N	**30988**	AQ3 M2I 4NBR250N	**31018**
315	AQ3 M2I 2NBR315N	**31134**	AQ3 M2I 3NBR315N	**31158**	AQ3 M2I 4NBR315N	**31182**
350	AQ3 M2I 2NBR350N	**31135**	AQ3 M2I 3NBR350N	**31159**	AQ3 M2I 4NBR350N	**31183**
400	AQ3 M2I 2NBR400N	**31136**	AQ3 M2I 3NBR400N	**31160**	AQ3 M2I 4NBR400N	**31184**
500	AQ3 M2I 2NBR500N	**31137**	AQ3 M2I 3NBR500N	**31161**	AQ3 M2I 4NBR500N	**31185**
Model S: Automa tic transfer without restoration						
20	AQ3 M2I 2NBS20N	**10779**	AQ3 M2I 3NBS20N	**10833**	AQ3 M2I 4NBS20N	**10887**
25	AQ3 M2I 2NBS25N	**10780**	AQ3 M2I 3NBS25N	**10834**	AQ3 M2I 4NBS25N	**10888**
32	AQ3 M2I 2NBS32N	**10781**	AQ3 M2I 3NBS32N	**10835**	AQ3 M2I 4NBS32N	**10889**
40	AQ3 M2I 2NBS40N	**10782**	AQ3 M2I 3NBS40N	**10836**	AQ3 M2I 4NBS40N	**10890**
50	AQ3 M2I 2NBS50N	**10783**	AQ3 M2I 3NBS50N	**10837**	AQ3 M2I 4NBS50N	**10891**
63	AQ3 M2I 2NBS63N	**10784**	AQ3 M2I 3NBS63N	**10838**	AQ3 M2I 4NBS63N	**10892**
80	AQ3 M2I 2NBS80N	**10785**	AQ3 M2I 3NBS80N	**10839**	AQ3 M2I 4NBS80N	**10893**
100	AQ3 M2I 2NBS100N	**10786**	AQ3 M2I 3NBS100N	**10840**	AQ3 M2I 4NBS100N	**10894**
125	AQ3 M2I 2NBS125N	**10787**	AQ3 M2I 3NBS125N	**10841**	AQ3 M2I 4NBS125N	**10895**
160	AQ3 M2I 2NBS160N	**30964**	AQ3 M2I 3NBS160N	**30994**	AQ3 M2I 4NBS160N	**31024**
180	AQ3 M2I 2NBS180N	**30965**	AQ3 M2I 3NBS180N	**30995**	AQ3 M2I 4NBS180N	**31025**
200	AQ3 M2I 2NBS200N	**30966**	AQ3 M2I 3NBS200N	**30996**	AQ3 M2I 4NBS200N	**31026**
225	AQ3 M2I 2NBS225N	**30967**	AQ3 M2I 3NBS225N	**30997**	AQ3 M2I 4NBS225N	**31027**
250	AQ3 M2I 2NBS250N	**30968**	AQ3 M2I 3NBS250N	**30998**	AQ3 M2I 4NBS250N	**31028**
315	AQ3 M2I 2NBS315N	**31142**	AQ3 M2I 3NBS315N	**31166**	AQ3 M2I 4NBS315N	**31190**
350	AQ3 M2I 2NBS350N	**31143**	AQ3 M2I 3NBS350N	**31167**	AQ3 M2I 4NBS350N	**31191**
400	AQ3 M2I 2NBS400N	**31144**	AQ3 M2I 3NBS400N	**31168**	AQ3 M2I 4NBS400N	**31192**
500	AQ3 M2I 2NBS500N	**31145**	AQ3 M2I 3NBS500N	**31169**	AQ3 M2I 4NBS500N	**31193**
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M2I 2NGR20N	**10797**	AQ3 M2I 3NGR20N	**10851**	AQ3 M2I 4NGR20N	**10905**
25	AQ3 M2I 2NGR25N	**10798**	AQ3 M2I 3NGR25N	**10852**	AQ3 M2I 4NGR25N	**10906**
32	AQ3 M2I 2NGR32N	**10799**	AQ3 M2I 3NGR32N	**10853**	AQ3 M2I 4NGR32N	**10907**
40	AQ3 M2I 2NGR40N	**10800**	AQ3 M2I 3NGR40N	**10854**	AQ3 M2I 4NGR40N	**10908**
50	AQ3 M2I 2NGR50N	**10801**	AQ3 M2I 3NGR50N	**10855**	AQ3 M2I 4NGR50N	**10909**
63	AQ3 M2I 2NGR63N	**10802**	AQ3 M2I 3NGR63N	**10856**	AQ3 M2I 4NGR63N	**10910**
80	AQ3 M2I 2NGR80N	**10803**	AQ3 M2I 3NGR80N	**10857**	AQ3 M2I 4NGR80N	**10911**
100	AQ3 M2I 2NGR100N	**10804**	AQ3 M2I 3NGR100N	**10858**	AQ3 M2I 4NGR100N	**10912**
125	AQ3 M2I 2NGR125N	**10805**	AQ3 M2I 3NGR125N	**10859**	AQ3 M2I 4NGR125N	**10913**
160	AQ3 M2I 2NGR160N	**30974**	AQ3 M2I 3NGR160N	**31004**	AQ3 M2I 4NGR160N	**31034**
180	AQ3 M2I 2NGR180N	**30975**	AQ3 M2I 3NGR180N	**31005**	AQ3 M2I 4NGR180N	**31035**
200	AQ3 M2I 2NGR200N	**30976**	AQ3 M2I 3NGR200N	**31006**	AQ3 M2I 4NGR200N	**31036**
225	AQ3 M2I 2NGR225N	**30977**	AQ3 M2I 3NGR225N	**31007**	AQ3 M2I 4NGR225N	**31037**
250	AQ3 M2I 2NGR250N	**30978**	AQ3 M2I 3NGR250N	**31008**	AQ3 M2I 4NGR250N	**31038**
315	AQ3 M2I 2NGR315N	**31150**	AQ3 M2I 3NGR315N	**31174**	AQ3 M2I 4NGR315N	**31198**
350	AQ3 M2I 2NGR350N	**31151**	AQ3 M2I 3NGR350N	**31175**	AQ3 M2I 4NGR350N	**31199**
400	AQ3 M2I 2NGR400N	**31152**	AQ3 M2I 3NGR400N	**31176**	AQ3 M2I 4NGR400N	**31200**
500	AQ3 M2I 2NGR500N	**31153**	AQ3 M2I 3NGR500N	**31177**	AQ3 M2I 4NGR500N	**31201**

Selection and ordering data

M2 I versions equipped with external J-type controller unit



	Rated current	2P		3P		4P	
	(A)	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)							
Model R: Automatic transfer with restoration							
	20	AQ3 M2I 2NBR20J	**10770**	AQ3 M2I 3NBR20J	**10824**	AQ3 M2I 4NBR20J	**10878**
	25	AQ3 M2I 2NBR25J	**10771**	AQ3 M2I 3NBR25J	**10825**	AQ3 M2I 4NBR25J	**10879**
	32	AQ3 M2I 2NBR32J	**10772**	AQ3 M2I 3NBR32J	**10826**	AQ3 M2I 4NBR32J	**10880**
	40	AQ3 M2I 2NBR40J	**10773**	AQ3 M2I 3NBR40J	**10827**	AQ3 M2I 4NBR40J	**10881**
	50	AQ3 M2I 2NBR50J	**10774**	AQ3 M2I 3NBR50J	**10828**	AQ3 M2I 4NBR50J	**10882**
	63	AQ3 M2I 2NBR63J	**10775**	AQ3 M2I 3NBR63J	**10829**	AQ3 M2I 4NBR63J	**10883**
	80	AQ3 M2I 2NBR80J	**10776**	AQ3 M2I 3NBR80J	**10830**	AQ3 M2I 4NBR80J	**10884**
	100	AQ3 M2I 2NBR100J	**10777**	AQ3 M2I 3NBR100J	**10831**	AQ3 M2I 4NBR100J	**10885**
	125	AQ3 M2I 2NBR125J	**10778**	AQ3 M2I 3NBR125J	**10832**	AQ3 M2I 4NBR125J	**10886**
	160	AQ3 M2I 2NBR160J	**30959**	AQ3 M2I 3NBR160J	**30989**	AQ3 M2I 4NBR160J	**31019**
	180	AQ3 M2I 2NBR180J	**30960**	AQ3 M2I 3NBR180J	**30990**	AQ3 M2I 4NBR180J	**31020**
	200	AQ3 M2I 2NBR200J	**30961**	AQ3 M2I 3NBR200J	**30991**	AQ3 M2I 4NBR200J	**31021**
	225	AQ3 M2I 2NBR225J	**30962**	AQ3 M2I 3NBR225J	**30992**	AQ3 M2I 4NBR225J	**31022**
	250	AQ3 M2I 2NBR250J	**30963**	AQ3 M2I 3NBR250J	**30993**	AQ3 M2I 4NBR250J	**31023**
	315	AQ3 M2I 2NBR315J	**31138**	AQ3 M2I 3NBR315J	**31162**	AQ3 M2I 4NBR315J	**31186**
	350	AQ3 M2I 2NBR350J	**31139**	AQ3 M2I 3NBR350J	**31163**	AQ3 M2I 4NBR350J	**31187**
	400	AQ3 M2I 2NBR400J	**31140**	AQ3 M2I 3NBR400J	**31164**	AQ3 M2I 4NBR400J	**31188**
	500	AQ3 M2I 2NBR500J	**31141**	AQ3 M2I 3NBR500J	**31165**	AQ3 M2I 4NBR500J	**31189**
Model S: Automatic transfer without restoration							
	20	AQ3 M2I 2NBS20J	**10788**	AQ3 M2I 3NBS20J	**10842**	AQ3 M2I 4NBS20J	**10896**
	25	AQ3 M2I 2NBS25J	**10789**	AQ3 M2I 3NBS25J	**10843**	AQ3 M2I 4NBS25J	**10897**
	32	AQ3 M2I 2NBS32J	**10790**	AQ3 M2I 3NBS32J	**10844**	AQ3 M2I 4NBS32J	**10898**
	40	AQ3 M2I 2NBS40J	**10791**	AQ3 M2I 3NBS40J	**10845**	AQ3 M2I 4NBS40J	**10899**
	50	AQ3 M2I 2NBS50J	**10792**	AQ3 M2I 3NBS50J	**10846**	AQ3 M2I 4NBS50J	**10900**
	63	AQ3 M2I 2NBS63J	**10793**	AQ3 M2I 3NBS63J	**10847**	AQ3 M2I 4NBS63J	**10901**
	80	AQ3 M2I 2NBS80J	**10794**	AQ3 M2I 3NBS80J	**10848**	AQ3 M2I 4NBS80J	**10902**
	100	AQ3 M2I 2NBS100J	**10795**	AQ3 M2I 3NBS100J	**10849**	AQ3 M2I 4NBS100J	**10903**
	125	AQ3 M2I 2NBS125J	**10796**	AQ3 M2I 3NBS125J	**10850**	AQ3 M2I 4NBS125J	**10904**
	160	AQ3 M2I 2NBS160J	**30969**	AQ3 M2I 3NBS160J	**30999**	AQ3 M2I 4NBS160J	**31029**
	180	AQ3 M2I 2NBS180J	**30970**	AQ3 M2I 3NBS180J	**31000**	AQ3 M2I 4NBS180J	**31030**
	200	AQ3 M2I 2NBS200J	**30971**	AQ3 M2I 3NBS200J	**31001**	AQ3 M2I 4NBS200J	**31031**
	225	AQ3 M2I 2NBS225J	**30972**	AQ3 M2I 3NBS225J	**31002**	AQ3 M2I 4NBS225J	**31032**
	250	AQ3 M2I 2NBS250J	**30973**	AQ3 M2I 3NBS250J	**31003**	AQ3 M2I 4NBS250J	**31033**
	315	AQ3 M2I 2NBS315J	**31146**	AQ3 M2I 3NBS315J	**31170**	AQ3 M2I 4NBS315J	**31194**
	350	AQ3 M2I 2NBS350J	**31147**	AQ3 M2I 3NBS350J	**31171**	AQ3 M2I 4NBS350J	**31195**
	400	AQ3 M2I 2NBS400J	**31148**	AQ3 M2I 3NBS400J	**31172**	AQ3 M2I 4NBS400J	**31196**
	500	AQ3 M2I 2NBS500J	**31149**	AQ3 M2I 3NBS500J	**31173**	AQ3 M2I 4NBS500J	**31197**
Grid-Generator (NG)							
Model R: Automatic transfer with restoration							
	20	AQ3 M2I 2NGR20J	**10806**	AQ3 M2I 3NGR20J	**10860**	AQ3 M2I 4NGR20J	**10914**
	25	AQ3 M2I 2NGR25J	**10807**	AQ3 M2I 3NGR25J	**10861**	AQ3 M2I 4NGR25J	**10915**
	32	AQ3 M2I 2NGR32J	**10808**	AQ3 M2I 3NGR32J	**10862**	AQ3 M2I 4NGR32J	**10916**
	40	AQ3 M2I 2NGR40J	**10809**	AQ3 M2I 3NGR40J	**10863**	AQ3 M2I 4NGR40J	**10917**
	50	AQ3 M2I 2NGR50J	**10810**	AQ3 M2I 3NGR50J	**10864**	AQ3 M2I 4NGR50J	**10918**
	63	AQ3 M2I 2NGR63J	**10811**	AQ3 M2I 3NGR63J	**10865**	AQ3 M2I 4NGR63J	**30788**
	80	AQ3 M2I 2NGR80J	**10812**	AQ3 M2I 3NGR80J	**10866**	AQ3 M2I 4NGR80J	**30789**
	100	AQ3 M2I 2NGR100J	**10813**	AQ3 M2I 3NGR100J	**10867**	AQ3 M2I 4NGR100J	**30790**
	125	AQ3 M2I 2NGR125J	**10814**	AQ3 M2I 3NGR125J	**10868**	AQ3 M2I 4NGR125J	**30791**
	160	AQ3 M2I 2NGR160J	**30979**	AQ3 M2I 3NGR160J	**31009**	AQ3 M2I 4NGR160J	**31039**
	180	AQ3 M2I 2NGR180J	**30980**	AQ3 M2I 3NGR180J	**31010**	AQ3 M2I 4NGR180J	**31040**
	200	AQ3 M2I 2NGR200J	**30981**	AQ3 M2I 3NGR200J	**31011**	AQ3 M2I 4NGR200J	**31041**
	225	AQ3 M2I 2NGR225J	**30982**	AQ3 M2I 3NGR225J	**31012**	AQ3 M2I 4NGR225J	**31042**
	250	AQ3 M2I 2NGR250J	**30983**	AQ3 M2I 3NGR250J	**31013**	AQ3 M2I 4NGR250J	**31043**
	315	AQ3 M2I 2NGR315J	**31154**	AQ3 M2I 3NGR315J	**31178**	AQ3 M2I 4NGR315J	**31202**
	350	AQ3 M2I 2NGR350J	**31155**	AQ3 M2I 3NGR350J	**31179**	AQ3 M2I 4NGR350J	**31203**
	400	AQ3 M2I 2NGR400J	**31156**	AQ3 M2I 3NGR400J	**31180**	AQ3 M2I 4NGR400J	**31204**
	500	AQ3 M2I 2NGR500J	**31157**	AQ3 M2I 3NGR500J	**31181**	AQ3 M2I 4NGR500J	**31205**

Selection and ordering data

M3 II versions equipped with internal controller unit



Rated current (A)	2P Type code	2P Order code	3P Type code	3P Order code	4P Type code	4P Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NBR20L	**30792**	AQ3 M3II 3NBR20L	**30846**	AQ3 M3II 4NBR20L	**30900**
25	AQ3 M3II 2NBR25L	**30793**	AQ3 M3II 3NBR25L	**30847**	AQ3 M3II 4NBR25L	**30901**
32	AQ3 M3II 2NBR32L	**30794**	AQ3 M3II 3NBR32L	**30848**	AQ3 M3II 4NBR32L	**30902**
40	AQ3 M3II 2NBR40L	**30795**	AQ3 M3II 3NBR40L	**30849**	AQ3 M3II 4NBR40L	**30903**
50	AQ3 M3II 2NBR50L	**30796**	AQ3 M3II 3NBR50L	**30850**	AQ3 M3II 4NBR50L	**30904**
63	AQ3 M3II 2NBR63L	**30797**	AQ3 M3II 3NBR63L	**30851**	AQ3 M3II 4NBR63L	**30905**
80	AQ3 M3II 2NBR80L	**30798**	AQ3 M3II 3NBR80L	**30852**	AQ3 M3II 4NBR80L	**30906**
100	AQ3 M3II 2NBR100L	**30799**	AQ3 M3II 3NBR100L	**30853**	AQ3 M3II 4NBR100L	**30907**
125	AQ3 M3II 2NBR125L	**30800**	AQ3 M3II 3NBR125L	**30854**	AQ3 M3II 4NBR125L	**30908**
160	AQ3 M3II 2NBR160L	**31044**	AQ3 M3II 3NBR160L	**31074**	AQ3 M3II 4NBR160L	**31104**
180	AQ3 M3II 2NBR180L	**31045**	AQ3 M3II 3NBR180L	**31075**	AQ3 M3II 4NBR180L	**31105**
200	AQ3 M3II 2NBR200L	**31046**	AQ3 M3II 3NBR200L	**31076**	AQ3 M3II 4NBR200L	**31106**
225	AQ3 M3II 2NBR225L	**31047**	AQ3 M3II 3NBR225L	**31077**	AQ3 M3II 4NBR225L	**31107**
250	AQ3 M3II 2NBR250L	**31048**	AQ3 M3II 3NBR250L	**31078**	AQ3 M3II 4NBR250L	**31108**
315	AQ3 M3II 2NBR315L	**31206**	AQ3 M3II 3NBR315L	**31230**	AQ3 M3II 4NBR315L	**31254**
350	AQ3 M3II 2NBR350L	**31207**	AQ3 M3II 3NBR350L	**31231**	AQ3 M3II 4NBR350L	**31255**
400	AQ3 M3II 2NBR400L	**31208**	AQ3 M3II 3NBR400L	**31232**	AQ3 M3II 4NBR400L	**31256**
500	AQ3 M3II 2NBR500L	**31209**	AQ3 M3II 3NBR500L	**31233**	AQ3 M3II 4NBR500L	**31257**
630	-	**-**	AQ3 M3II 3NBR630L	**31278**	AQ3 M3II 4NBR630L	**31290**
800	-	**-**	AQ3 M3II 3NBR800L	**31279**	AQ3 M3II 4NBR800L	**31291**
1000	-	**-**	AQ3 M3II 3NBR1000L	**31302**	AQ3 M3II 4NBR1000L	**31344**
1250	-	**-**	AQ3 M3II 3NBR1250L	**31303**	AQ3 M3II 4NBR1250L	**31345**
1600	-	**-**	AQ3 M3II 3NBR1600L	**31304**	AQ3 M3II 4NBR1600L	**31346**
2000	-	**-**	AQ3 M3II 3NBR2000L	**31305**	AQ3 M3II 4NBR2000L	**31347**
3150	-	**-**	AQ3 M3II 3NBR3150L	**31306**	AQ3 M3II 4NBR3150L	**31348**
4000	-	**-**	AQ3 M3II 3NBR4000L	**31307**	AQ3 M3II 4NBR4000L	**31349**
5000	-	**-**	AQ3 M3II 3NBR5000L	**31308**	AQ3 M3II 4NBR5000L	**31350**
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NGR20L	**30819**	AQ3 M3II 3NGR20L	**30873**	AQ3 M3II 4NGR20L	**30927**
25	AQ3 M3II 2NGR25L	**30820**	AQ3 M3II 3NGR25L	**30874**	AQ3 M3II 4NGR25L	**30928**
32	AQ3 M3II 2NGR32L	**30821**	AQ3 M3II 3NGR32L	**30875**	AQ3 M3II 4NGR32L	**30929**
40	AQ3 M3II 2NGR40L	**30822**	AQ3 M3II 3NGR40L	**30876**	AQ3 M3II 4NGR40L	**30930**
50	AQ3 M3II 2NGR50L	**30823**	AQ3 M3II 3NGR50L	**30877**	AQ3 M3II 4NGR50L	**30931**
63	AQ3 M3II 2NGR63L	**30824**	AQ3 M3II 3NGR63L	**30878**	AQ3 M3II 4NGR63L	**30932**
80	AQ3 M3II 2NGR80L	**30825**	AQ3 M3II 3NGR80L	**30879**	AQ3 M3II 4NGR80L	**30933**
100	AQ3 M3II 2NGR100L	**30826**	AQ3 M3II 3NGR100L	**30880**	AQ3 M3II 4NGR100L	**30934**
125	AQ3 M3II 2NGR125L	**30827**	AQ3 M3II 3NGR125L	**30881**	AQ3 M3II 4NGR125L	**30935**
160	AQ3 M3II 2NGR160L	**31059**	AQ3 M3II 3NGR160L	**31089**	AQ3 M3II 4NGR160L	**31119**
180	AQ3 M3II 2NGR180L	**31060**	AQ3 M3II 3NGR180L	**31090**	AQ3 M3II 4NGR180L	**31120**
200	AQ3 M3II 2NGR200L	**31061**	AQ3 M3II 3NGR200L	**31091**	AQ3 M3II 4NGR200L	**31121**
225	AQ3 M3II 2NGR225L	**31062**	AQ3 M3II 3NGR225L	**31092**	AQ3 M3II 4NGR225L	**31122**
250	AQ3 M3II 2NGR250L	**31063**	AQ3 M3II 3NGR250L	**31093**	AQ3 M3II 4NGR250L	**31123**
315	AQ3 M3II 2NGR315L	**31218**	AQ3 M3II 3NGR315L	**31242**	AQ3 M3II 4NGR315L	**31266**
350	AQ3 M3II 2NGR350L	**31219**	AQ3 M3II 3NGR350L	**31243**	AQ3 M3II 4NGR350L	**31267**
400	AQ3 M3II 2NGR400L	**31220**	AQ3 M3II 3NGR400L	**31244**	AQ3 M3II 4NGR400L	**31268**
500	AQ3 M3II 2NGR500L	**31221**	AQ3 M3II 3NGR500L	**31245**	AQ3 M3II 4NGR500L	**31269**
630	-	**-**	AQ3 M3II 3NGR630L	**31284**	AQ3 M3II 4NGR630L	**31296**
800	-	**-**	AQ3 M3II 3NGR800L	**31285**	AQ3 M3II 4NGR800L	**31297**
1000	-	**-**	AQ3 M3II 3NGR1000L	**31323**	AQ3 M3II 4NGR1000L	**31365**
1250	-	**-**	AQ3 M3II 3NGR1250L	**31324**	AQ3 M3II 4NGR1250L	**31366**
1600	-	**-**	AQ3 M3II 3NGR1600L	**31325**	AQ3 M3II 4NGR1600L	**31367**
2000	-	**-**	AQ3 M3II 3NGR2000L	**31326**	AQ3 M3II 4NGR2000L	**31368**
3150	-	**-**	AQ3 M3II 3NGR3150L	**31327**	AQ3 M3II 4NGR3150L	**31369**
4000	-	**-**	AQ3 M3II 3NGR4000L	**31328**	AQ3 M3II 4NGR4000L	**31370**
5000	-	**-**	AQ3 M3II 3NGR5000L	**31329**	AQ3 M3II 4NGR5000L	**31371**

- Not available

Selection and ordering data

M3 II versions equipped with external J-type controller unit



Rated current (A)	2P Type code	2P Order code	3P Type code	3P Order code	4P Type code	4P Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NBR20J	**30801**	AQ3 M3II 3NBR20J	**30855**	AQ3 M3II 4NBR20J	**30909**
25	AQ3 M3II 2NBR25J	**30802**	AQ3 M3II 3NBR25J	**30856**	AQ3 M3II 4NBR25J	**30910**
32	AQ3 M3II 2NBR32J	**30803**	AQ3 M3II 3NBR32J	**30857**	AQ3 M3II 4NBR32J	**30911**
40	AQ3 M3II 2NBR40J	**30804**	AQ3 M3II 3NBR40J	**30858**	AQ3 M3II 4NBR40J	**30912**
50	AQ3 M3II 2NBR50J	**30805**	AQ3 M3II 3NBR50J	**30859**	AQ3 M3II 4NBR50J	**30913**
63	AQ3 M3II 2NBR63J	**30806**	AQ3 M3II 3NBR63J	**30860**	AQ3 M3II 4NBR63J	**30914**
80	AQ3 M3II 2NBR80J	**30807**	AQ3 M3II 3NBR80J	**30861**	AQ3 M3II 4NBR80J	**30915**
100	AQ3 M3II 2NBR100J	**30808**	AQ3 M3II 3NBR100J	**30862**	AQ3 M3II 4NBR100J	**30916**
125	AQ3 M3II 2NBR125J	**30809**	AQ3 M3II 3NBR125J	**30863**	AQ3 M3II 4NBR125J	**30917**
160	AQ3 M3II 2NBR160J	**31049**	AQ3 M3II 3NBR160J	**31079**	AQ3 M3II 4NBR160J	**31109**
180	AQ3 M3II 2NBR180J	**31050**	AQ3 M3II 3NBR180J	**31080**	AQ3 M3II 4NBR180J	**31110**
200	AQ3 M3II 2NBR200J	**31051**	AQ3 M3II 3NBR200J	**31081**	AQ3 M3II 4NBR200J	**31111**
225	AQ3 M3II 2NBR225J	**31052**	AQ3 M3II 3NBR225J	**31082**	AQ3 M3II 4NBR225J	**31112**
250	AQ3 M3II 2NBR250J	**31053**	AQ3 M3II 3NBR250J	**31083**	AQ3 M3II 4NBR250J	**31113**
315	AQ3 M3II 2NBR315J	**31210**	AQ3 M3II 3NBR315J	**31234**	AQ3 M3II 4NBR315J	**31258**
350	AQ3 M3II 2NBR350J	**31211**	AQ3 M3II 3NBR350J	**31235**	AQ3 M3II 4NBR350J	**31259**
400	AQ3 M3II 2NBR400J	**31212**	AQ3 M3II 3NBR400J	**31236**	AQ3 M3II 4NBR400J	**31260**
500	AQ3 M3II 2NBR500J	**31213**	AQ3 M3II 3NBR500J	**31237**	AQ3 M3II 4NBR500J	**31261**
630	-	**-**	AQ3 M3II 3NBR630J	**31280**	AQ3 M3II 4NBR630J	**31292**
800	-	**-**	AQ3 M3II 3NBR800J	**31281**	AQ3 M3II 4NBR800J	**31293**
1000	-	**-**	AQ3 M3II 3NBR1000J	**31309**	AQ3 M3II 4NBR1000J	**31351**
1250	-	**-**	AQ3 M3II 3NBR1250J	**31310**	AQ3 M3II 4NBR1250J	**31352**
1600	-	**-**	AQ3 M3II 3NBR1600J	**31311**	AQ3 M3II 4NBR1600J	**31353**
2000	-	**-**	AQ3 M3II 3NBR2000J	**31312**	AQ3 M3II 4NBR2000J	**31354**
3150	-	**-**	AQ3 M3II 3NBR3150J	**31313**	AQ3 M3II 4NBR3150J	**31355**
4000	-	**-**	AQ3 M3II 3NBR4000J	**31314**	AQ3 M3II 4NBR4000J	**31356**
5000	-	**-**	AQ3 M3II 3NBR5000J	**31315**	AQ3 M3II 4NBR5000J	**31357**
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NGR20J	**30828**	AQ3 M3II 3NGR20J	**30882**	AQ3 M3II 4NGR20J	**30936**
25	AQ3 M3II 2NGR25J	**30829**	AQ3 M3II 3NGR25J	**30883**	AQ3 M3II 4NGR25J	**30937**
32	AQ3 M3II 2NGR32J	**30830**	AQ3 M3II 3NGR32J	**30884**	AQ3 M3II 4NGR32J	**30938**
40	AQ3 M3II 2NGR40J	**30831**	AQ3 M3II 3NGR40J	**30885**	AQ3 M3II 4NGR40J	**30939**
50	AQ3 M3II 2NGR50J	**30832**	AQ3 M3II 3NGR50J	**30886**	AQ3 M3II 4NGR50J	**30940**
63	AQ3 M3II 2NGR63J	**30833**	AQ3 M3II 3NGR63J	**30887**	AQ3 M3II 4NGR63J	**30941**
80	AQ3 M3II 2NGR80J	**30834**	AQ3 M3II 3NGR80J	**30888**	AQ3 M3II 4NGR80J	**30942**
100	AQ3 M3II 2NGR100J	**30835**	AQ3 M3II 3NGR100J	**30889**	AQ3 M3II 4NGR100J	**30943**
125	AQ3 M3II 2NGR125J	**30836**	AQ3 M3II 3NGR125J	**30890**	AQ3 M3II 4NGR125J	**30944**
160	AQ3 M3II 2NGR160J	**31064**	AQ3 M3II 3NGR160J	**31094**	AQ3 M3II 4NGR160J	**31124**
180	AQ3 M3II 2NGR180J	**31065**	AQ3 M3II 3NGR180J	**31095**	AQ3 M3II 4NGR180J	**31125**
200	AQ3 M3II 2NGR200J	**31066**	AQ3 M3II 3NGR200J	**31096**	AQ3 M3II 4NGR200J	**31126**
225	AQ3 M3II 2NGR225J	**31067**	AQ3 M3II 3NGR225J	**31097**	AQ3 M3II 4NGR225J	**31127**
250	AQ3 M3II 2NGR250J	**31068**	AQ3 M3II 3NGR250J	**31098**	AQ3 M3II 4NGR250J	**31128**
315	AQ3 M3II 2NGR315J	**31222**	AQ3 M3II 3NGR315J	**31246**	AQ3 M3II 4NGR315J	**31270**
350	AQ3 M3II 2NGR350J	**31223**	AQ3 M3II 3NGR350J	**31247**	AQ3 M3II 4NGR350J	**31271**
400	AQ3 M3II 2NGR400J	**31224**	AQ3 M3II 3NGR400J	**31248**	AQ3 M3II 4NGR400J	**31272**
500	AQ3 M3II 2NGR500J	**31225**	AQ3 M3II 3NGR500J	**31249**	AQ3 M3II 4NGR500J	**31273**
630	-	**-**	AQ3 M3II 3NGR630J	**31286**	AQ3 M3II 4NGR630J	**31298**
800	-	**-**	AQ3 M3II 3NGR800J	**31287**	AQ3 M3II 4NGR800J	**31299**
1000	-	**-**	AQ3 M3II 3NGR1000J	**31330**	AQ3 M3II 4NGR1000J	**31372**
1250	-	**-**	AQ3 M3II 3NGR1250J	**31331**	AQ3 M3II 4NGR1250J	**31373**
1600	-	**-**	AQ3 M3II 3NGR1600J	**31332**	AQ3 M3II 4NGR1600J	**31374**
2000	-	**-**	AQ3 M3II 3NGR2000J	**31333**	AQ3 M3II 4NGR2000J	**31375**
3150	-	**-**	AQ3 M3II 3NGR3150J	**31334**	AQ3 M3II 4NGR3150J	**31376**
4000	-	**-**	AQ3 M3II 3NGR4000J	**31335**	AQ3 M3II 4NGR4000J	**31377**
5000	-	**-**	AQ3 M3II 3NGR5000J	**31336**	AQ3 M3II 4NGR5000J	**31378**

- Not available

Selection and ordering data

M3 II versions equipped with external LCD display controller unit



	Rated current (A)	2P Type code	2P Order code	3P Type code	3P Order code	4P Type code	4P Order code
Grid-Grid (NB)							
Model R: Automatic transfer with restoration							
	20	AQ3 M3II 2NBR20C	**30810**	AQ3 M3II 3NBR20C	**30864**	AQ3 M3II 4NBR20C	**30918**
	25	AQ3 M3II 2NBR25C	**30811**	AQ3 M3II 3NBR25C	**30865**	AQ3 M3II 4NBR25C	**30919**
	32	AQ3 M3II 2NBR32C	**30812**	AQ3 M3II 3NBR32C	**30866**	AQ3 M3II 4NBR32C	**30920**
	40	AQ3 M3II 2NBR40C	**30813**	AQ3 M3II 3NBR40C	**30867**	AQ3 M3II 4NBR40C	**30921**
	50	AQ3 M3II 2NBR50C	**30814**	AQ3 M3II 3NBR50C	**30868**	AQ3 M3II 4NBR50C	**30922**
	63	AQ3 M3II 2NBR63C	**30815**	AQ3 M3II 3NBR63C	**30869**	AQ3 M3II 4NBR63C	**30923**
	80	AQ3 M3II 2NBR80C	**30816**	AQ3 M3II 3NBR80C	**30870**	AQ3 M3II 4NBR80C	**30924**
	100	AQ3 M3II 2NBR100C	**30817**	AQ3 M3II 3NBR100C	**30871**	AQ3 M3II 4NBR100C	**30925**
	125	AQ3 M3II 2NBR125C	**30818**	AQ3 M3II 3NBR125C	**30872**	AQ3 M3II 4NBR125C	**30926**
	160	AQ3 M3II 2NBR160C	**31054**	AQ3 M3II 3NBR160C	**31084**	AQ3 M3II 4NBR160C	**31114**
	180	AQ3 M3II 2NBR180C	**31055**	AQ3 M3II 3NBR180C	**31085**	AQ3 M3II 4NBR180C	**31115**
	200	AQ3 M3II 2NBR200C	**31056**	AQ3 M3II 3NBR200C	**31086**	AQ3 M3II 4NBR200C	**31116**
	225	AQ3 M3II 2NBR225C	**31057**	AQ3 M3II 3NBR225C	**31087**	AQ3 M3II 4NBR225C	**31117**
	250	AQ3 M3II 2NBR250C	**31058**	AQ3 M3II 3NBR250C	**31088**	AQ3 M3II 4NBR250C	**31118**
	315	AQ3 M3II 2NBR315C	**31214**	AQ3 M3II 3NBR315C	**31238**	AQ3 M3II 4NBR315C	**31262**
	350	AQ3 M3II 2NBR350C	**31215**	AQ3 M3II 3NBR350C	**31239**	AQ3 M3II 4NBR350C	**31263**
	400	AQ3 M3II 2NBR400C	**31216**	AQ3 M3II 3NBR400C	**31240**	AQ3 M3II 4NBR400C	**31264**
	500	AQ3 M3II 2NBR500C	**31217**	AQ3 M3II 3NBR500C	**31241**	AQ3 M3II 4NBR500C	**31265**
	630	-	**-**	AQ3 M3II 3NBR630C	**31282**	AQ3 M3II 4NBR630C	**31294**
	800	-	**-**	AQ3 M3II 3NBR800C	**31283**	AQ3 M3II 4NBR800C	**31295**
	1000	-	**-**	AQ3 M3II 3NBR1000C	**31316**	AQ3 M3II 4NBR1000C	**31358**
	1250	-	**-**	AQ3 M3II 3NBR1250C	**31317**	AQ3 M3II 4NBR1250C	**31359**
	1600	-	**-**	AQ3 M3II 3NBR1600C	**31318**	AQ3 M3II 4NBR1600C	**31360**
	2000	-	**-**	AQ3 M3II 3NBR2000C	**31319**	AQ3 M3II 4NBR2000C	**31361**
	3150	-	**-**	AQ3 M3II 3NBR3150C	**31320**	AQ3 M3II 4NBR3150C	**31362**
	4000	-	**-**	AQ3 M3II 3NBR4000C	**31321**	AQ3 M3II 4NBR4000C	**31363**
	5000	-	**-**	AQ3 M3II 3NBR5000C	**31322**	AQ3 M3II 4NBR5000C	**31364**
Grid-Generator (NG)							
Model R: Automatic transfer with restoration							
	20	AQ3 M3II 2NGR20C	**30837**	AQ3 M3II 3NGR20C	**30891**	AQ3 M3II 4NGR20C	**30945**
	25	AQ3 M3II 2NGR25C	**30838**	AQ3 M3II 3NGR25C	**30892**	AQ3 M3II 4NGR25C	**30946**
	32	AQ3 M3II 2NGR32C	**30839**	AQ3 M3II 3NGR32C	**30893**	AQ3 M3II 4NGR32C	**30947**
	40	AQ3 M3II 2NGR40C	**30840**	AQ3 M3II 3NGR40C	**30894**	AQ3 M3II 4NGR40C	**30948**
	50	AQ3 M3II 2NGR50C	**30841**	AQ3 M3II 3NGR50C	**30895**	AQ3 M3II 4NGR50C	**30949**
	63	AQ3 M3II 2NGR63C	**30842**	AQ3 M3II 3NGR63C	**30896**	AQ3 M3II 4NGR63C	**30950**
	80	AQ3 M3II 2NGR80C	**30843**	AQ3 M3II 3NGR80C	**30897**	AQ3 M3II 4NGR80C	**30951**
	100	AQ3 M3II 2NGR100C	**30844**	AQ3 M3II 3NGR100C	**30898**	AQ3 M3II 4NGR100C	**30952**
	125	AQ3 M3II 2NGR125C	**30845**	AQ3 M3II 3NGR125C	**30899**	AQ3 M3II 4NGR125C	**30953**
	160	AQ3 M3II 2NGR160C	**31069**	AQ3 M3II 3NGR160C	**31099**	AQ3 M3II 4NGR160C	**31129**
	180	AQ3 M3II 2NGR180C	**31070**	AQ3 M3II 3NGR180C	**31100**	AQ3 M3II 4NGR180C	**31130**
	200	AQ3 M3II 2NGR200C	**31071**	AQ3 M3II 3NGR200C	**31101**	AQ3 M3II 4NGR200C	**31131**
	225	AQ3 M3II 2NGR225C	**31072**	AQ3 M3II 3NGR225C	**31102**	AQ3 M3II 4NGR225C	**31132**
	250	AQ3 M3II 2NGR250C	**31073**	AQ3 M3II 3NGR250C	**31103**	AQ3 M3II 4NGR250C	**31133**
	315	AQ3 M3II 2NGR315C	**31226**	AQ3 M3II 3NGR315C	**31250**	AQ3 M3II 4NGR315C	**31274**
	350	AQ3 M3II 2NGR350C	**31227**	AQ3 M3II 3NGR350C	**31251**	AQ3 M3II 4NGR350C	**31275**
	400	AQ3 M3II 2NGR400C	**31228**	AQ3 M3II 3NGR400C	**31252**	AQ3 M3II 4NGR400C	**31276**
	500	AQ3 M3II 2NGR500C	**31229**	AQ3 M3II 3NGR500C	**31253**	AQ3 M3II 4NGR500C	**31277**
	630	-	**-**	AQ3 M3II 3NGR630C	**31288**	AQ3 M3II 4NGR630C	**31300**
	800	-	**-**	AQ3 M3II 3NGR800C	**31289**	AQ3 M3II 4NGR800C	**31301**
	1000	-	**-**	AQ3 M3II 3NGR1000C	**31337**	AQ3 M3II 4NGR1000C	**31379**
	1250	-	**-**	AQ3 M3II 3NGR1250C	**31338**	AQ3 M3II 4NGR1250C	**31380**
	1600	-	**-**	AQ3 M3II 3NGR1600C	**31339**	AQ3 M3II 4NGR1600C	**31381**
	2000	-	**-**	AQ3 M3II 3NGR2000C	**31340**	AQ3 M3II 4NGR2000C	**31382**
	3150	-	**-**	AQ3 M3II 3NGR3150C	**31341**	AQ3 M3II 4NGR3150C	**31383**
	4000	-	**-**	AQ3 M3II 3NGR4000C	**31342**	AQ3 M3II 4NGR4000C	**31384**
	5000	-	**-**	AQ3 M3II 3NGR5000C	**31343**	AQ3 M3II 4NGR5000C	**31385**

- Not available

Miniature Circuit Breakers
Series 3SB71-63

1

Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure.

Technical specifications

- Standards: IEC 60898-1, IEC 60947-2
- Rated current In (A) : 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage Un (V AC): 230/400
- Operational voltage (V AC): Min. 2; Max. 250/440
- Rated frequency (Hz): 50/60
- Rated insulation voltage (V AC): 500
- Number of poles: 1, 2, 3, 4

Tripping characteristic	IEC 60898-1	IEC 60947-2
Characteristic B (In)	3-5	4
Characteristic C (In)	5-10	8
Characteristic D (In)	10-20	12

- Thermal operating limit (In): 1.13 - 1.45
- Rated switching capacity Icn (kA): 10
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 10,000
- Mechanical life (times): 20,000
- Breaking capacity:

Model	Rated voltage (V)		Acc. to IEC 60898-1 Icn (kA)	Acc. to IEC 60898-1 Ics (kA)	Acc. to IEC 60947-2 Icu (kA)	Acc. to IEC 60947-2 Ics (kA)
3SB71-63	1P	230/400	16	12	15	7.5
	2-4P	400	16	12	15	7.5
3SB71-63H	1P	230/400	10	7.5	10	7.5
	2-4P	400	10	7.5	10	7.5

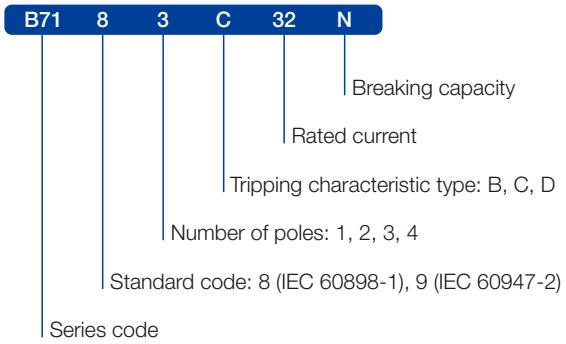
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-35
- Finely stranded with end sleeve (mm^2): 0.75-25
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max 2,000

References

- Additional components: page 189 ~ 191



Instruction of type code

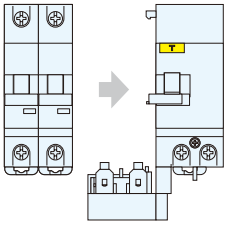


Features

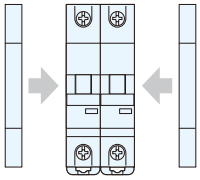
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with: IEC 60898 -1, B, C and D tripping characteristics
- This MCB for industry in accordance with IEC 60947-2 instantaneous tripping characteristics with release B: 4 In, release C: 8 In, release D: 12 In
- This MCB may be extended with:
  - A wide range of RCDs
  - Full sets of accessories

Add-on devices

Add-on RCD



Auxiliaries



Benefits

- Attractive device design
- Easily recognizable, color-coded switching position
- Indication integrated in the handle.





Well matched with RCCB 3SL71



Extended with add-on RCD block 3SB71LB



Added both on the left and right sides of the MCB.



Safety terminal: easy wiring; protection degree IP20.
Pozidriv and slot screw head.
Torque up to 2.8 N·m.



MCB's and RCCB's can be connected with PIN type busbar both at the top and bottom terminals, with easy DIN-rail extraction



MCB's and RCCB's can be connected with FORK type busbar both at the top and bottom terminals, with easy DIN-rail extraction

Selection and ordering data

IEC 60898-1 16 kA
IEC 60947-2 15 kA

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	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	6	B71 1B06	**13702**	B71 1C06	**13713**	B71 1D06	**13724**	12
		10	B71 1B10	**13703**	B71 1C10	**13714**	B71 1D10	**13725**	12
		16	B71 1B16	**13704**	B71 1C16	**13715**	B71 1D16	**13726**	12
		20	B71 1B20	**13705**	B71 1C20	**13716**	B71 1D20	**13727**	12
		25	B71 1B25	**13706**	B71 1C25	**13717**	B71 1D25	**13728**	12
		32	B71 1B32	**13707**	B71 1C32	**13718**	B71 1D32	**13729**	12
		40	B71 1B40	**13708**	B71 1C40	**13719**	B71 1D40	**13730**	12
		50	B71 1B50	**13709**	B71 1C50	**13720**	B71 1D50	**13731**	12
		63	B71 1B63	**13710**	B71 1C63	**13721**	B71 1D63	**13732**	12
	2	6	B71 2B06	**13735**	B71 2C06	**13746**	B71 2D06	**13757**	6
		10	B71 2B10	**13736**	B71 2C10	**13747**	B71 2D10	**13758**	6
		16	B71 2B16	**13737**	B71 2C16	**13748**	B71 2D16	**13759**	6
		20	B71 2B20	**13738**	B71 2C20	**13749**	B71 2D20	**13760**	6
		25	B71 2B25	**13739**	B71 2C25	**13750**	B71 2D25	**13761**	6
		32	B71 2B32	**13740**	B71 2C32	**13751**	B71 2D32	**13762**	6
		40	B71 2B40	**13741**	B71 2C40	**13752**	B71 2D40	**13763**	6
		50	B71 2B50	**13742**	B71 2C50	**13753**	B71 2D50	**13764**	6
		63	B71 2B63	**13743**	B71 2C63	**13754**	B71 2D63	**13765**	6
	3	6	B71 3B06	**13768**	B71 3C06	**13779**	B71 3D06	**13790**	4
		10	B71 3B10	**13769**	B71 3C10	**13780**	B71 3D10	**13791**	4
		16	B71 3B16	**13770**	B71 3C16	**13781**	B71 3D16	**13792**	4
		20	B71 3B20	**13771**	B71 3C20	**13782**	B71 3D20	**13793**	4
		25	B71 3B25	**13772**	B71 3C25	**13783**	B71 3D25	**13794**	4
		32	B71 3B32	**13773**	B71 3C32	**13784**	B71 3D32	**13795**	4
		40	B71 3B40	**13774**	B71 3C40	**13785**	B71 3D40	**13796**	4
		50	B71 3B50	**13775**	B71 3C50	**13786**	B71 3D50	**13797**	4
		63	B71 3B63	**13776**	B71 3C63	**13787**	B71 3D63	**13798**	4
	4	6	B71 4B06	**13801**	B71 4C06	**13812**	B71 4D06	**13823**	3
		10	B71 4B10	**13802**	B71 4C10	**13813**	B71 4D10	**13824**	3
		16	B71 4B16	**13803**	B71 4C16	**13814**	B71 4D16	**13825**	3
		20	B71 4B20	**13804**	B71 4C20	**13815**	B71 4D20	**13826**	3
		25	B71 4B25	**13805**	B71 4C25	**13816**	B71 4D25	**13827**	3
		32	B71 4B32	**13806**	B71 4C32	**13817**	B71 4D32	**13828**	3
		40	B71 4B40	**13807**	B71 4C40	**13818**	B71 4D40	**13829**	3
		50	B71 4B50	**13808**	B71 4C50	**13819**	B71 4D50	**13830**	3
		63	B71 4B63	**13809**	B71 4C63	**13820**	B71 4D63	**13831**	3

Selection and ordering data

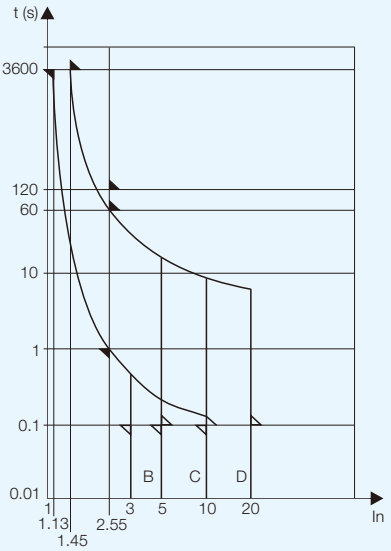
IEC 60898-1 10 kA
IEC 60947-2 10 kA

	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	2	B71 1B02H	**19251**	B71 1C02H	**19271**	B71 1D02H	**19291**	12
		4	B71 1B04H	**19253**	B71 1C04H	**19273**	B71 1D04H	**19293**	12
		6	B71 1B06H	**20001**	B71 1C06H	**20046**	B71 1D06H	**20091**	12
		10	B71 1B10H	**20002**	B71 1C10H	**20047**	B71 1D10H	**20092**	12
		16	B71 1B16H	**20003**	B71 1C16H	**20048**	B71 1D16H	**20093**	12
		20	B71 1B20H	**20004**	B71 1C20H	**20049**	B71 1D20H	**20094**	12
		25	B71 1B25H	**20005**	B71 1C25H	**20050**	B71 1D25H	**20095**	12
		32	B71 1B32H	**20006**	B71 1C32H	**20051**	B71 1D32H	**20096**	12
		40	B71 1B40H	**20007**	B71 1C40H	**20052**	B71 1D40H	**20097**	12
		50	B71 1B50H	**20008**	B71 1C50H	**20053**	B71 1D50H	**20098**	12
		63	B71 1B63H	**20009**	B71 1C63H	**20054**	B71 1D63H	**20099**	12
	2	2	B71 2B02H	**19255**	B71 2C02H	**19275**	B71 2D02H	**19295**	6
		4	B71 2B04H	**19257**	B71 2C04H	**19277**	B71 2D04H	**19297**	6
		6	B71 2B06H	**20010**	B71 2C06H	**20055**	B71 2D06H	**20100**	6
		10	B71 2B10H	**20011**	B71 2C10H	**20056**	B71 2D10H	**20101**	6
		16	B71 2B16H	**20012**	B71 2C16H	**20057**	B71 2D16H	**20102**	6
		20	B71 2B20H	**20013**	B71 2C20H	**20058**	B71 2D20H	**20103**	6
		25	B71 2B25H	**20014**	B71 2C25H	**20059**	B71 2D25H	**20104**	6
		32	B71 2B32H	**20015**	B71 2C32H	**20060**	B71 2D32H	**20105**	6
		40	B71 2B40H	**20016**	B71 2C40H	**20061**	B71 2D40H	**20106**	6
		50	B71 2B50H	**20017**	B71 2C50H	**20062**	B71 2D50H	**20107**	6
		63	B71 2B63H	**20018**	B71 2C63H	**20063**	B71 2D63H	**20108**	6
	3	2	B71 3B02H	**19259**	B71 3C02H	**19279**	B71 3D02H	**19299**	4
		4	B71 3B04H	**19261**	B71 3C04H	**19281**	B71 3D04H	**19301**	4
		6	B71 3B06H	**20019**	B71 3C06H	**20064**	B71 3D06H	**20109**	4
		10	B71 3B10H	**20020**	B71 3C10H	**20065**	B71 3D10H	**20110**	4
		16	B71 3B16H	**20021**	B71 3C16H	**20066**	B71 3D16H	**20111**	4
		20	B71 3B20H	**20022**	B71 3C20H	**20067**	B71 3D20H	**20112**	4
		25	B71 3B25H	**20023**	B71 3C25H	**20068**	B71 3D25H	**20113**	4
		32	B71 3B32H	**20024**	B71 3C32H	**20069**	B71 3D32H	**20114**	4
		40	B71 3B40H	**20025**	B71 3C40H	**20070**	B71 3D40H	**20115**	4
		50	B71 3B50H	**20026**	B71 3C50H	**20071**	B71 3D50H	**20116**	4
		63	B71 3B63H	**20027**	B71 3C63H	**20072**	B71 3D63H	**20117**	4
	4	2	B71 4B02H	**19267**	B71 4C02H	**19287**	B71 4D02H	**19307**	3
		4	B71 4B04H	**19269**	B71 4C04H	**19289**	B71 4D04H	**19309**	3
		6	B71 4B06H	**20037**	B71 4C06H	**20082**	B71 4D06H	**20127**	3
		10	B71 4B10H	**20038**	B71 4C10H	**20083**	B71 4D10H	**20128**	3
		16	B71 4B16H	**20039**	B71 4C16H	**20084**	B71 4D16H	**20129**	3
		20	B71 4B20H	**20040**	B71 4C20H	**20085**	B71 4D20H	**20130**	3
		25	B71 4B25H	**20041**	B71 4C25H	**20086**	B71 4D25H	**20131**	3
		32	B71 4B32H	**20042**	B71 4C32H	**20087**	B71 4D32H	**20132**	3
		40	B71 4B40H	**20043**	B71 4C40H	**20088**	B71 4D40H	**20133**	3
		50	B71 4B50H	**20044**	B71 4C50H	**20089**	B71 4D50H	**20134**	3
		63	B71 4B63H	**20045**	B71 4C63H	**20090**	B71 4D63H	**20135**	3

1

Tripping characteristic curves

IEC 60898-1 Standard



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C, D

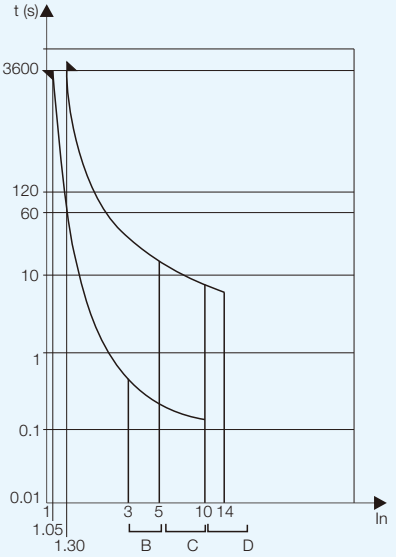
	Test current	Tripping time	Applications
B	3 In	0.1 < t < 45 s (In ≤ 32 A) 0.1 < t < 90 s (In > 32 A)	Only for resistive loads such as: - electrical heating - water heater
	5 In	t < 0.1 s	- stoves
C	5 In	0.1 < t < 15 s (In ≤ 32 A) 0.1 < t < 30 s (In > 32 A)	Usual loads such as: - lighting - socket outlets
	10 In	t < 0.1 s	- small motors
D	10 In	0.1 < t < 4 s (In ≤ 32 A) 0.1 < t < 8 s (In > 32 A)	Control and protection of circuits having important transient inrush currents (large motors)
	20 In	t < 0.1 s	

Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1 s < t < 60 s (In ≤ 32 A) 1 s < t < 120 s (In > 32 A)

IEC 60947-2 Standard



Magnetic release

- An electromagnet with plunger ensures instantaneous tripping in case of short circuit.
- The standard leaves the calibration of magnetic release to manufacturer's decision.
- SASSIN MCB series 3SB71-63 offers instantaneous tripping ranges
  - release B: 4 In
  - release C: 8 In
  - release D: 12 In

Thermal release

- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for two specific overload values.
- Reference ambient temperature is 30 °C.

Test current	Tripping time
1.05 In	t ≥ 1 h (In ≤ 63 A)
1.30 In	t < 1 h (In ≤ 63 A)

Selectivity

Load side: 3SB71-63, Characteristic B, C	Rated current In (A)	Power supply side: RT16-00 (fuse) Is (kA)								
		20	25	36	50	63	80	100	125	160
	≤ 2	1.2	4	12	12	12	12	12	12	12
	3	0.7	1.2	3.8	5.3	6	6	6	6	6
	4	0.6	0.9	2.5	3.8	6	6	6	6	6
	6	0.5	0.8	1.9	2.5	4.5	5	6	6	6
	10		0.7	1.4	2.2	3.2	3.6	6	6	6
	16			1.2	1.8	2.6	3	5.6	6	6
	20				1.5	2.2	2.5	4.6	6	6
	25				1.3	2	2.2	4.1	5.5	6
	32					1.7	1.9	3.8	4.5	6
	40						1.7	3	4	5
	50						1.5	2.6	3.5	4.5
	63							2.4	3.3	4.5

Load side: 3SB71-63, Characteristic B, C	Rated current In (A)	Power supply side: 3SM29-125 Is (kA)								
		16	20	25	32	40	50	63	80	100
	≤ 10	0.19	0.019	0.3	0.4	0.5	0.5	0.5	0.63	0.8
	16			0.3	0.4	0.5	0.5	0.5	0.63	0.8
	20					0.5	0.5	0.5	0.63	0.8
	25						0.5	0.5	0.63	0.8
	32						0.5	0.5	0.63	0.8
	40									
	50									
	63									

Back up protection

Load side: 3SB71-63, Characteristic B, C	Rated current In (A)	Power supply side: RT16 series Is (kA)						
		40	50	63	80	100	125	160
	1~6	40	40	40	40	40	40	40
	8~10	40	40	40	40	40	40	40
	13	40	40	40	40	35	35	35
	16	40	40	40	40	30	30	30
	20	40	40	40	40	30	30	30
	25	40	40	40	40	30	30	30
	32	40	40	40	40	30	30	30
	40	40	40	40	40	30	30	30
	50	30	30	30	30	30	30	30
	63	20	20	20	20	15	15	15

Load side: 3SB71-63, Characteristic B, C	Rated current In (A)	Power supply side: 3SM29 Is (kA)					
		3SM29-125S	3SM29-125H	3SM29-125R	3SM29-250S	3SM29-250H	3SM29-250R
	1~6	15	18	18	15	15	15
	10~20	12	15	15	12	12	12
	32~40	12	15	15	12	12	12
	50~60	12	15	15	12	12	12

1

Temperature derating

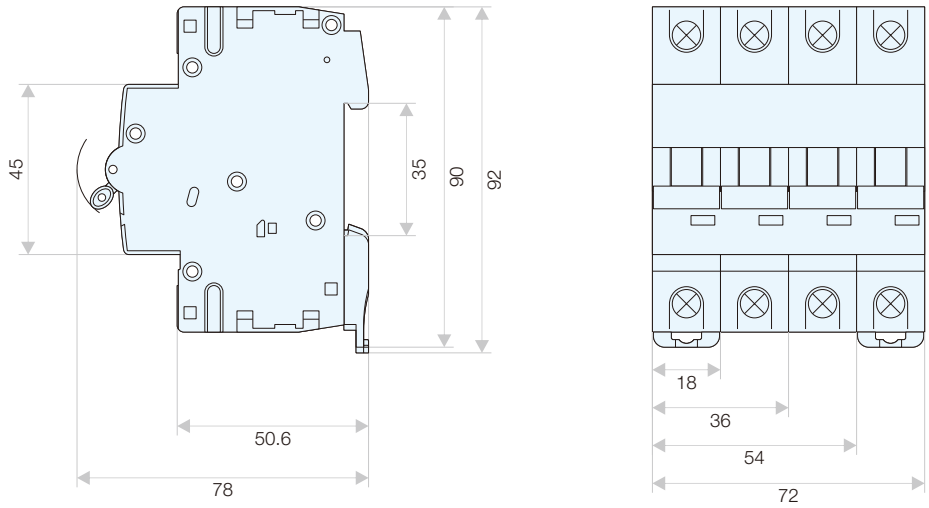
The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed.
Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.
The reference temperature is 30 ºC

Ambient temperature Rated current (A)	-35 ºC	-30 ºC	-20 ºC	-10 ºC	0 ºC	10 ºC	20 ºC	30 ºC	40 ºC	50 ºC	60 ºC
2	2.60	2.52	2.46	2.38	2.28	2.20	2.08	2.00	1.92	1.86	1.76
4	5.20	2.04	4.92	4.76	4.56	4.40	4.16	4.00	3.84	3.76	3.52
6	7.80	7.56	7.38	7.14	6.84	6.60	6.24	6.00	5.76	5.64	5.28
10	13.20	12.70	2.50	12.00	11.50	11.10	10.60	10.00	9.60	9.30	8.90
16	21.12	20.48	20.00	19.20	18.40	17.76	16.96	16.00	15.36	4.88	14.24
20	26.40	25.60	25.00	24.00	23.00	22.20	21.20	20.00	19.20	8.60	17.80
25	33.00	32.00	31.25	30.00	28.75	27.75	26.50	25.00	24.00	23.25	22.25
32	42.56	41.28	40.00	38.72	37.12	35.52	33.92	32.00	30.72	29.76	28.16
40	53.20	51.20	50.00	48.00	46.40	44.80	42.40	40.00	38.40	37.20	35.60
50	67.00	65.50	63.00	60.50	58.00	56.00	53.00	50.00	48.00	46.50	44.00
63	83.79	81.90	80.01	76.86	73.71	70.56	66.78	63.00	60.48	58.90	55.44

When several simultaneously operating circuit breakers are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in current rating. you must then assign the rating (already derated if necessary according to ambient temperature) a downrating factor of 0.8.

Outline and installation dimensions

unit in mm



Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure.

Technical specifications

- Standard: IEC 60947-2
- Rated current In (A): 80, 100, 125
- Rated voltage Un (V AC): 230/400
- Operational voltage (V AC): Min: 24; Max: 250/440
- Number of poles: 1, 2, 3, 4
- Trip characteristic: C, D
- Characteristic C (In): 8
- Characteristic D (In): 12
- Thermal operating limit (In): (1.05-1.3)
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Breaking capacity:

Model	Rated voltage		Acc. to IEC 60947-2	
	(V)		Icu (kA)	Ics (kA)
3SB71-125	1P	230/400	10	7.5
	2-4P	400	10	7.5

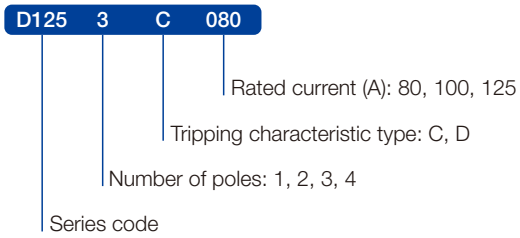
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 1-50
- Finely stranded with end sleeve (mm^2): 1-35
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max 2,000

References

- Additional components: page 189 ~ 191



Instruction of type code

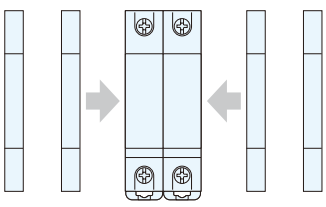


Features

- Rated current up to 125 A
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for industry in accordance with IEC 60947-2 instantaneous tripping characteristic release B 4 In, release C 8 In, release D 12 In.
- This MCB may be extended with:
- A wide range of RCDs and RCBO
- Full sets of additional components
- Full sets of accessories

Add-on devices

Auxiliaries



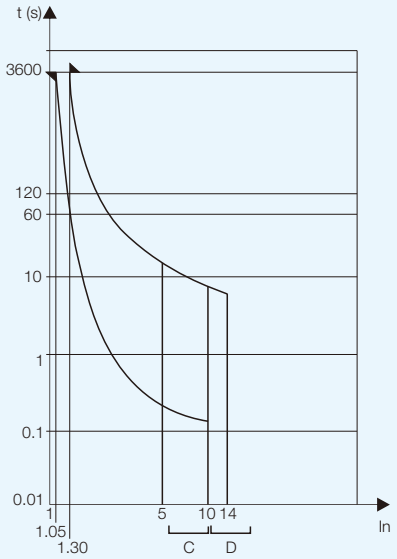
Selection and ordering data

IEC 60947-2 10 kA

	Number of poles	Rated current In (A)	Characteristic C		Characteristic D		
			Type code	Order code	Type code	Order code	Pack.
	1	80	D125 1C080	**16161**	D125 1D080	**16173**	12
		100	D125 1C100	**16162**	D125 1D100	**16174**	12
		125	D125 1C125	**16163**	D125 1D125	**16175**	12
	2	80	D125 2C080	**16164**	D125 2D080	**16176**	6
		100	D125 2C100	**16165**	D125 2D100	**16177**	6
		125	D125 2C125	**16166**	D125 2D125	**16178**	6
	3	80	D125 3C080	**16167**	D125 3D080	**16179**	4
		100	D125 3C100	**16168**	D125 3D100	**16180**	4
		125	D125 3C125	**16169**	D125 3D125	**16181**	4
	4	80	D125 4C080	**16170**	D125 4D080	**16182**	3
		100	D125 4C100	**16171**	D125 4D100	**16183**	3
		125	D125 4C125	**16172**	D125 4D125	**16184**	3

Tripping characteristic

IEC 60947-2 Standard



Magnetic release

- An electromagnet with plunger ensures instantaneous tripping in case of short circuit.
- The standard leaves the calibration of magnetic release to manufacturer's decision.
- Sassin MCB series 3SB71-125 offers instantaneous tripping ranges
  - release C: 8 In
  - release D: 12 In

Thermal release

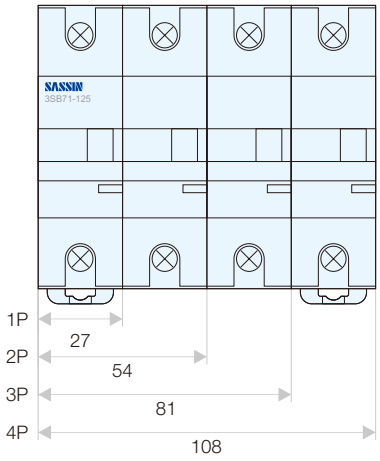
- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for two specific overload values.
- Reference ambient temperature is 30 °C.

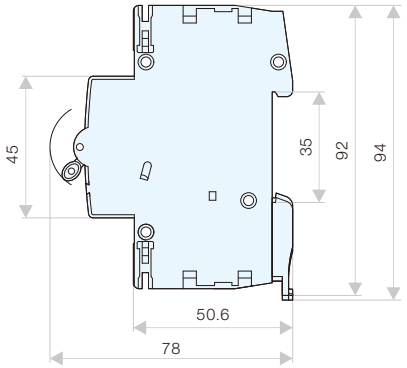
Test current	Tripping time
1.05 In	t ≥ 2 h (In > 63 A)
1.30 In	t < 2 h (In > 63 A)

Outline and installation dimensions

3SB71-125 is installed on DIN rail

unit in mm





DPN Miniature Circuit Breakers
Series 3SB66

Functions

- Overload protection
- Short circuit protection
- Isolation both for phase and neutral line
- Controlling
- Used for the protection of plants with switched neutral
- Used in residential building



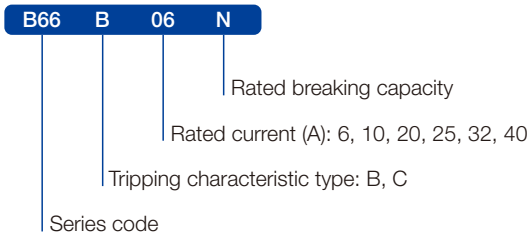
Technical specifications

- Standard: IEC 60898-1
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage Un (V AC): 230
- Rated frequency (Hz): 50/60
- Operational voltage Min / Max (V AC): 24 / 250
- Number of pole: 1P+N (1 modular width)
- Tripping characteristic: B, C
- Characteristic B (In): 3-5
- Characteristic C (In): 5-10
- Thermal operating limit : 1.13-1.45 In
- Rated switching capacity Icn (kA): 6
- Degree of protection: IP20, with connected conductors
- Electrical life(times): 4,000
- Mechanical life (times): 10,000
- Breaking capacity:

Model	Rated voltage		Acc. to IEC 60898-1	
			Icu	Ics
	(V)		(kA)	(kA)
3SB66	1P+N	230	6	6

- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-16
- Finely stranded with end sleeve (mm^2): 0.75-16
- Terminal tightening torque (N·m): 2.0
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Connection capacity (mm^2): 1-16

Instruction of type code



Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON/OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with: IEC 60898-1, B, C tripping characteristics
- Full sets of accessories

References

- Additional components: page 189 ~ 191

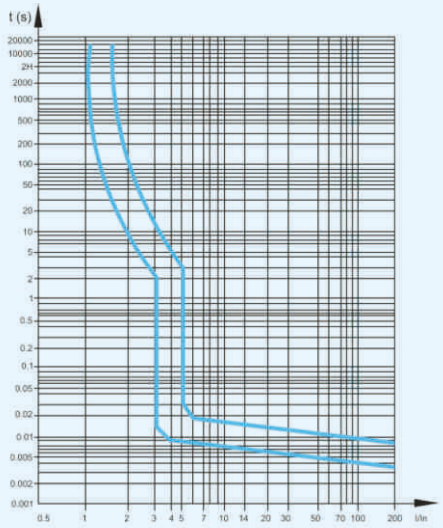
Selection and ordering data

IEC 60898-2 10 kA

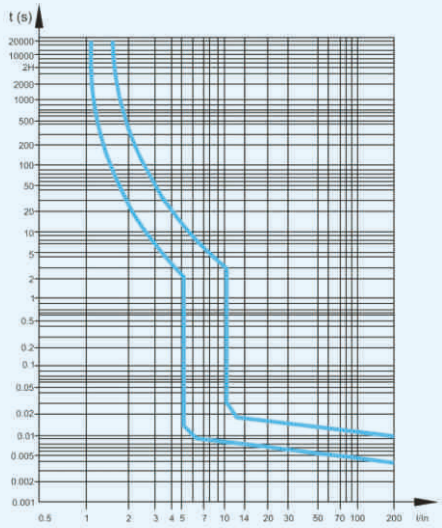
	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Pack.
			Type code	Order code	Type code	Order code	
	1P+N	6	B66 B06N	**21284**	B66 C06N	**21291**	12
		10	B66 B10N	**21285**	B66 C10N	**21292**	12
		16	B66 B16N	**21286**	B66 C16N	**21293**	12
		20	B66 B20N	**21287**	B66 C20N	**21294**	12
		25	B66 B25N	**21288**	B66 C25N	**21295**	12
		32	B66 B32N	**21289**	B66 C32N	**21296**	12
		40	B66 B40N	**21290**	B66 C40N	**21297**	12

Tripping characteristic curves

Characteristic B



Characteristic C



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C

	Test current	Tripping time	Applications
B	3 In	0.1 < t < 45 s (In ≤ 32 A) 0.1 < t < 90 s (In > 32 A)	Only for resistive loads such as: - electrical heating - water heater
	5 In	t < 0.1 s	- stoves
C	5 In	0.1 < t < 15 s (In ≤ 32 A) 0.1 < t < 30 s (In > 32 A)	Usual loads such as: - lighting - socket outlets
	10 In	t < 0.1 s	- small motors

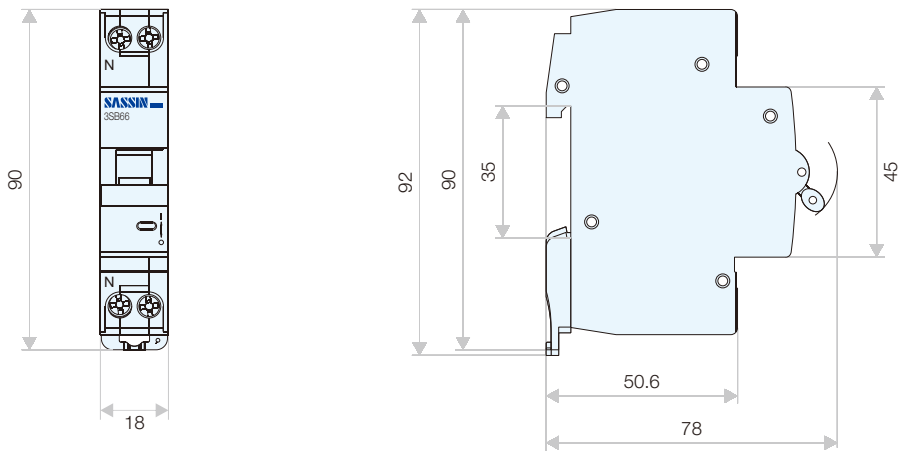
Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1s < t < 60 s (In ≤ 32 A) 1s < t < 120 s (In > 32 A)

Outline and installation dimensions

unit in mm



Miniature Circuit Breakers for DC Applications
Series 3SB71Z-63

Functions

- Overload protection
- Short circuit protection
- Controlling
- Protection for people and big length cables in TN and IT systems
- DC string protection: Protects the PV module from dangerous high DC back current
- Application in direct current circuit, like motors, auxiliary, circuits and photovoltaic.
- Used in industry and new energy



Technical specifications

- Standard: IEC 60898-2
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Number of poles: 1, 2
- Rated voltage Ue (V DC):
  - 1P: 220
  - 2P: 440
- Operational voltage Ub (V DC):
  - Min. : 12
  - Max. : 1P: 250; 2P: 500
- Rated insulation voltage (V AC): 500
- Rated frequency (Hz): 50/60
- Rated impulse withstand voltage (kA): 5
- Tripping characteristic: B, C
  - Characteristic B (In): 4~7
  - Characteristic C (In): 7~15
- Thermal operating limit (In): 1.13~1.45
- Rated breaking capacity:

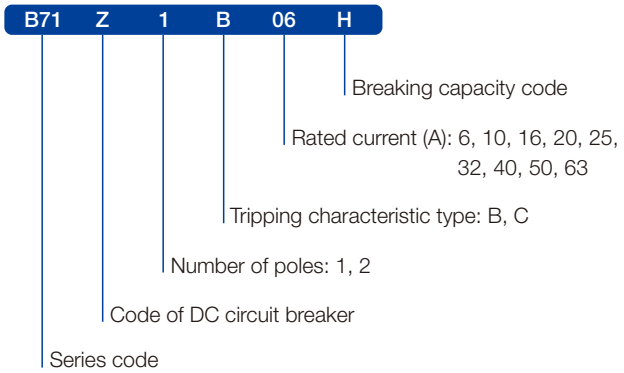
Model	Rated voltage		Acc. to IEC 60898-2	
	(V)		Icn (kA)	Ics (kA)
3SB71Z-63	1P	220 V DC	10	7.5
	2P	400 V DC	10	7.5

- Mounting position: Any
- Conductor cross-sections
  - Solid and stranded (mm^2): 0.75-35
  - Finely stranded with end sleeve (mm^2): 0.75-25
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Connection Capacity (mm^2): 1-25

References

- Additional components: page 189 ~ 191

Instruction of type code

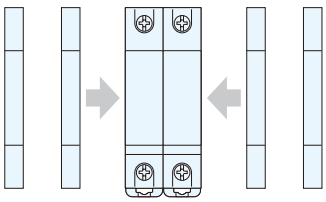


Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with IEC 60898-2, B, C tripping characteristics
- This MCB may be extended with:
  - Full sets additional components
  - Full sets of accessories

Add-on devices

Auxiliaries



Selection and ordering data

IEC 60898-2 10 kA

	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Pack.
			Type code	Order code	Type code	Order code	
	1	6	B71Z 1B06H	**17618**	B71Z 1C06H	**17654**	12
		10	B71Z 1B10H	**17619**	B71Z 1C10H	**17655**	12
		16	B71Z 1B16H	**17620**	B71Z 1C16H	**17656**	12
		20	B71Z 1B20H	**17621**	B71Z 1C20H	**17657**	12
		25	B71Z 1B25H	**17622**	B71Z 1C25H	**17658**	12
		32	B71Z 1B32H	**17623**	B71Z 1C32H	**17659**	12
		40	B71Z 1B40H	**17624**	B71Z 1C40H	**17660**	12
		50	B71Z 1B50H	**17625**	B71Z 1C50H	**17661**	12
		63	B71Z 1B63H	**17626**	B71Z 1C63H	**17662**	12
	2	6	B71Z 2B06H	**17627**	B71Z 2C06H	**17663**	6
		10	B71Z 2B10H	**17628**	B71Z 2C10H	**17664**	6
		16	B71Z 2B16H	**17629**	B71Z 2C16H	**17665**	6
		20	B71Z 2B20H	**17630**	B71Z 2C20H	**17666**	6
		25	B71Z 2B25H	**17631**	B71Z 2C25H	**17667**	6
		32	B71Z 2B32H	**17632**	B71Z 2C32H	**17668**	6
		40	B71Z 2B40H	**17633**	B71Z 2C40H	**17669**	6
		50	B71Z 2B50H	**17634**	B71Z 2C50H	**17670**	6
		63	B71Z 2B63H	**17635**	B71Z 2C63H	**17671**	6

1

Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-2 distinguishes three different types, following the current for instantaneous release: type B, C

	Test current	Tripping time	Applications
B	4 In	0.1 < t < 45 s (In ≤ 32 A) 0.1 < t < 90 s (In > 32 A)	Only for resistive loads such as: - electrical heating - water heater
	7 In	t < 0.1 s	- stoves
C	7 In	0.1 < t < 15 s (In ≤ 32 A) 0.1 < t < 30 s (In > 32 A)	Usual loads such as: - lighting - socket outlets
	15 In	t < 0.1 s	- small motors

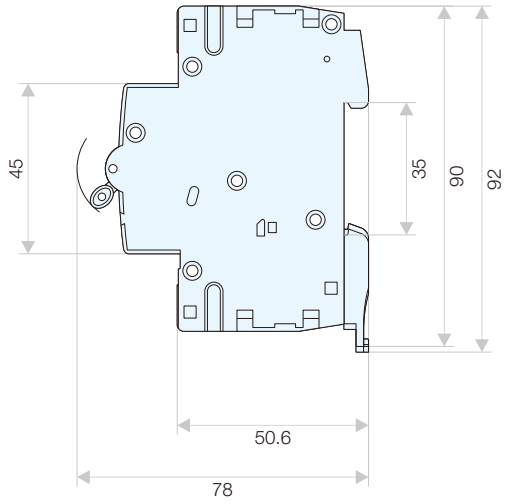
Thermal release

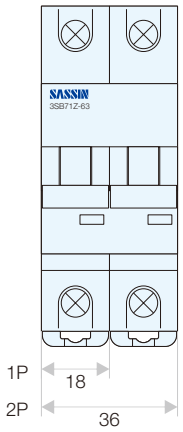
- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for specific overload values.
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1s < t < 60 s (In ≤ 32 A) 1s < t < 120 s (In > 32 A)

Outline and installation dimensions

unit in mm





Functions

- Switching and isolation function
- Controlling
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building , non-residential building, energy sources, industry and infrastructure.
- Combination with auxiliary elements: auxiliary contact, signal contact, shunt trip, undervoltage release



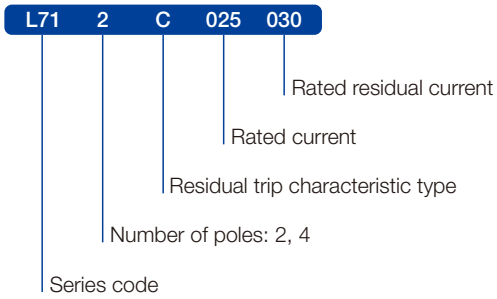
Technical specifications

- Standard: IEC 61008-1
- Type (wave form of the earth leakage sensed): AC, A
- Trip time type: instantaneous, selectivity S
- Number of poles: 2, 4
- Rated current In (A): 16, 25, 40, 63, 80, 100
- Rated voltage Ue (V AC): 230/400
- Rated insulation voltage Ui (V AC): 500
- Rated frequency Fn (Hz): 50/60
- Rated residual currents IΔn (mA): 10 (2P 16 A), 30, 100, 300
- Rated conditional short-circuit current:
  Inc = IΔc = 6000 A SCPD fuse 100A Gg
- Making and breaking capacity Im (A): 1000
- Rated residual breaking capacity IΔm (A): 1000
- Degree of protection: IP20, with connected conductors
- Terminals
- Terminal tightening torque (N·m): 3
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity

References

- Additional components: page 189 ~ 191

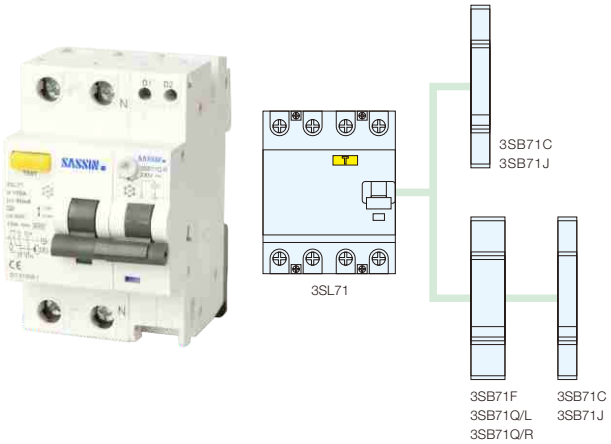
Instruction of type code



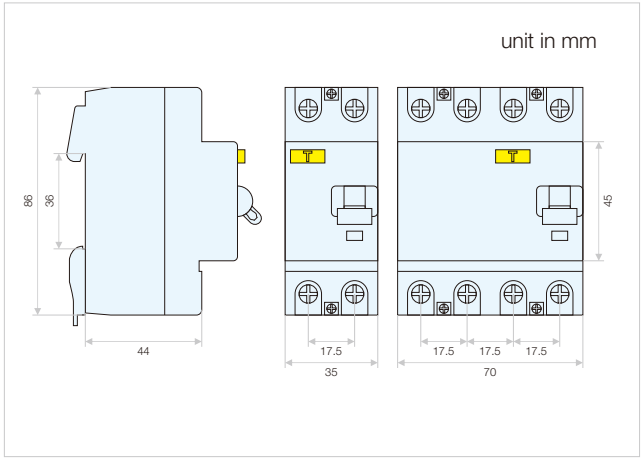
Features

- Electromagnetic type, voltage independent.
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification

Combination of auxiliary elements with 3SL71



Outline and installation dimensions



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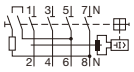
Selection and ordering data

Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Type AC		Type A		Type S+AC		Type S+A	
			Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
2	10	16	L71 2C016/010	**36067**	L71 2A016/010	**36104**	-	-	-	-
	30	16	L71 2C016/030	**36068**	L71 2A016/030	**36105**	-	-	-	-
		25	L71 2C025/030	**36069**	L71 2A025/030	**36106**	-	-	-	-
		40	L71 2C040/030	**36070**	L71 2A040/030	**36107**	-	-	-	-
		63	L71 2C063/030	**36071**	L71 2A063/030	**36108**	-	-	-	-
		80	L71 2C080/030	**36072**	L71 2A080/030	**36109**	-	-	-	-
		100	L71 2C100/030	**36073**	L71 2A100/030	**36110**	-	-	-	-
	100	16	L71 2C016/100	**36074**	L71 2A016/100	**36111**	L71 2SC016/100	**36141**	L71 2SA016/100	**36165**
		25	L71 2C025/100	**36075**	L71 2A025/100	**36112**	L71 2SC025/100	**36142**	L71 2SA025/100	**36166**
		40	L71 2C040/100	**36076**	L71 2A040/100	**36113**	L71 2SC040/100	**36143**	L71 2SA040/100	**36167**
		63	L71 2C063/100	**36077**	L71 2A063/100	**36114**	L71 2SC063/100	**36144**	L71 2SA063/100	**36168**
		80	L71 2C080/100	**36078**	L71 2A080/100	**36115**	L71 2SC080/100	**36145**	L71 2SA080/100	**36169**
		100	L71 2C100/100	**36079**	L71 2A100/100	**36116**	L71 2SC100/100	**36146**	L71 2SA100/100	**36170**
	300	16	L71 2C016/300	**36080**	L71 2A016/300	**36117**	L71 2SC016/300	**36147**	L71 2SA016/300	**36171**
		25	L71 2C025/300	**36081**	L71 2A025/300	**36118**	L71 2SC025/300	**36148**	L71 2SA025/300	**36172**
		40	L71 2C040/300	**36082**	L71 2A040/300	**36119**	L71 2SC040/300	**36149**	L71 2SA040/300	**36173**
		63	L71 2C063/300	**36083**	L71 2A063/300	**36120**	L71 2SC063/300	**36150**	L71 2SA063/300	**36174**
		80	L71 2C080/300	**36084**	L71 2A080/300	**36121**	L71 2SC080/300	**36151**	L71 2SA080/300	**36175**
		100	L71 2C100/300	**36085**	L71 2A100/300	**36122**	L71 2SC100/300	**36152**	L71 2SA100/300	**36176**
4	30	16	L71 4C016/030	**36086**	L71 4A016/030	**36123**	-	-	-	-
		25	L71 4C025/030	**36087**	L71 4A025/030	**36124**	-	-	-	-
		40	L71 4C040/030	**36088**	L71 4A040/030	**36125**	-	-	-	-
		63	L71 4C063/030	**36089**	L71 4A063/030	**36126**	-	-	-	-
		80	L71 4C080/030	**36090**	L71 4A080/030	**36127**	-	-	-	-
		100	L71 4C100/030	**36091**	L71 4A100/030	**36128**	-	-	-	-
	100	16	L71 4C016/100	**36092**	L71 4A016/100	**36129**	L71 4SC016/100	**36153**	L71 4SA016/100	**36177**
		25	L71 4C025/100	**36093**	L71 4A025/100	**36130**	L71 4SC025/100	**36154**	L71 4SA025/100	**36178**
		40	L71 4C040/100	**36094**	L71 4A040/100	**36131**	L71 4SC040/100	**36155**	L71 4SA040/100	**36179**
		63	L71 4C063/100	**36095**	L71 4A063/100	**36132**	L71 4SC063/100	**36156**	L71 4SA063/100	**36180**
		80	L71 4C080/100	**36096**	L71 4A080/100	**36133**	L71 4SC080/100	**36157**	L71 4SA080/100	**36181**
		100	L71 4C100/100	**36097**	L71 4A100/100	**36134**	L71 4SC100/100	**36158**	L71 4SA100/100	**36182**
	300	16	L71 4C016/300	**36098**	L71 4A016/300	**36135**	L71 4SC016/300	**36159**	L71 4SA016/300	**36183**
		25	L71 4C025/300	**36099**	L71 4A025/300	**36136**	L71 4SC025/300	**36160**	L71 4SA025/300	**36184**
		40	L71 4C040/300	**36100**	L71 4A040/300	**36137**	L71 4SC040/300	**36161**	L71 4SA040/300	**36185**
		63	L71 4C063/300	**36101**	L71 4A063/300	**36138**	L71 4SC063/300	**36162**	L71 4SA063/300	**36186**
		80	L71 4C080/300	**36102**	L71 4A080/300	**36139**	L71 4SC080/300	**36163**	L71 4SA080/300	**36187**
		100	L71 4C100/300	**36103**	L71 4A100/300	**36140**	L71 4SC100/300	**36164**	L71 4SA100/300	**36188**







Functions

- Switching and isolation function
- Protection against overload and short-circuit currents
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building

Technical specifications

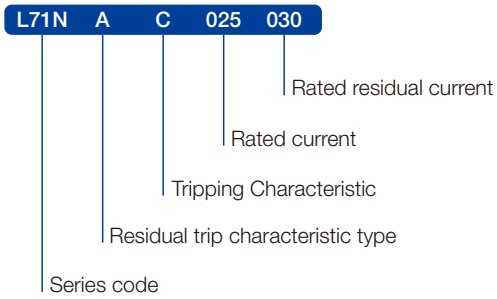
- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of pole: 1P+N
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage Ue (V AC): 230
- Rated insulation voltage Ui (V AC): 500
- Rated frequency Fn (Hz): 50/60
- Rated residual currents IΔn (mA): 30, 100, 300
- Rated breaking capacity acc. to IEC 61009-1 ultimate Icn (kA): 6
- Rated breaking capacity acc. to IEC 60947-2 ultimate Icu (kA): 10
- Rated residual breaking capacity IΔm (kA): 6
- Rated impulse withstand voltage (1.2/50) Uimp (kV): 4
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C
- Characteristic B (In): 3-5
- Characteristic C (In): 5-10
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-35
- Finely stranded with end sleeve (mm^2): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000

References

- Additional components: page 189 ~ 191



Instruction of type code

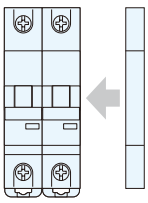


Features

- The combination of an RCCB and a miniature circuit breaker in a compact design for personnel, fire and line protection.
- Electromagnetic type, voltage independent.
- The MCB part protects lines against overload and short circuits and is available in characteristics B and C.
- The handle provides a clear indication of the contact position.
- The earth reference cable ensures protection against earth leakage in case of loss of supply neutral.

Add-on devices

Auxiliaries

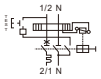


1

Selection and ordering data

Type AC

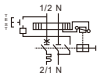




Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Characteristic B		Characteristic C	
			Type code	Order code	Type code	Order code
1P+N	30	6	L71NC B06/030	**20276**	L71NC C06/030	**20283**
		10	L71NC B10/030	**20277**	L71NC C10/030	**20284**
		16	L71NC B16/030	**20278**	L71NC C16/030	**20285**
		20	L71NC B20/030	**20279**	L71NC C20/030	**20286**
		25	L71NC B25/030	**20280**	L71NC C25/030	**20287**
		32	L71NC B32/030	**20281**	L71NC C32/030	**20288**
		40	L71NC B40/030	**20282**	L71NC C40/030	**20289**
	100	6	L71NC B06/100	**20304**	L71NC C06/100	**20311**
		10	L71NC B10/100	**20305**	L71NC C10/100	**20312**
		16	L71NC B16/100	**20306**	L71NC C16/100	**20313**
		20	L71NC B20/100	**20307**	L71NC C20/100	**20314**
		25	L71NC B25/100	**20308**	L71NC C25/100	**20315**
		32	L71NC B32/100	**20309**	L71NC C32/100	**20316**
		40	L71NC B40/100	**20310**	L71NC C40/100	**20317**
	300	6	L71NC B06/300	**20332**	L71NC C06/300	**20339**
		10	L71NC B10/300	**20333**	L71NC C10/300	**20340**
		16	L71NC B16/300	**20334**	L71NC C16/300	**20341**
		20	L71NC B20/300	**20335**	L71NC C20/300	**20342**
		25	L71NC B25/300	**20336**	L71NC C25/300	**20343**
		32	L71NC B32/300	**20337**	L71NC C32/300	**20344**
		40	L71NC B40/300	**20338**	L71NC C40/300	**20345**

Type A

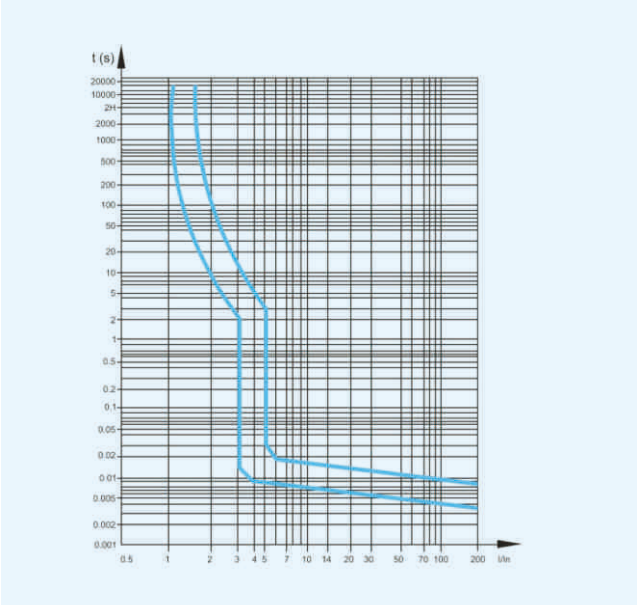




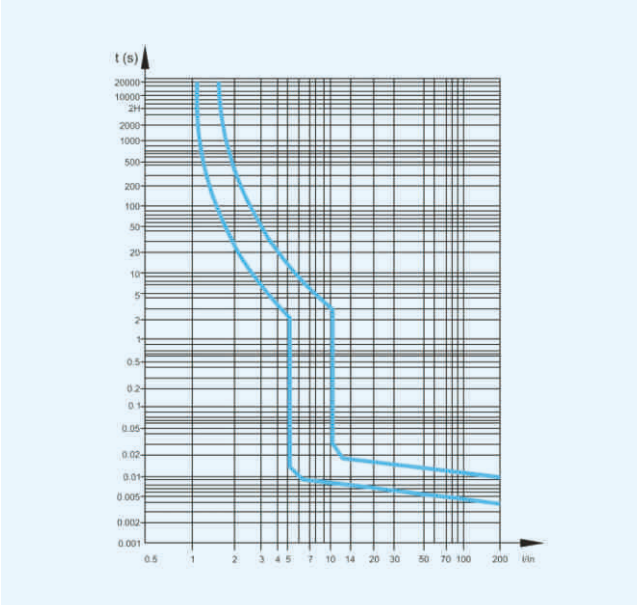
Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Characteristic B		Characteristic C	
			Type code	Order code	Type code	Order code
1P+N	30	6	L71NA B06/030	**20290**	L71NA C06/030	**20297**
		10	L71NA B10/030	**20291**	L71NA C10/030	**20298**
		16	L71NA B16/030	**20292**	L71NA C16/030	**20299**
		20	L71NA B20/030	**20293**	L71NA C20/030	**20300**
		25	L71NA B25/030	**20294**	L71NA C25/030	**20301**
		32	L71NA B32/030	**20295**	L71NA C32/030	**20302**
		40	L71NA B40/030	**20296**	L71NA C40/030	**20303**
	100	6	L71NA B06/100	**20318**	L71NA C06/100	**20325**
		10	L71NA B10/100	**20319**	L71NA C10/100	**20326**
		16	L71NA B16/100	**20320**	L71NA C16/100	**20327**
		20	L71NA B20/100	**20321**	L71NA C20/100	**20328**
		25	L71NA B25/100	**20322**	L71NA C25/100	**20329**
		32	L71NA B32/100	**20323**	L71NA C32/100	**20330**
		40	L71NA B40/100	**20324**	L71NA C40/100	**20331**
	300	6	L71NA B06/300	**20346**	L71NA C06/300	**20353**
		10	L71NA B10/300	**20347**	L71NA C10/300	**20354**
		16	L71NA B16/300	**20348**	L71NA C16/300	**20355**
		20	L71NA B20/300	**20349**	L71NA C20/300	**20356**
		25	L71NA B25/300	**20350**	L71NA C25/300	**20357**
		32	L71NA B32/300	**20351**	L71NA C32/300	**20358**
		40	L71NA B40/300	**20352**	L71NA C40/300	**20359**

Tripping characteristic curves

Characteristic B

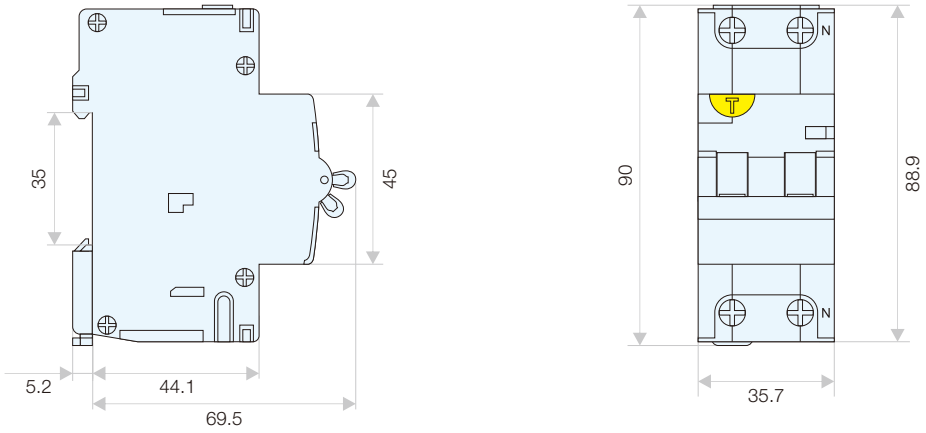


Characteristic C



Outline and installation dimensions

unit in mm



Residual Current Circuit Breakers with Overcurrent Protection
Series 3SB71LN

1

Functions

- Switching and isolation function
- Protection against overload and short-circuit currents
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building



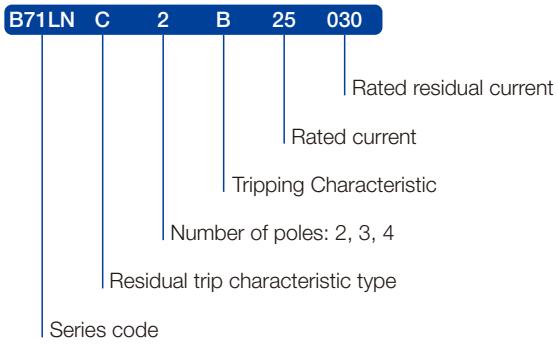
Technical specifications

- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of poles: 2, 3, 4
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage Ue (V AC): 230/400
- Rated insulation voltage Ui (V AC): 500
- Rated frequency Fn (Hz): 50/60
- Rated residual currents IΔn (mA): 30, 100, 300
- Rated breaking capacity acc. to IEC 61009-1 ultimate Icn (kA): 10
- Rated breaking capacity acc. to IEC 60947-2 ultimate Icu (kA): 10
- Rated residual breaking capacity IΔm (kA): 6
- Rated impulse withstand voltage (1.2/50) Uimp (kV): 4
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C, D
  - Characteristic B (In): 3-5
  - Characteristic C (In): 5-10
  - Characteristic D (In): 10-14
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
  - Solid and stranded (mm^2): 0.75-35
  - Finely stranded with end sleeve (mm^2): 0.75-25
- Terminals
  - Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000

References

- Additional components: page 189 ~ 191

Instruction of type code

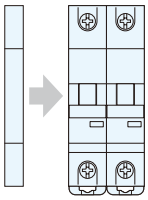


Features

- The combination of an RCCB and a miniature circuit breaker in a compact design for personnel, fire and line protection.
- Electromagnetic type, voltage independent.
- The MCB part protects lines against overload and short circuits and is available in characteristics B, C and D.
- The handle provides a clear indication of the contact position.

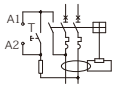
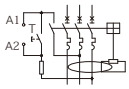
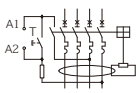
Add-on devices

Auxiliaries



Selection and ordering data

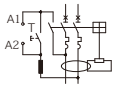
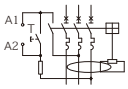
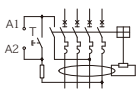
Type AC

Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D	
			Type code	Order code	Type code	Order code	Type code	Order code
2	30	6	B71LNC 2B06/030H	**16947**	B71LNC 2C06/030H	**16968**	B71LNC 2D06/030H	**16989**
		10	B71LNC 2B10/030H	**16948**	B71LNC 2C10/030H	**16969**	B71LNC 2D10/030H	**16990**
		16	B71LNC 2B16/030H	**16949**	B71LNC 2C16/030H	**16970**	B71LNC 2D16/030H	**16991**
		20	B71LNC 2B20/030H	**16950**	B71LNC 2C20/030H	**16971**	B71LNC 2D20/030H	**16992**
		25	B71LNC 2B25/030H	**16951**	B71LNC 2C25/030H	**16972**	B71LNC 2D25/030H	**16993**
		32	B71LNC 2B32/030H	**16952**	B71LNC 2C32/030H	**16973**	B71LNC 2D32/030H	**16994**
		40	B71LNC 2B40/030H	**16953**	B71LNC 2C40/030H	**16974**	B71LNC 2D40/030H	**16995**
	100	6	B71LNC 2B06/100H	**17010**	B71LNC 2C06/100H	**17031**	B71LNC 2D06/100H	**17052**
		10	B71LNC 2B10/100H	**17011**	B71LNC 2C10/100H	**17032**	B71LNC 2D10/100H	**17053**
		16	B71LNC 2B16/100H	**17012**	B71LNC 2C16/100H	**17033**	B71LNC 2D16/100H	**17054**
		20	B71LNC 2B20/100H	**17013**	B71LNC 2C20/100H	**17034**	B71LNC 2D20/100H	**17055**
		25	B71LNC 2B25/100H	**17014**	B71LNC 2C25/100H	**17035**	B71LNC 2D25/100H	**17056**
		32	B71LNC 2B32/100H	**17015**	B71LNC 2C32/100H	**17036**	B71LNC 2D32/100H	**17057**
		40	B71LNC 2B40/100H	**17016**	B71LNC 2C40/100H	**17037**	B71LNC 2D40/100H	**17058**
	300	6	B71LNC 2B06/300H	**17073**	B71LNC 2C06/300H	**17094**	B71LNC 2D06/300H	**17115**
		10	B71LNC 2B10/300H	**17074**	B71LNC 2C10/300H	**17095**	B71LNC 2D10/300H	**17116**
		16	B71LNC 2B16/300H	**17075**	B71LNC 2C16/300H	**17096**	B71LNC 2D16/300H	**17117**
		20	B71LNC 2B20/300H	**17076**	B71LNC 2C20/300H	**17097**	B71LNC 2D20/300H	**17118**
		25	B71LNC 2B25/300H	**17077**	B71LNC 2C25/300H	**17098**	B71LNC 2D25/300H	**17119**
		32	B71LNC 2B32/300H	**17078**	B71LNC 2C32/300H	**17099**	B71LNC 2D32/300H	**17120**
		40	B71LNC 2B40/300H	**17079**	B71LNC 2C40/300H	**17100**	B71LNC 2D40/300H	**17121**
3	30	6	B71LNC 3B06/030H	**16954**	B71LNC 3C06/030H	**16975**	B71LNC 3D06/030H	**16996**
		10	B71LNC 3B10/030H	**16955**	B71LNC 3C10/030H	**16976**	B71LNC 3D10/030H	**16997**
		16	B71LNC 3B16/030H	**16956**	B71LNC 3C16/030H	**16977**	B71LNC 3D16/030H	**16998**
		20	B71LNC 3B20/030H	**16957**	B71LNC 3C20/030H	**16978**	B71LNC 3D20/030H	**16999**
		25	B71LNC 3B25/030H	**16958**	B71LNC 3C25/030H	**16979**	B71LNC 3D25/030H	**17000**
		32	B71LNC 3B32/030H	**16959**	B71LNC 3C32/030H	**16980**	B71LNC 3D32/030H	**17001**
		40	B71LNC 3B40/030H	**16960**	B71LNC 3C40/030H	**16981**	B71LNC 3D40/030H	**17002**
	100	6	B71LNC 3B06/100H	**17017**	B71LNC 3C06/100H	**17038**	B71LNC 3D06/100H	**17059**
		10	B71LNC 3B10/100H	**17018**	B71LNC 3C10/100H	**17039**	B71LNC 3D10/100H	**17060**
		16	B71LNC 3B16/100H	**17019**	B71LNC 3C16/100H	**17040**	B71LNC 3D16/100H	**17061**
		20	B71LNC 3B20/100H	**17020**	B71LNC 3C20/100H	**17041**	B71LNC 3D20/100H	**17062**
		25	B71LNC 3B25/100H	**17021**	B71LNC 3C25/100H	**17042**	B71LNC 3D25/100H	**17063**
		32	B71LNC 3B32/100H	**17022**	B71LNC 3C32/100H	**17043**	B71LNC 3D32/100H	**17064**
		40	B71LNC 3B40/100H	**17023**	B71LNC 3C40/100H	**17044**	B71LNC 3D40/100H	**17065**
	300	6	B71LNC 3B06/300H	**17080**	B71LNC 3C06/300H	**17101**	B71LNC 3D06/300H	**17122**
		10	B71LNC 3B10/300H	**17081**	B71LNC 3C10/300H	**17102**	B71LNC 3D10/300H	**17123**
		16	B71LNC 3B16/300H	**17082**	B71LNC 3C16/300H	**17103**	B71LNC 3D16/300H	**17124**
		20	B71LNC 3B20/300H	**17083**	B71LNC 3C20/300H	**17104**	B71LNC 3D20/300H	**17125**
		25	B71LNC 3B25/300H	**17084**	B71LNC 3C25/300H	**17105**	B71LNC 3D25/300H	**17126**
		32	B71LNC 3B32/300H	**17085**	B71LNC 3C32/300H	**17106**	B71LNC 3D32/300H	**17127**
		40	B71LNC 3B40/300H	**17086**	B71LNC 3C40/300H	**17107**	B71LNC 3D40/300H	**17128**
4	30	6	B71LNC 4B06/030H	**16961**	B71LNC 4C06/030H	**16982**	B71LNC 4D06/030H	**17003**
		10	B71LNC 4B10/030H	**16962**	B71LNC 4C10/030H	**16983**	B71LNC 4D10/030H	**17004**
		16	B71LNC 4B16/030H	**16963**	B71LNC 4C16/030H	**16984**	B71LNC 4D16/030H	**17194**
		20	B71LNC 4B20/030H	**16964**	B71LNC 4C20/030H	**16985**	B71LNC 4D20/030H	**17195**
		25	B71LNC 4B25/030H	**16965**	B71LNC 4C25/030H	**16986**	B71LNC 4D25/030H	**17196**
		32	B71LNC 4B32/030H	**16966**	B71LNC 4C32/030H	**16987**	B71LNC 4D32/030H	**17197**
		40	B71LNC 4B40/030H	**16967**	B71LNC 4C40/030H	**16988**	B71LNC 4D40/030H	**17198**
	100	6	B71LNC 4B06/100H	**17024**	B71LNC 4C06/100H	**17045**	B71LNC 4D06/100H	**17066**
		10	B71LNC 4B10/100H	**17025**	B71LNC 4C10/100H	**17046**	B71LNC 4D10/100H	**17067**
		16	B71LNC 4B16/100H	**17026**	B71LNC 4C16/100H	**17047**	B71LNC 4D16/100H	**17257**
		20	B71LNC 4B20/100H	**17027**	B71LNC 4C20/100H	**17048**	B71LNC 4D20/100H	**17258**
		25	B71LNC 4B25/100H	**17028**	B71LNC 4C25/100H	**17049**	B71LNC 4D25/100H	**17259**
		32	B71LNC 4B32/100H	**17029**	B71LNC 4C32/100H	**17050**	B71LNC 4D32/100H	**17260**
		40	B71LNC 4B40/100H	**17030**	B71LNC 4C40/100H	**17051**	B71LNC 4D40/100H	**17261**
	300	6	B71LNC 4B06/300H	**17087**	B71LNC 4C06/300H	**17108**	B71LNC 4D06/300H	**17129**
		10	B71LNC 4B10/300H	**17088**	B71LNC 4C10/300H	**17109**	B71LNC 4D10/300H	**17130**
		16	B71LNC 4B16/300H	**17089**	B71LNC 4C16/300H	**17110**	B71LNC 4D16/300H	**17320**
		20	B71LNC 4B20/300H	**17090**	B71LNC 4C20/300H	**17111**	B71LNC 4D20/300H	**17321**
		25	B71LNC 4B25/300H	**17091**	B71LNC 4C25/300H	**17112**	B71LNC 4D25/300H	**17322**
		32	B71LNC 4B32/300H	**17092**	B71LNC 4C32/300H	**17113**	B71LNC 4D32/300H	**17323**
		40	B71LNC 4B40/300H	**17093**	B71LNC 4C40/300H	**17114**	B71LNC 4D40/300H	**17324**

1

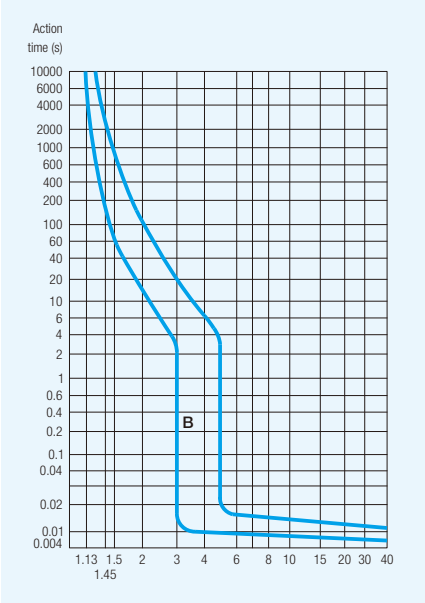
Selection and ordering data

Type A

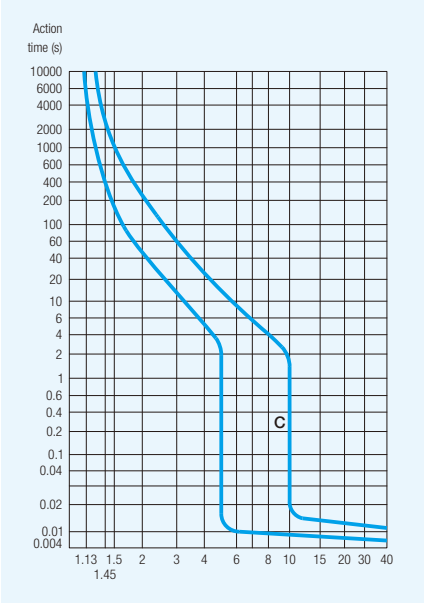
Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D	
			Type code	Order code	Type code	Order code	Type code	Order code
2	30	6	B71LNA 2B06/030H	**17136**	B71LNA 2C06/030H	**17157**	B71LNA 2D06/030H	**17178**
		10	B71LNA 2B10/030H	**17137**	B71LNA 2C10/030H	**17158**	B71LNA 2D10/030H	**17179**
		16	B71LNA 2B16/030H	**17138**	B71LNA 2C16/030H	**17159**	B71LNA 2D16/030H	**17180**
		20	B71LNA 2B20/030H	**17139**	B71LNA 2C20/030H	**17160**	B71LNA 2D20/030H	**17181**
		25	B71LNA 2B25/030H	**17140**	B71LNA 2C25/030H	**17161**	B71LNA 2D25/030H	**17182**
		32	B71LNA 2B32/030H	**17141**	B71LNA 2C32/030H	**17162**	B71LNA 2D32/030H	**17183**
		40	B71LNA 2B40/030H	**17142**	B71LNA 2C40/030H	**17163**	B71LNA 2D40/030H	**17184**
	100	6	B71LNA 2B06/100H	**17199**	B71LNA 2C06/100H	**17220**	B71LNA 2D06/100H	**17241**
		10	B71LNA 2B10/100H	**17200**	B71LNA 2C10/100H	**17221**	B71LNA 2D10/100H	**17242**
		16	B71LNA 2B16/100H	**17201**	B71LNA 2C16/100H	**17222**	B71LNA 2D16/100H	**17243**
		20	B71LNA 2B20/100H	**17202**	B71LNA 2C20/100H	**17223**	B71LNA 2D20/100H	**17244**
		25	B71LNA 2B25/100H	**17203**	B71LNA 2C25/100H	**17224**	B71LNA 2D25/100H	**17245**
		32	B71LNA 2B32/100H	**17204**	B71LNA 2C32/100H	**17225**	B71LNA 2D32/100H	**17246**
		40	B71LNA 2B40/100H	**17205**	B71LNA 2C40/100H	**17226**	B71LNA 2D40/100H	**17247**
	300	6	B71LNA 2B06/300H	**17262**	B71LNA 2C06/300H	**17283**	B71LNA 2D06/300H	**17304**
		10	B71LNA 2B10/300H	**17263**	B71LNA 2C10/300H	**17284**	B71LNA 2D10/300H	**17305**
		16	B71LNA 2B16/300H	**17264**	B71LNA 2C16/300H	**17285**	B71LNA 2D16/300H	**17306**
		20	B71LNA 2B20/300H	**17265**	B71LNA 2C20/300H	**17286**	B71LNA 2D20/300H	**17307**
		25	B71LNA 2B25/300H	**17266**	B71LNA 2C25/300H	**17287**	B71LNA 2D25/300H	**17308**
		32	B71LNA 2B32/300H	**17267**	B71LNA 2C32/300H	**17288**	B71LNA 2D32/300H	**17309**
		40	B71LNA 2B40/300H	**17268**	B71LNA 2C40/300H	**17289**	B71LNA 2D40/300H	**17310**
3	30	6	B71LNA 3B06/030H	**17143**	B71LNA 3C06/030H	**17164**	B71LNA 3D06/030H	**17185**
		10	B71LNA 3B10/030H	**17144**	B71LNA 3C10/030H	**17165**	B71LNA 3D10/030H	**17186**
		16	B71LNA 3B16/030H	**17145**	B71LNA 3C16/030H	**17166**	B71LNA 3D16/030H	**17187**
		20	B71LNA 3B20/030H	**17146**	B71LNA 3C20/030H	**17167**	B71LNA 3D20/030H	**17188**
		25	B71LNA 3B25/030H	**17147**	B71LNA 3C25/030H	**17168**	B71LNA 3D25/030H	**17189**
		32	B71LNA 3B32/030H	**17148**	B71LNA 3C32/030H	**17169**	B71LNA 3D32/030H	**17190**
		40	B71LNA 3B40/030H	**17149**	B71LNA 3C40/030H	**17170**	B71LNA 3D40/030H	**17191**
	100	6	B71LNA 3B06/100H	**17206**	B71LNA 3C06/100H	**17227**	B71LNA 3D06/100H	**17248**
		10	B71LNA 3B10/100H	**17207**	B71LNA 3C10/100H	**17228**	B71LNA 3D10/100H	**17249**
		16	B71LNA 3B16/100H	**17208**	B71LNA 3C16/100H	**17229**	B71LNA 3D16/100H	**17250**
		20	B71LNA 3B20/100H	**17209**	B71LNA 3C20/100H	**17230**	B71LNA 3D20/100H	**17251**
		25	B71LNA 3B25/100H	**17210**	B71LNA 3C25/100H	**17231**	B71LNA 3D25/100H	**17252**
		32	B71LNA 3B32/100H	**17211**	B71LNA 3C32/100H	**17232**	B71LNA 3D32/100H	**17253**
		40	B71LNA 3B40/100H	**17212**	B71LNA 3C40/100H	**17233**	B71LNA 3D40/100H	**17254**
	300	6	B71LNA 3B06/300H	**17269**	B71LNA 3C06/300H	**17290**	B71LNA 3D06/300H	**17311**
		10	B71LNA 3B10/300H	**17270**	B71LNA 3C10/300H	**17291**	B71LNA 3D10/300H	**17312**
		16	B71LNA 3B16/300H	**17271**	B71LNA 3C16/300H	**17292**	B71LNA 3D16/300H	**17313**
		20	B71LNA 3B20/300H	**17272**	B71LNA 3C20/300H	**17293**	B71LNA 3D20/300H	**17314**
		25	B71LNA 3B25/300H	**17273**	B71LNA 3C25/300H	**17294**	B71LNA 3D25/300H	**17315**
		32	B71LNA 3B32/300H	**17274**	B71LNA 3C32/300H	**17295**	B71LNA 3D32/300H	**17316**
		40	B71LNA 3B40/300H	**17275**	B71LNA 3C40/300H	**17296**	B71LNA 3D40/300H	**17317**
4	30	6	B71LNA 4B06/030H	**17150**	B71LNA 4C06/030H	**17171**	B71LNA 4D06/030H	**17192**
		10	B71LNA 4B10/030H	**17151**	B71LNA 4C10/030H	**17172**	B71LNA 4D10/030H	**17193**
		16	B71LNA 4B16/030H	**17152**	B71LNA 4C16/030H	**17173**	B71LNA 4D16/030H	**17194**
		20	B71LNA 4B20/030H	**17153**	B71LNA 4C20/030H	**17174**	B71LNA 4D20/030H	**17195**
		25	B71LNA 4B25/030H	**17154**	B71LNA 4C25/030H	**17175**	B71LNA 4D25/030H	**17196**
		32	B71LNA 4B32/030H	**17155**	B71LNA 4C32/030H	**17176**	B71LNA 4D32/030H	**17197**
		40	B71LNA 4B40/030H	**17156**	B71LNA 4C40/030H	**17177**	B71LNA 4D40/030H	**17198**
	100	6	B71LNA 4B06/100H	**17213**	B71LNA 4C06/100H	**17234**	B71LNA 4D06/100H	**17255**
		10	B71LNA 4B10/100H	**17214**	B71LNA 4C10/100H	**17235**	B71LNA 4D10/100H	**17256**
		16	B71LNA 4B16/100H	**17215**	B71LNA 4C16/100H	**17236**	B71LNA 4D16/100H	**17257**
		20	B71LNA 4B20/100H	**17216**	B71LNA 4C20/100H	**17237**	B71LNA 4D20/100H	**17258**
		25	B71LNA 4B25/100H	**17217**	B71LNA 4C25/100H	**17238**	B71LNA 4D25/100H	**17259**
		32	B71LNA 4B32/100H	**17218**	B71LNA 4C32/100H	**17239**	B71LNA 4D32/100H	**17260**
		40	B71LNA 4B40/100H	**17219**	B71LNA 4C40/100H	**17240**	B71LNA 4D40/100H	**17261**
	300	6	B71LNA 4B06/300H	**17276**	B71LNA 4C06/300H	**17297**	B71LNA 4D06/300H	**17318**
		10	B71LNA 4B10/300H	**17277**	B71LNA 4C10/300H	**17298**	B71LNA 4D10/300H	**17319**
		16	B71LNA 4B16/300H	**17278**	B71LNA 4C16/300H	**17299**	B71LNA 4D16/300H	**17320**
		20	B71LNA 4B20/300H	**17279**	B71LNA 4C20/300H	**17300**	B71LNA 4D20/300H	**17321**
		25	B71LNA 4B25/300H	**17280**	B71LNA 4C25/300H	**17301**	B71LNA 4D25/300H	**17322**
		32	B71LNA 4B32/300H	**17281**	B71LNA 4C32/300H	**173023**	B71LNA 4D32/300H	**17323**
		40	B71LNA 4B40/300H	**17282**	B71LNA 4C40/300H	**17303**	B71LNA 4D40/300H	**17324**

Tripping characteristic curves

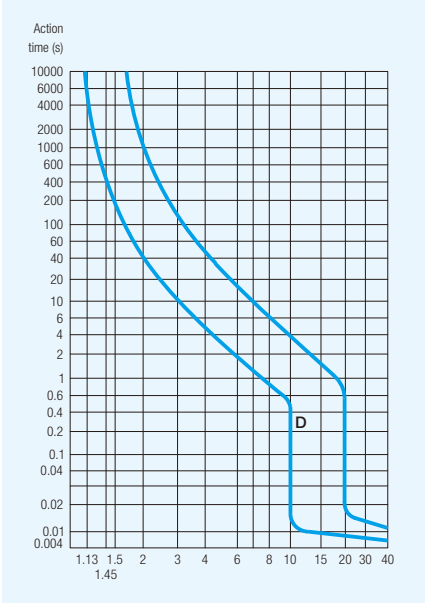
Characteristic B



Characteristic C

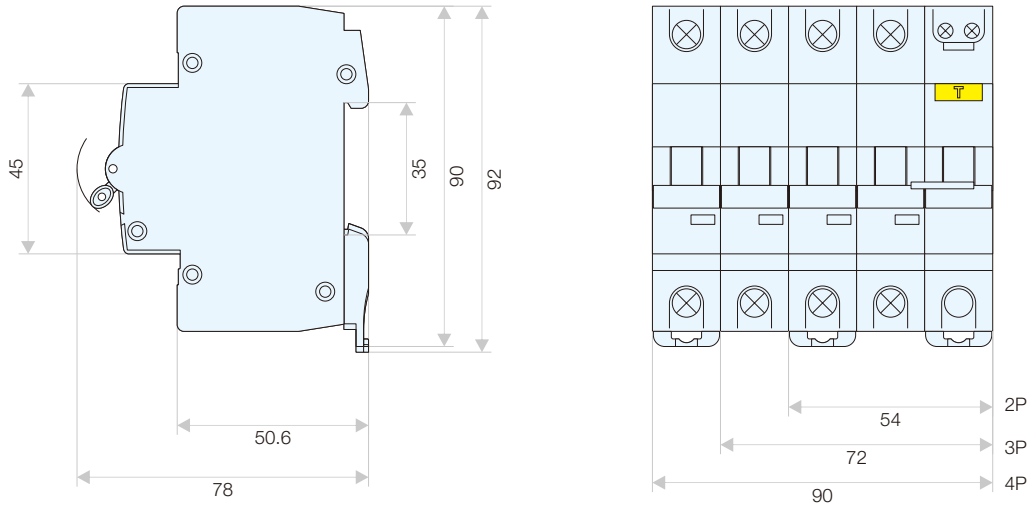


Characteristic D



Outline and installation dimensions

unit in mm



Residual Current Circuit Breakers with Overcurrent Protection
Series 3SB71L-50

Functions

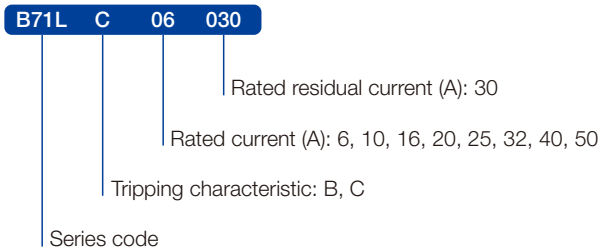
- Switching and isolation function.
- Protection against overload and short-circuit currents.
- protection against the effects of sinusoidal alternating earth fault currents
- protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults.
- Used in residential building and distribution boards.



Technical specifications

- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC
- Number of pole: 1+N (1 module)
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40, 50
- Rated voltage Ue (V AC): 230
- Rated insulation voltage Ui (V AC): 500
- Rated frequency Fn (Hz): 50/60
- Rated residual currents IΔn (mA): 30
- Rated breaking capacity acc. to IEC 61009-1 ultimate Icn (kA): 10
- Rated breaking capacity acc. to IEC 60947-2 ultimate Icu (kA): 10
- Rated residual breaking capacity IΔm (kA): 10
- Rated impulse withstand voltage (1.2/50) Uimp (kV): 4
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C
- Characteristic B (In): 3-5
- Characteristic C (In): 5-10
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-35
- Finely stranded with end sleeve (mm^2): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000

Instruction of type code



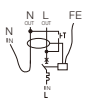
Features

- The combination of an RCCB and a miniature circuit breaker in a compact design.
- The MCB part protects lines against overload and short circuits and is available in characteristics B and C.
- Electronic Type, voltage dependent
- The handle provides a clear indication of the contact position.
- The earth reference cable ensures protection against earth leakage in case of loss of supply neutral.

Selection and ordering data

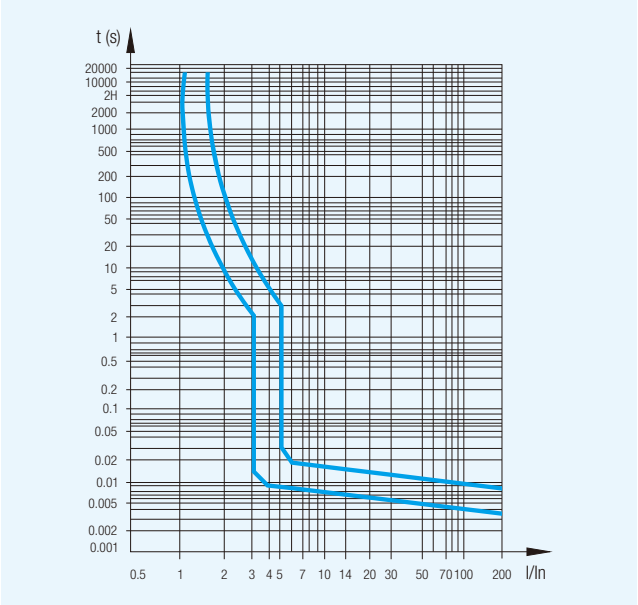
Type AC

	Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Characteristic B		Characteristic C	
				Type code	Order code	Type code	Order code
	1P+N	30	6	B71L B06/030	**23589**	B71L C06/030	**23597**
			10	B71L B10/030	**23590**	B71L C10/030	**23598**
			16	B71L B16/030	**23591**	B71L C16/030	**23599**
			20	B71L B20/030	**23592**	B71L C20/030	**23600**
			25	B71L B25/030	**23593**	B71L C25/030	**23601**
			32	B71L B32/030	**23594**	B71L C32/030	**23602**
			40	B71L B40/030	**23595**	B71L C40/030	**23603**
			50	B71L B50/030	**23596**	B71L C50/030	**23604**

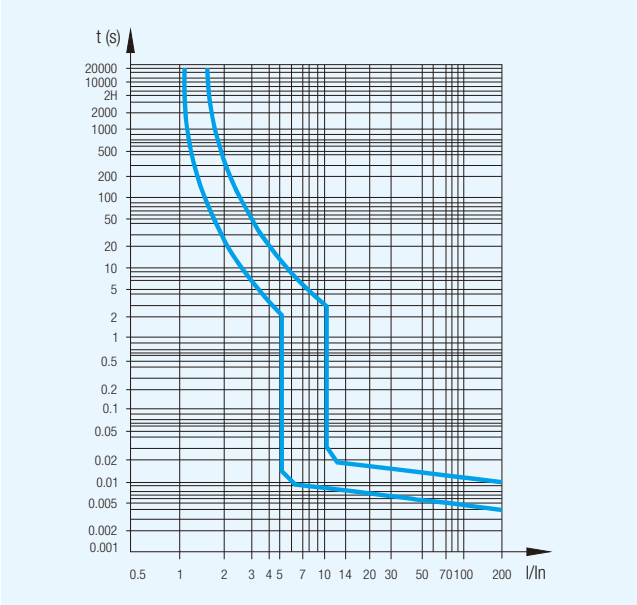


Tripping characteristic curves

Characteristic B

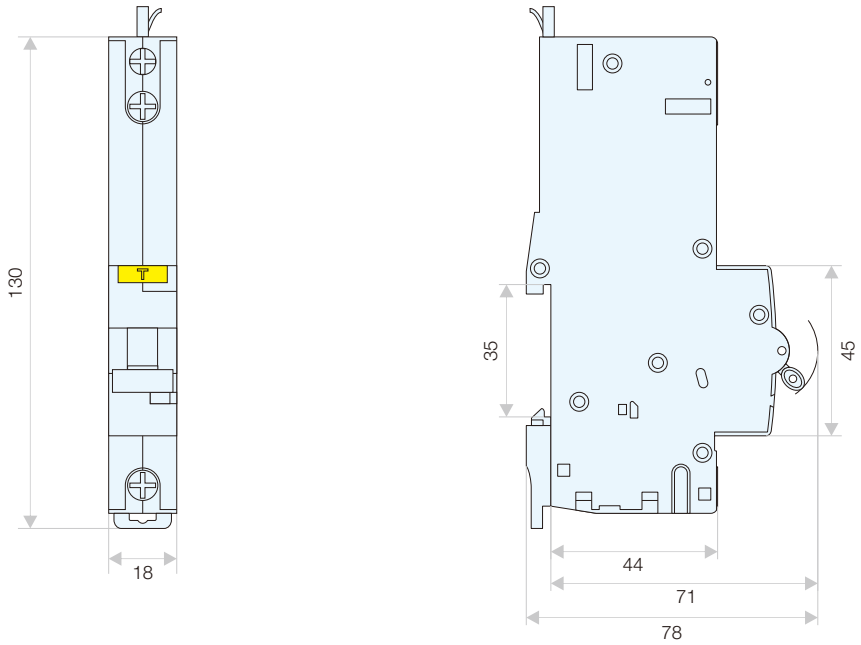


Characteristic C



Outline and installation dimensions

unit in mm



RCD Blocks
Series 3SB71LB

Functions

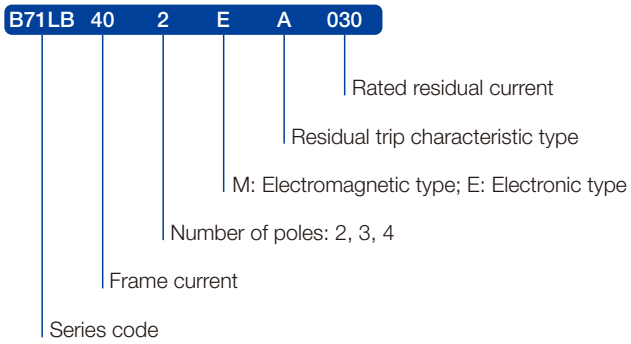
- Assembly on side with MCBs
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts

Technical specifications

- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of poles: 2, 3, 4
- Rated current In (A): 40, 63
- Rated voltage Ue (V AC): 230/400
- Rated insulation voltage Ui (V AC): 500
- Rated frequency Fn (Hz): 50/60
- Rated residual currents IΔn (mA): 30, 100, 300
- Rated breaking capacity (Icn) : Icn of the associated MCB
- Rated residual breaking capacity Im: Icn of the associated MCB
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-35
- Finely stranded with end sleeve (mm^2): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000



Instruction of type code



Features

- Electronic Type, voltage dependent and Electromagnetic type, voltage independent.
- Assembly on side with MCBs 3SB71 series.

Selection and ordering data

Electronic Type

	Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Type A Type code	Type A Order code
	2	30	40	B71LB40 2EA030	**19538**
		100	40	B71LB40 2EA100	**19539**
		300	40	B71LB40 2EA300	**19540**
		30	63	B71LB63 2EA030	**19541**
		100	63	B71LB63 2EA100	**19542**
		300	63	B71LB63 2EA300	**19543**
	3	30	40	B71LB40 3EA030	**19544**
		100	40	B71LB40 3EA100	**19545**
		300	40	B71LB40 3EA300	**19546**
		30	63	B71LB63 3EA030	**19547**
		100	63	B71LB63 3EA100	**19548**
		300	63	B71LB63 3EA300	**19549**
	4	30	40	B71LB40 4EA030	**19550**
		100	40	B71LB40 4EA100	**19551**
		300	40	B71LB40 4EA300	**19552**
		30	63	B71LB63 4EA030	**19553**
		100	63	B71LB63 4EA100	**19554**
		300	63	B71LB63 4EA300	**19555**

Electromagnetic type

	Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	Type AC Type code	Type AC Order code	Type A Type code	Type A Order code
	2	30	40	B71LB40 2MC030	**19502**	B71LB40 2MA030	**19508**
		100	40	B71LB40 2MC100	**19503**	B71LB40 2MA100	**19509**
		300	40	B71LB40 2MC300	**19504**	B71LB40 2MA300	**19510**
		30	63	B71LB63 2MC030	**19505**	B71LB63 2MA030	**19511**
		100	63	B71LB63 2MC100	**19506**	B71LB63 2MA100	**19512**
		300	63	B71LB63 2MC300	**19507**	B71LB63 2MA300	**19513**
	3	30	40	B71LB40 3MC030	**19514**	B71LB40 3MA030	**19520**
		100	40	B71LB40 3MC100	**19515**	B71LB40 3MA100	**19521**
		300	40	B71LB40 3MC300	**19516**	B71LB40 3MA300	**19522**
		30	63	B71LB63 3MC030	**19517**	B71LB63 3MA030	**19523**
		100	63	B71LB63 3MC100	**19518**	B71LB63 3MA100	**19524**
		300	63	B71LB63 3MC300	**19519**	B71LB63 3MA300	**19525**
	4	30	40	B71LB40 4MC030	**19526**	B71LB40 4MA030	**19532**
		100	40	B71LB40 4MC100	**19527**	B71LB40 4MA100	**19533**
		300	40	B71LB40 4MC300	**19528**	B71LB40 4MA300	**19534**
		30	63	B71LB63 4MC030	**19529**	B71LB63 4MA030	**19535**
		100	63	B71LB63 4MC100	**19530**	B71LB63 4MA100	**19536**
		300	63	B71LB63 4MC300	**19531**	B71LB63 4MA300	**19537**

RCD Blocks
Series 3SB71LB

Types

Both RCCBs and RCBOs are further divided into types depending on the operating function:

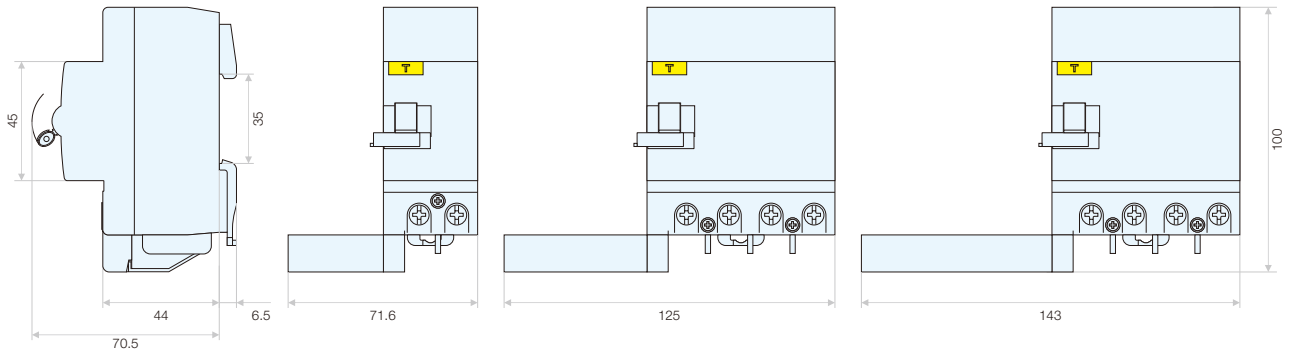
- Type AC ⏦: For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A ⏦: For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula IΔn < 50/R, to provide protection against indirect contacts.

Outline and installation dimensions

unit in mm



3SB71DD

Descriptions

- Remote control with manual buttons
- Matched with 3SB71 series MCB and 3SL71 series RCCB
- Operate the handle to switch on and off by bidirectional controllable permanent magnet synchronous motor
- Widely used in the advanced residential building, communication field and the industrial automation, as well as the smart power grid.



Technical specifications

- Standard: IEC 60947-2
- Match
- Miniature circuit breaker 3SB71 (1P, 2P, 3P, 4P);
- Residual current operation circuit breaker 3SL71 (1P+N, 3P+N)
- Rated insulation voltage (Ui): AC 500 V
- Rated voltage (Un): AC 230 V
- Operational voltage: 0.85~1.1 Un
- Rated frequency: 50 Hz
- Power consumption: 20 VA (operating)
- Electrical life: 4000 times
- Time to switch on or off: < 1 s
- Mounting class: II
- Degree of protection: IP20
- Installation: DIN-rail of 35 mm
- Connecting wire: 0.5~2.5 mm^2 Cord

Selection and ordering data



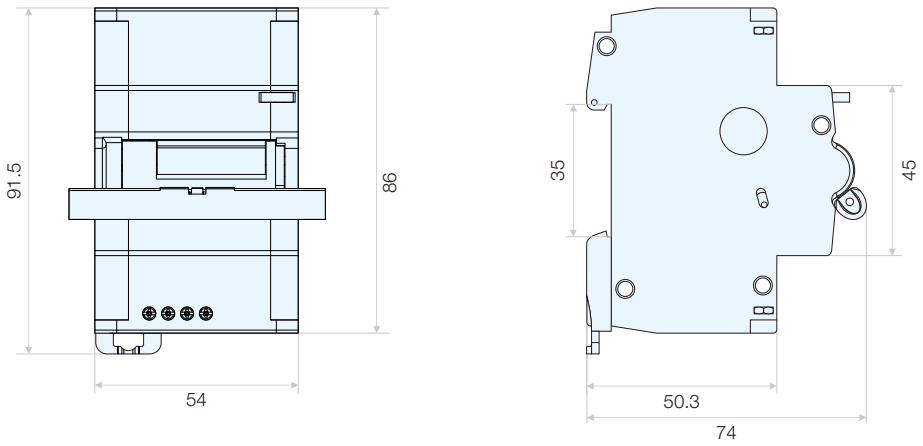
Voltage (V)	Type code	Order code
AC 230	B71 DD	**31423**

Working conditions

- Pollution degree: II
- Ambient temperature: -5 ºC ~ +40 ºC, and the average of 24 hours should be under +35 ºC
- Altitude (Meters): Max 2000
- Atmospheric conditions: The relative humidity of the air is 50% when +40 ºC, and the relative humidity can be higher at lower temperatures.

Outline and installation dimensions

unit in mm



Additional Components for Series 3SB71
3SB71C, 3SB71J, 3SB71CC/CJ, 3SB71Q, 3SB71F

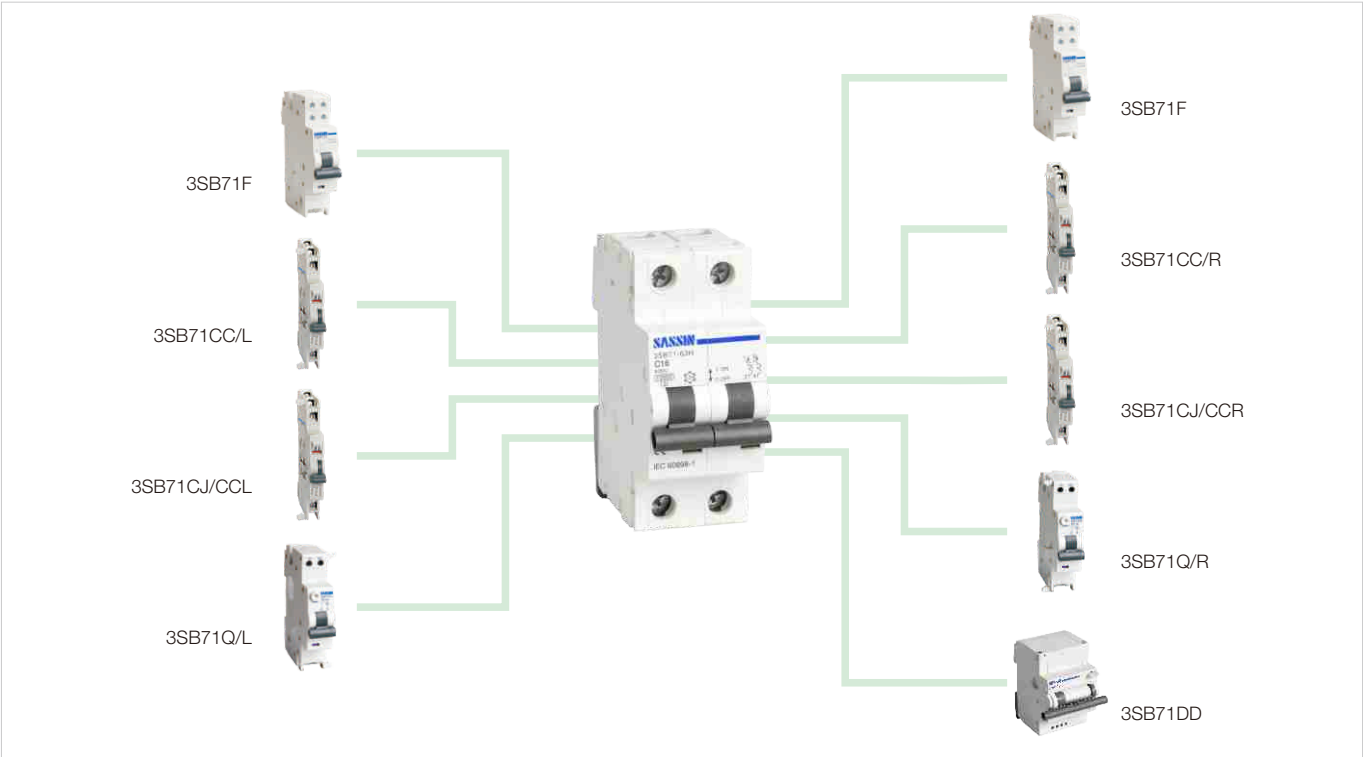
Functions

- 3SB71C Auxiliary contact: indication of the position of MCB and RCD
- 3SB71J Auxiliary alarm: signaling of status making or breaking of MCB and RCD through Alarm
- 3SB71CC/CJ Auxiliary contact & alarm: combination of auxilary contact and alarm
- 3SB71Q Under voltage release: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value)
- 3SB71F Shunt release: remote opening of the device when a voltage is applied
- Suitable for MCB Series: 3SB71-63, 3SB71-125, 3SB71Z, RCBO Series: 3SL71N-40, 3SB71LN

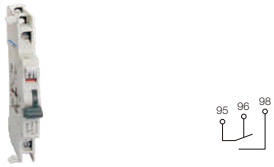


Technical specifications

- Standard: IEC 60947-2
- Rated insulation voltage (V AC): 500
- Rated frequency (Hz): 50/60
- Utilization category: AC14
- Mechanical life (times): 4,000
- Conductor cross-sections
- Solid and stranded (mm^2): 2.5
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Terminal tightening torque (N·m): 0.5
- Diselectr ic Strength: 2,000
- Wire square: 2.5



Selection and ordering data

	Rated current (A)	Rated voltage (V)	Installation side	Type code	Order code	Packing Unit pc
3SB71CC Auxiliary contact						
	5	AC 230	R	B71CR	**20271**	12
	5	AC 230	L	B71CL	**20272**	12
3SB71J Auxiliary alarm contact						
	5	AC 230	R	B71JR	**20273**	12
	5	AC 230	L	B71JL	**20274**	12
3SB71CJ/CC Auxiliary contact & Auxiliary alarm contact						
	5	AC 230	R	B71CJR	**10467**	12
	5	AC 230	L	B71CJL	**10466**	12
3SB71Q Under voltage release						
	5	12 V	R	B71QR12	**16078**	12
	5	24 V	R	B71QR24	**16079**	12
	5	48 V	R	B71QR48	**16080**	12
	5	127 V	R	B71QRD127	**16081**	12
	5	230 V AC	R	B71QRA230	**16084**	12
	5	12 V	L	B71QL12	**16085**	12
	5	24 V	L	B71QL24	**16086**	12
	5	48 V	L	B71QL48	**16087**	12
	5	127 V	L	B71QLD127	**16088**	12
	5	230 V AC	L	B71QLA230	**16091**	12
3SB71F Shunt release						
	5	AC 24-60 DC 16-48	R	B71FR2	**17726**	12
	5	AC 110-415 DC 110-125	R	B71FR1	**20275**	12
	5	AC 24-60 DC 16-48	L	B71FL2	**26330**	12
	5	AC 110-415 DC 110-125	L	B71FL1	**26329**	12

Padlock for MCBs and switches

Prevents unauthorised or dangerous operation of the operating lever. An adaptor makes it possible to block the operating lever when switched ON or OFF. The key lock should be provided by user.

	Application	Type code	Order code
	3SB71 series MCBs, 3SL71 series RCCBs, 3SL71N-40 series RCBOs, 3SB71LN-40 series RCBOs, 3SB72LE-25 series RCBOs, 3SB71LB series RCD blocks, 3SB71G series switch disconnectors	PL3	**32961**

Surface Protective Devices
Series 3SU71

1

Functions

- Types 2 surge arresters
- Handling energy from distant/ indirect lightning strikes or from switching operations
- Feature lower protection level (Up)
- Recommended at the incoming of installation for locations with no exposure to direct lightning impulses



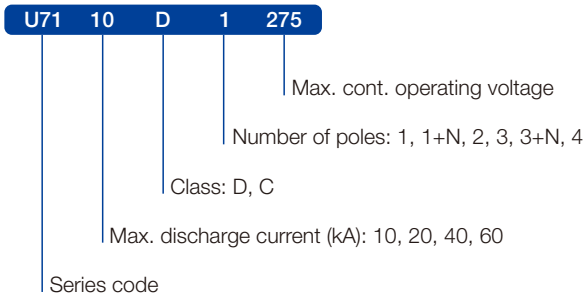
Technical specifications

- Standard: IEC 61643-1
- Type / test class: 2 / II
- Number of poles: 1P, 1P+N, 2P, 3P, 3P+N, 4P
- Type of current: AC
- Frequency (Hz): 50/60
- Rated voltage Un (V): 230/400
- Max. Cont. operating voltage U (V): 140, 275, 320, 385, 420
- Max. discharge current Imax (8/20) per pole (kA): 10, 20, 40, 60
- Norminal discharge current In (8/20) per pole (kA): 5, 10, 15, 20
- Voltage protection level Up (kV): 1.0, 1.2, 1.2, 1.5
- Tov (Temporary overvoltage) withstand UT (5 s.) (V): 440
- Continuous operating current Ic (mA): < 1
- Degree of protection: IP20, with connected conductors
- Pluggable cartridge: Yes
- State indicator: Yes
- Integrated auxiliary contact: Yes
- Conductor cross-sections
- Solid and stranded (mm^2): 2-35
- Finely stranded with end sleeve (mm^2): 2-25
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Connection Capacity (mm^2): 1-25

Technical specification of the integrated remote signal contact

- Contact complement: 1 NO +1 NC
- Min. load: 24 V DC - 10 mA
- Max. load: 240 V AC - 1 A

Instruction of type code



Selection and ordering data

	Test classification	Max. Cont. operating voltage Uc (V)	Remote signal contact	Number of poles	Max. discharge current Imax (8/20) per pole (kA)	Nominal discharge current In (8/20) per pole (kA)	Type code	Order code
	T2	140	with	1P	10	5	U71C T210 1/140	**34823**
				2P	10	5	U71C T210 2/140	**34828**
				3P	10	5	U71C T210 3/140	**34833**
				4P	10	5	U71C T210 4/140	**34838**
				1P+N	10	5	U71C T210 1N/140	**38093**
				3P+N	10	5	U71C T210 3N/140	**38098**
		275	with	1P	10	5	U71C T210 1/275	**34824**
					20	10	U71C T220 1/275	**34843**
					40	20	U71C T240 1/275	**34859**
					60	30	U71C T260 1/275	**34875**
				1P+N	10	5	U71C T210 1N/275	**38094**
					20	10	U71C T220 1N/275	**38103**
					40	20	U71C T240 1N/275	**38111**
					60	30	U71C T260 1N/275	**38119**
				2P	10	5	U71C T210 2/275	**34829**
					20	10	U71C T220 2/275	**34847**
					40	20	U71C T240 2/275	**34863**
					60	30	U71C T260 2/275	**34879**
				3P	10	5	U71C T210 3/275	**34834**
					20	10	U71C T220 3/275	**34851**
					40	20	U71C T240 3/275	**34867**
					60	30	U71C T260 3/275	**34883**
				3P+N	10	5	U71C T210 3N/275	**38099**
					20	10	U71C T220 3N/275	**38107**
					40	20	U71C T240 3N/275	**38115**
					60	30	U71C T260 3N/275	**38123**
				4P	10	5	U71C T210 4/275	**34839**
					20	10	U71C T220 4/275	**34855**
					40	20	U71C T240 4/275	**34871**
					60	30	U71C T260 4/275	**34887**
		320	with	1P	10	5	U71C T210 1/320	**34825**
					20	10	U71C T220 1/320	**34844**
					40	20	U71C T240 1/320	**34860**
					60	30	U71C T260 1/320	**34876**
				1P+N	10	5	U71C T210 1N/320	**38095**
					20	10	U71C T220 1N/320	**38104**
					40	20	U71C T240 1N/320	**38112**
					60	30	U71C T260 1N/320	**38120**
				2P	10	5	U71C T210 2/320	**34830**
					20	10	U71C T220 2/320	**34848**
					40	20	U71C T240 2/320	**34864**
					60	30	U71C T260 2/320	**34880**
				3P	10	5	U71C T210 3/320	**34835**
					20	10	U71C T220 3/320	**34852**
					40	20	U71C T240 3/320	**34868**
					60	30	U71C T260 3/320	**34884**
				3P+N	10	5	U71C T210 3N/320	**38100**
					20	10	U71C T220 3N/320	**38108**
					40	20	U71C T240 3N/320	**38116**
					60	30	U71C T260 3N/320	**38124**
				4P	10	5	U71C T210 4/320	**34840**
					20	10	U71C T220 4/320	**34856**
					40	20	U71C T240 4/320	**34872**
					60	30	U71C T260 4/320	**34888**

1

Selection and ordering data

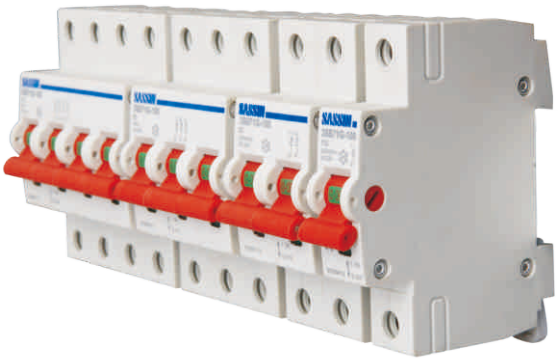
	Test classification	Max. Cont. operating voltage Uc (V)	Remote signal contact	Number of poles	Max. discharge current Imax (8/20) per pole (kA)	Nominal discharge current In (8/20) per pole (kA)	Type code	Order code
	T2	385	with	1P	10	5	U71C T210 1/385	**34826**
					20	10	U71C T220 1/385	**34845**
					40	20	U71C T240 1/385	**34861**
					60	30	U71C T260 1/385	**34877**
				1P+N	10	5	U71C T210 1N/385	**38096**
					20	10	U71C T220 1N/385	**38105**
					40	20	U71C T240 1N/385	**38113**
					60	30	U71C T260 1N/385	**38121**
				2P	10	5	U71C T210 2/385	**34831**
					20	10	U71C T220 2/385	**34849**
					40	20	U71C T240 2/385	**34865**
					60	30	U71C T260 2/385	**34881**
				3P	10	5	U71C T210 3/385	**34836**
					20	10	U71C T220 3/385	**34853**
					40	20	U71C T240 3/385	**34869**
					60	30	U71C T260 3/385	**34885**
				3P+N	10	5	U71C T210 3N/385	**38101**
					20	10	U71C T220 3N/385	**38109**
					40	20	U71C T240 3N/385	**38117**
					60	30	U71C T260 3N/385	**38125**
				4P	10	5	U71C T210 4/385	**34841**
					20	10	U71C T220 4/385	**34857**
					40	20	U71C T240 4/385	**34873**
					60	30	U71C T260 4/385	**34889**
		420	with	1P	10	5	U71C T210 1/420	**34827**
					20	10	U71C T220 1/420	**34846**
					40	20	U71C T240 1/420	**34862**
					60	30	U71C T260 1/420	**34878**
				1P+N	10	5	U71C T210 1N/420	**38097**
					20	10	U71C T220 1N/420	**38106**
					40	20	U71C T240 1N/420	**38114**
					60	30	U71C T260 1N/420	**38122**
				2P	10	5	U71C T210 2/420	**34832**
					20	10	U71C T220 2/420	**34850**
					40	20	U71C T240 2/420	**34866**
					60	30	U71C T260 2/420	**34882**
				3P	10	5	U71C T210 3/420	**34837**
					20	10	U71C T220 3/420	**34854**
					40	20	U71C T240 3/420	**34870**
					60	30	U71C T260 3/420	**34886**
				3P+N	10	5	U71C T210 3N/420	**38102**
					20	10	U71C T220 3N/420	**38110**
					40	20	U71C T240 3N/420	**38118**
					60	30	U71C T260 3N/420	**38126**
				4P	10	5	U71C T210 4/420	**34842**
					20	10	U71C T220 4/420	**34858**
					40	20	U71C T240 4/420	**34874**
					60	30	U71C T260 4/420	**34890**

Functions

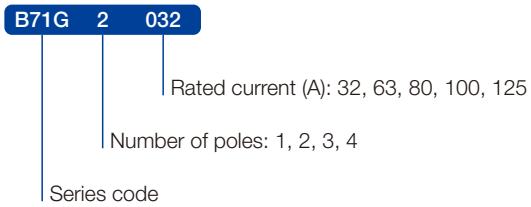
- Making and breaking under load condition
- Providing safety isolation for terminal distribution system
- Used in residential building, non-residential building

Features

- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides longterm identification
- Based on the technology of MCB series 3SB71, similar design to series 3SB71
- Matched with series 3SB71



Instruction of type code



Technical specifications

Type		3SB71G-125	3SB71G-125 DC			
Standard		IEC 60947-3	IEC 60947-3			
Rated current In	(A)	32, 63, 100, 125	63, 80, 100, 125			
Number of poles		1P, 2P, 3P, 4P	1P	2P	3P	4P
Rated voltage Un		230/400 V AC	230 V DC	400 V DC	750 V DC	1000 V DC
Rated insulation voltage Ui	(V)	500	1000			
Rated short-time withstand current Icw	(A)	20 In	12 In			
Degree of protection		IP20, with connected conductors	IP20, with connected conductors			
Electrical life	(times)	10,000	1500			
Mechanical life	(times)	20,00	8500			
Mounting position		Any	Any			
Conductor cross-sections						
Solid and stranded	(mm^2)	0.75-35	0.75-35			
Finely stranded with end sleeve	(mm^2)	0.75-25	0.75-25			
Terminal tightening torque	(N·m)	2-2.5	2-2.5			
Ambient temperature	(°C)	-25 ~ +45, max. 95% humidity	-25 ~ +45, max. 95% humidity			
Storage temperature	(°C)	-40 ~ +75	-40 ~ +70			
Altitude	(meter)	Max. 2000	Max. 2000			

Selection and ordering data

3SB71G-125

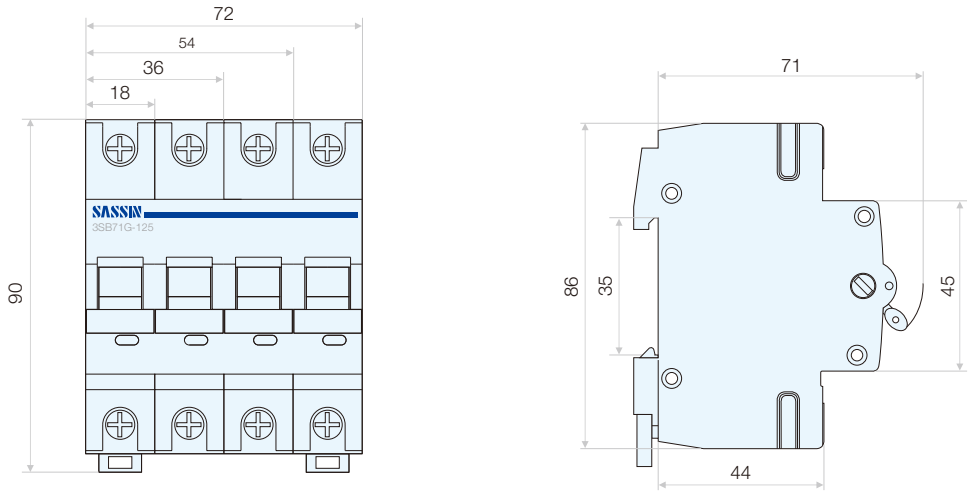
	Number of poles (P)	Rated current In (A)	Type code	Order code	Pack.
	1	32	B71G 1032	**22899**	12
		63	B71G 1063	**22900**	12
		100	B71G 1100	**22901**	12
		125	B71G 1125	**38876**	12
	2	32	B71G 2032	**22902**	6
		63	B71G 2063	**22903**	6
		100	B71G 2100	**22904**	6
		125	B71G 2125	**38877**	6
	3	32	B71G 3032	**22905**	4
		63	B71G 3063	**22906**	4
		100	B71G 3100	**22907**	4
		125	B71G 3125	**38878**	4
	4	32	B71G 4032	**22908**	3
		63	B71G 4063	**22909**	3
		100	B71G 4100	**22910**	3
		125	B71G 4125	**38879**	3

3SB71G-125 DC

	Number of poles (P)	Rated voltage Un (V)	Rated current In (A)	Type code	Order code	Pack.
	1	230	63	B71G 163D	**39195**	12
			80	B71G 180D	**24361**	12
			100	B71G 1100D	**24365**	12
			125	B71G 1125D	**24383**	12
	2	400 ⎓	63	B71G 263D	**39196**	6
			80	B71G 280D	**24362**	6
			100	B71G 2100D	**24366**	6
			125	B71G 2125D	**24384**	6
	3	750 ⎓	63	B71G 363D	**39197**	4
			80	B71G 380D	**24363**	4
			100	B71G 3100D	**24367**	4
			125	B71G 3125D	**24385**	4
	4	1000 ⎓	63	B71G 463D	**39198**	3
			80	B71G 480D	**24364**	3
			100	B71G 4100D	**24382**	3
			125	B71G 4125D	**24386**	3

Outline and installation dimensions

unit in mm



Modular Contactors
Series 3SCH8

1

Functions

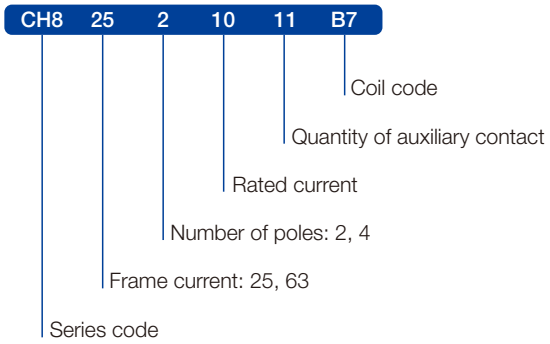
- Remote switching and controlling of power circuits
- Used in building automation, controlling of small pumps, ventilations, heating systems, lighting systems, and so on



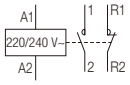
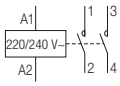
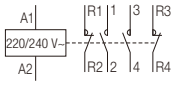
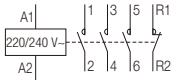
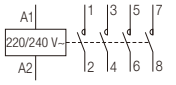
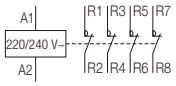
Technical specifications

Type	3SCH8-25	3SCH8-63
Standards	IEC 61095	IEC 60947-4-1
Number of poles	2, 4	
Type of current	AC	
Frequency (Hz)	50/60	
Rated voltage Un (V)	230/400	
Rated current In in AC-7a / AC1 (A)	10, 16, 20, 25	25, 32, 40, 63
Rated current In in AC-7b / AC1 (A)	4, 5.5, 7, 8.5	8.5, 12, 15, 25
Rated power in AC3 (Kw)		
230 V	2-5	5-13
400 V	6-13	15-40
Control circuit voltage (V)	24, 230	
Mechanical life (times)	300,000	
Electrical life (times)		
AC-7a / AC1	10,000	80,000
AC-7b / AC1	50,000	40,000
Degree of protection	IP20, with connected conductors	
Conductor cross-sections		
Solid and stranded (mm^2)	2-25	
Finely stranded with end sleeve (mm^2)	2-25	
Terminals		
Terminal tightening torque (N·m)	0.8-2.4	
Ambient temperature (°C)	-5 ~ +40, max. 95 % humidity	
Storage temperature (°C)	-40 ~ +75	
Connection capacity (mm^2)	1-25	

Instruction of type code



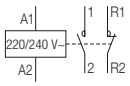
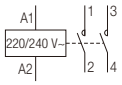
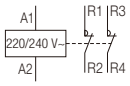
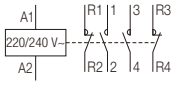
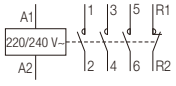
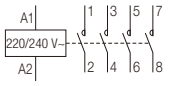
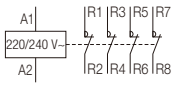
Selection and ordering data

	Number of poles	Width 18 mm mods	Rated current In AC-7a AC (A)	Rated current In AC-7b AC	Contact position	Control voltage (V AC)	Rated control Power in AC-7a /230 V (kW)	Rated control Power in AC-7b /230 V	Type code	Order code
	2	1	10	4	1NO+1NC	24	2	0.75	CH825 210 11B7	**25896**
		1	10	4	2NO	24	2	0.75	CH825 210 20B7	**25897**
		1	16	5.5	1NO+1NC	24	3.2	1.0	CH825 216 11B7	**25898**
		1	16	5.5	2NO	24	3.2	1.0	CH825 216 20B7	**25899**
		1	20	7	1NO+1NC	24	4	1.2	CH825 220 11B7	**25900**
		1	20	7	2NO	24	4	1.2	CH825 220 20B7	**25901**
		1	25	8.5	1NO+1NC	24	5	1.4	CH825 225 11B7	**25902**
		1	25	8.5	2NO	24	5	1.4	CH825 225 20B7	**25903**
		1	10	4	1NO+1NC	230	2	0.75	CH825 210 11P7	**26156**
		1	10	4	2NO	230	2	0.75	CH825 210 20P7	**26157**
		1	16	5.5	1NO+1NC	230	3.2	1.0	CH825 216 11P7	**26158**
		1	16	5.5	2NO	230	3.2	1.0	CH825 216 20P7	**26159**
		1	20	7	1NO+1NC	230	4	1.2	CH825 220 11P7	**26160**
		1	20	7	2NO	230	4	1.2	CH825 220 20P7	**26161**
		1	25	8.5	1NO+1NC	230	5	1.4	CH825 225 11P7	**26162**
		1	25	8.5	2NO	230	5	1.4	CH825 225 20P7	**26163**
	4	2	10	4	2NO+2NC	24	6.2	2.2	CH825 410 22B7	**25904**
		2	10	4	3NO+1NC	24	6.2	2.2	CH825 410 31B7	**25905**
		2	10	4	4NO	24	6.2	2.2	CH825 410 40B7	**25906**
		2	10	4	4NC	24	6.2	2.2	CH825 410 04B7	**25907**
		2	16	5.5	2NO+2NC	24	10	3	CH825 416 22B7	**25908**
		2	16	5.5	3NO+1NC	24	10	3	CH825 416 31B7	**25909**
		2	16	5.5	4NO	24	10	3	CH825 416 40B7	**25910**
		2	16	5.5	4NC	24	10	3	CH825 416 04B7	**25911**
		2	20	7	2NO+2NC	24	13	3.5	CH825 420 22B7	**25912**
		2	20	7	3NO+1NC	24	13	3.5	CH825 420 31B7	**25913**
		2	20	7	4NO	24	13	3.5	CH825 420 40B7	**25914**
		2	20	7	4NC	24	13	3.5	CH825 420 04B7	**25915**
		2	25	8.5	2NO+2NC	24	15	4	CH825 425 22B7	**25916**
		2	25	8.5	3NO+1NC	24	15	4	CH825 425 31B7	**25917**
		2	25	8.5	4NO	24	15	4	CH825 425 40B7	**25918**
		2	25	8.5	4NC	24	15	4	CH825 425 04B7	**25919**
		2	10	4	2NO+2NC	230	6.2	2.2	CH825 410 22P7	**26164**
		2	10	4	3NO+1NC	230	6.2	2.2	Ch825 410 31P7	**26165**
		2	10	4	4NO	230	6.2	2.2	CH825 410 40P7	**26166**
		2	10	4	4NC	230	6.2	2.2	CH825 410 04P7	**26167**
		2	16	5.5	2NO+2NC	230	10	3	CH825 416 22P7	**26168**
		2	16	5.5	3NO+1NC	230	10	3	CH825 416 31P7	**26169**
		2	16	5.5	4NO	230	10	3	CH825 416 40P7	**26170**
		2	16	5.5	4NC	230	10	3	CH825 416 04P7	**26171**
		2	20	7	2NO+2NC	230	13	3.5	CH825 420 22P7	**26172**
		2	20	7	3NO+1NC	230	13	3.5	CH825 420 31P7	**26173**
		2	20	7	4NO	230	13	3.5	CH825 420 40P7	**26174**
		2	20	7	4NC	230	13	3.5	CH825 420 04P7	**26175**
		2	25	8.5	2NO+2NC	230	15	4	CH825 425 22P7	**26176**
		2	25	8.5	3NO+1NC	230	15	4	CH825 425 31P7	**26177**
		2	25	8.5	4NO	230	15	4	CH825 425 40P7	**26178**
		2	25	8.5	4NC	230	15	4	CH825 425 04P7	**26179**

(1) Please contact us if any other coil voltage required

1

Selection and ordering data

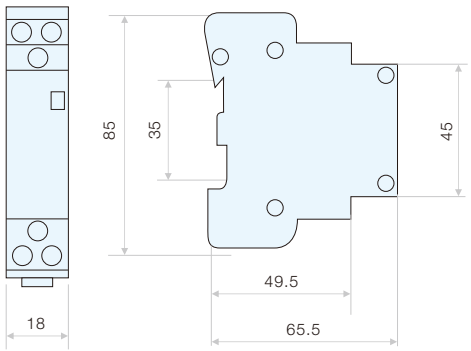
Number of poles	Width 18 mm mods	Rated current In AC-7a AC (A)	Rated current In AC-7b AC	Contact position	Control voltage (V AC)	Rated control Power in AC-7a /230 V (kW)	Rated control Power in AC-7b /230 V	Type code	Order code
2	2	25	8.5	1NO+1NC	24	5	1.4	CH863 225 11B7	**25920**
	2	25	8.5	2NO	24	5	1.4	CH863 225 20B7	**25921**
	2	25	8.5	2NC	24	5	1.4	CH863 225 02B7	**25922**
	2	32	12	1NO+1NC	24	6.5	2	CH863 232 11B7	**25923**
	2	32	12	2NO	24	6.5	2	CH863 232 20B7	**25924**
	2	32	12	2NC	24	6.5	2	CH863 232 02B7	**25925**
 	2	40	15	1NO+1NC	24	8.5	2.5	CH863 240 11B7	**25926**
	2	40	15	2NO	24	8.5	2.5	CH863 240 20B7	**25927**
	2	40	15	2NC	24	8.5	2.5	CH863 240 02B7	**25928**
	2	63	25	1NO+1NC	24	13	4	CH863 263 11B7	**25929**
	2	63	25	2NO	24	13	4	CH863 263 20B7	**25930**
	2	63	25	2NC	24	13	4	CH863 263 02B7	**25931**
	2	25	8.5	1NO+1NC	230	5	1.4	CH863 225 11P7	**26180**
	2	25	8.5	2NO	230	5	1.4	CH863 225 20P7	**26181**
	2	25	8.5	2NC	230	5	1.4	CH863 225 02P7	**26182**
	2	32	12	1NO+1NC	230	6.5	2	CH863 232 11P7	**26183**
	2	32	12	2NO	230	6.5	2	CH863 232 20P7	**26184**
	2	32	12	2NC	230	6.5	2	CH863 232 02P7	**26185**
	2	40	15	1NO+1NC	230	8.5	2.5	CH863 240 11P7	**26186**
	2	40	15	2NO	230	8.5	2.5	CH863 240 20P7	**26187**
	2	40	15	2NC	230	8.5	2.5	CH863 240 02P7	**26188**
	2	63	25	1NO+1NC	230	13	4	CH863 263 11P7	**26189**
	2	63	25	2NO	230	13	4	CH863 263 20P7	**26190**
	2	63	25	2NC	230	13	4	CH863 263 02P7	**26191**
4	3	25	8.5	2NO+2NC	24	15	4	CH863 425 22B7	**25932**
	3	25	8.5	3NO+1NC	24	15	4	CH863 425 31B7	**25933**
	3	25	8.5	4NO	24	15	4	CH863 425 40B7	**25934**
	3	25	8.5	4NC	24	15	4	CH863 425 04B7	**25935**
	3	32	12	2NO+2NC	24	21	6.5	CH863 432 22B7	**25936**
	3	32	12	3NO+1NC	24	21	6.5	CH863 432 31B7	**25937**
	3	32	12	4NO	24	21	6.5	CH863 432 40B7	**25938**
 	3	32	12	4NC	24	21	6.5	CH863 432 04B7	**25939**
	3	40	15	2NO+2NC	24	26	7.5	CH863 440 22B7	**25940**
	3	40	15	3NO+1NC	24	26	7.5	CH863 440 31B7	**25941**
	3	40	15	4NO	24	26	7.5	CH863 440 40B7	**25942**
	3	40	15	4NC	24	26	7.5	CH863 440 04B7	**25943**
	3	63	25	2NO+2NC	24	40	13	CH863 463 22B7	**25944**
	3	63	25	3NO+1NC	24	40	13	CH863 463 31B7	**25945**
	3	63	25	4NO	24	40	13	CH863 463 40B7	**25946**
	3	63	25	4NC	24	40	13	CH863 463 04B7	**25947**
	3	25	8.5	2NO+2NC	230	15	4	CH863 425 22P7	**26192**
	3	25	8.5	3NO+1NC	230	15	4	CH863 425 31P7	**26193**
	3	25	8.5	4NO	230	15	4	CH863 425 40P7	**26194**
	3	25	8.5	4NC	230	15	4	CH863 425 04P7	**26195**
	3	32	12	2NO+2NC	230	21	6.5	CH863 432 22P7	**26196**
	3	32	12	3NO+1NC	230	21	6.5	CH863 432 31P7	**26197**
	3	32	12	4NO	230	21	6.5	CH863 432 40P7	**26198**
	3	32	12	4NC	230	21	6.5	CH863 432 04P7	**26199**
	3	40	15	2NO+2NC	230	26	7.5	CH863 440 22P7	**26200**
	3	40	15	3NO+1NC	230	26	7.5	CH863 440 31P7	**26201**
	3	40	15	4NO	230	26	7.5	CH863 440 40P7	**26202**
	3	40	15	4NC	230	26	7.5	CH863 440 04P7	**26203**
	3	63	25	2NO+2NC	230	40	13	CH863 463 22P7	**26204**
	3	63	25	3NO+1NC	230	40	13	CH863 463 31P7	**26205**
	3	63	25	4NO	230	40	13	CH863 463 40P7	**26206**
	3	63	25	4NC	230	40	13	CH863 463 04P7	**26207**

(1) Please contact us if any other coil voltage required

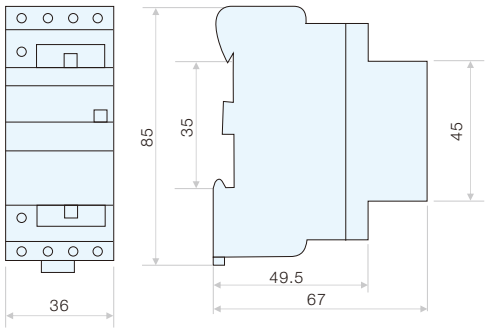
Outline and installation dimensions

unit in mm

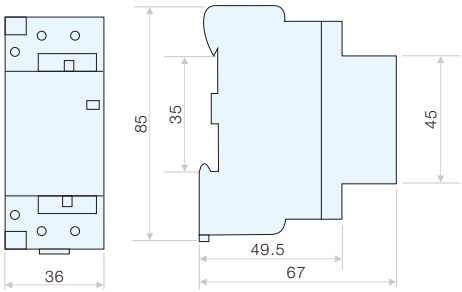
3SCH8-25 2P



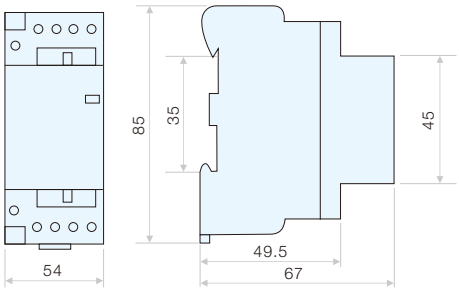
3SCH8-25 4P



3SCH8-63 2P



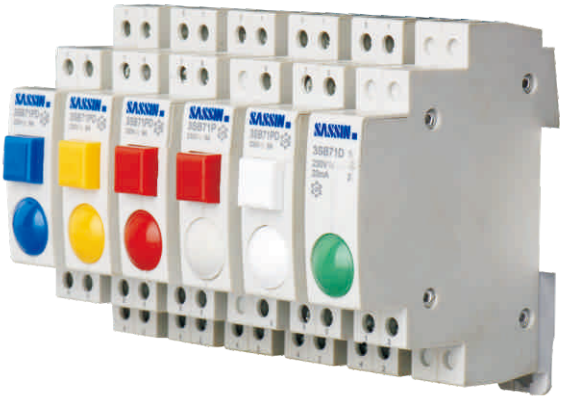
3SCH8-63 4P



Modular Pushbuttons and Indicators
Series 3SB71P / 3SB71D / 3SB71PD

Functions

- The pushbuttons are used for remote control in every kind of electric installation.
- The indicator lamps signal any event in every kind of electric installation.
- 3SB71P, 3SB71D, 3SB71PD may match with MCB series 3SB71-63

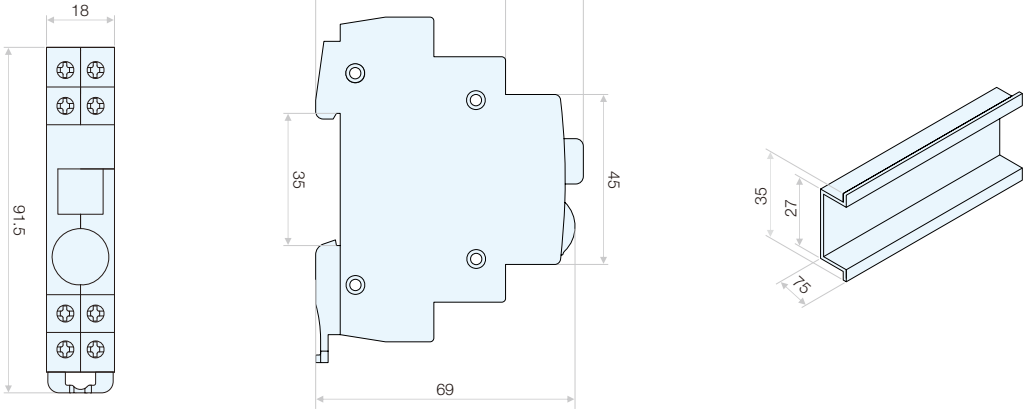


Technical specifications

- Standard: IEC 60947-5-1
- Rated voltage Ue (V): 230
- Rated current In (A): 6
- Conventional glowing current (A): 16
- Frequency (Hz): 50/60
- Modules (18mm): 1
- Utilization category: AC14, DC13
- Degree of protection: IP20, with connected conductors
- Conductor cross-sections
  - Solid and stranded (mm^2): 1-10
  - Finely stranded with end sleeve (mm^2): 1-4
- Terminal tightening torque (N·m): 0.5
- Ambient temperature (°C): -5 ~ +40, max. 95% humidity
- Storage temperature (°C): -40 ~ +75
- Connection capacity (mm^2): 1-16

Outline and installation dimensions

unit in mm



Selection and ordering data

3SB71P Pushbutton

Color Pushbutton		Indicator	Voltage AC/DC (V)	1 NO + 2 NC		2 NO + 1 NC		2 NO + 2 NC		3 NO	
				Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green		-	-	B71P G12	**16185**	B71P G21	**16186**	B71P G22	**16187**	B71P G30	**16188**
Red		-	-	B71P R12	**16189**	B71P R21	**16190**	B71P R22	**16191**	B71P R30	**16192**
Black		-	-	B71P H12	**16193**	B71P H21	**16194**	B71P H22	**16195**	B71P H30	**16196**
Yellow		-	-	B71P Y12	**16197**	B71P Y21	**16198**	B71P Y22	**16199**	B71P Y30	**16200**
Blue		-	-	B71P B12	**16201**	B71P B21	**16202**	B71P B22	**16203**	B71P B30	**16204**

3SB71PD Pushbutton + Indicator

Color Pushbutton		Indicator	Voltage AC/DC (V)	1 NO + 2 NC		2 NO + 1 NC		2 NO + 2 NC		3 NO	
				Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green			12	B71PD G12V12	**16205**	B71PD G21V12	**16206**	-	-	B71PD G30V12	**16207**
Red			12	B71PD R12V12	**16208**	B71PD R21V12	**16209**	-	-	B71PD R30V12	**16210**
White			12	B71PD W12V12	**16211**	B71PD W21V12	**16212**	-	-	B71PD W30V12	**16213**
Yellow			12	B71PD Y12V12	**16214**	B71PD Y21V12	**16215**	-	-	B71PD Y30V12	**16216**
Blue			12	B71PD B12V12	**16217**	B71PD B21V12	**16218**	-	-	B71PD B30V12	**16219**
Green			24	B71PD G12V24	**16220**	B71PD G21V24	**16221**	-	-	B71PD G30V24	**16222**
Red			24	B71PD R12V24	**16223**	B71PD R21V24	**16224**	-	-	B71PD R30V24	**16225**
White			24	B71PD W12V24	**16226**	B71PD W21V24	**16227**	-	-	B71PD W30V24	**16228**
Yellow			24	B71PD Y12V24	**16229**	B71PD Y21V24	**16230**	-	-	B71PD Y30V24	**16231**
Blue			24	B71PD B12V24	**16232**	B71PD B21V24	**16233**	-	-	B71PD B30V24	**16234**
Green			110	B71PD G12V110	**16235**	B71PD G21V110	**16236**	-	-	B71PD G30V110	**16237**
Red			110	B71PD R12V110	**16238**	B71PD R21V110	**16239**	-	-	B71PD R30V110	**16240**
White			110	B71PD W12V110	**16241**	B71PD W21V110	**16242**	-	-	B71PD W30V110	**16243**
Yellow			110	B71PD Y12V110	**16244**	B71PD Y21V110	**16245**			B71PD Y30V110	**16246**
Blue			110	B71PD B12V110	**16247**	B71PD B21V110	**16248**	-	-	B71PD B30V110	**16249**
Green			230	B71PD G12V230	**16250**	B71PD G21V230	**16251**	-	-	B71PD G30V230	**16252**
Red			230	B71PD R12V230	**16253**	B71PD R21V230	**16254**	-	-	B71PD R30V230	**16255**
White			230	B71PD W12V230	**16256**	B71PD W21V230	**16257**	-	-	B71PD W30V230	**16258**
Yellow			230	B71PD Y12V230	**16259**	B71PD Y21V230	**16260**	-	-	B71PD Y30V230	**16261**
Blue			230	B71PD B12V230	**16262**	B71PD B21V230	**16263**	-	-	B71PD B30V230	**16264**

3SB71D Indicator

Color Pushbutton		Indicator	12 V AC/DC		24 V AC/DC		110 V AC/DC		230 V AC/DC	
			Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green	-		B71D G12	**16265**	B71D G24	**16266**	B71D G110	**16267**	B71D G230	**16268**
Red	-		B71D R12	**16269**	B71D R24	**16270**	B71D R110	**16271**	B71D R230	**16272**
White	-		B71D W12	**16273**	B71D W24	**16274**	B71D W110	**16275**	B71D W230	**16276**
Yellow	-		B71D Y12	**16277**	B71D Y24	**16278**	B71D Y110	**16279**	B71D Y230	**16280**
Blue	-		B71D B12	**16281**	B71D B24	**16282**	B71D B110	**16283**	B71D B230	**16284**

Modular Time Swtiches
Series 3SE8, 3SUL181H, 3SRC18, 3SHC18A

Functions

- Controlling circuit opening and closing according to the scheduled program.
- Can be set on the scheduled program
- Available on hourly, daily and weekly version and equipped with a 16 A contact
- Fitting applications such as shop lighting systems, public buildings, schools, heating and irrigation systems and so forth.



Technical specifications

Type	3SE8	3SUL181H	3SRC18	3SHC18A
				
Standard	IEC 60730-1			
Rated supply voltage (V)	AC 220-240			
Contact type	-	-	-	1NC OR 1NO
Switching capacity				
resistive load (A)	16	16	16	16
inductive load (A)	4			
Rated frequency (Hz)	50/60			
Full time range	7 minutes	24 minutes	20 minutes	24 hours or one week
Minimum setting unit	0.5 minutes	30 minutes	0.5 minutes	-
Electrical life (times)	10^5 times	10^5 times	10^5 times	10^5 times
Mechanical life (times)	10^7 times	10^7 times	10^7 times	10^7 times
Modules (18 mm)	1	3	1	2
Operating temperature (°C)	-5 ~ +40, max. 95 % humidity			
Storage temperature (°C)	-40 ~ +75			
Mounting	ON DIN RAIL			
Terminal size for cable (mm^2)	2.5			

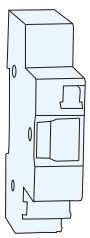
Selection and ordering data

	Rated current In (A)	Full time range	Type code	Order code
3SE8	16	7 minutes	E8	**24776**
3SUL181H	16	24 hours	SUL181H	**13684**
3SRC18	16	20 minutes	ALC18	**24780**
3SHC18A	16	24 hours or one week	HC18A	**24777**

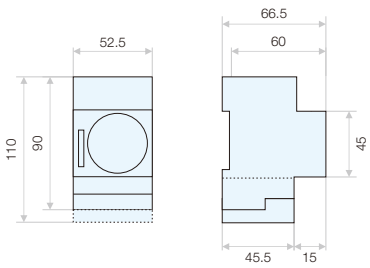
Outline and installation dimensions

unit in mm

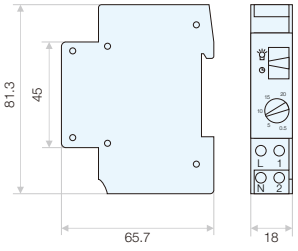
3SE8



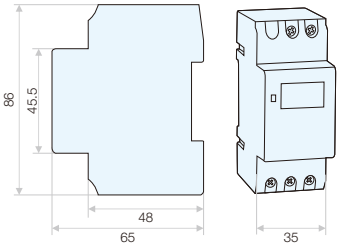
3SUL181H



3SRC18



3SHC18A

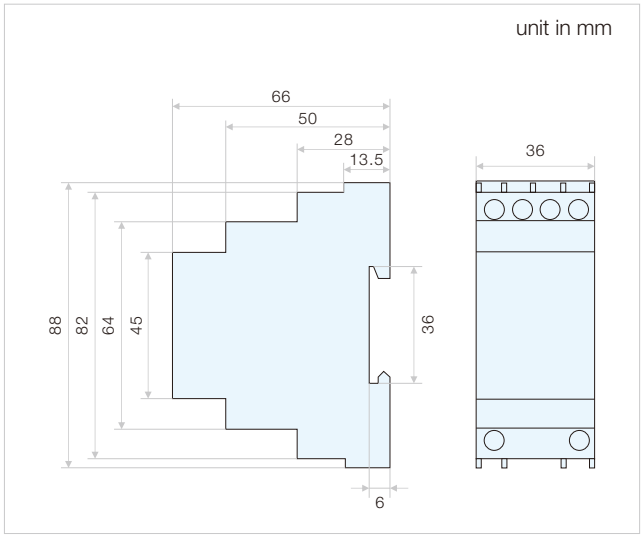


Technical specifications

- Rated input voltage AC (V): 230
- Rated output voltage AC (V): 4, 6, 8, 12, 16, 24
- Rated frequency (Hz): 50/60
- Rated output power (VA): 6
- Consumption (W): 1.15
- Pollution class: 2



Outline and installation dimensions



Selection and ordering data

	Rated output power	Type code	Order code	Pack.
	8 VA	BT8-8	**24751**	1

Modular Sockets
Series MS71

1

Functions

- Widely used in terminal distribution system
- Being complete series of terminal distribution system together with series 3SB71



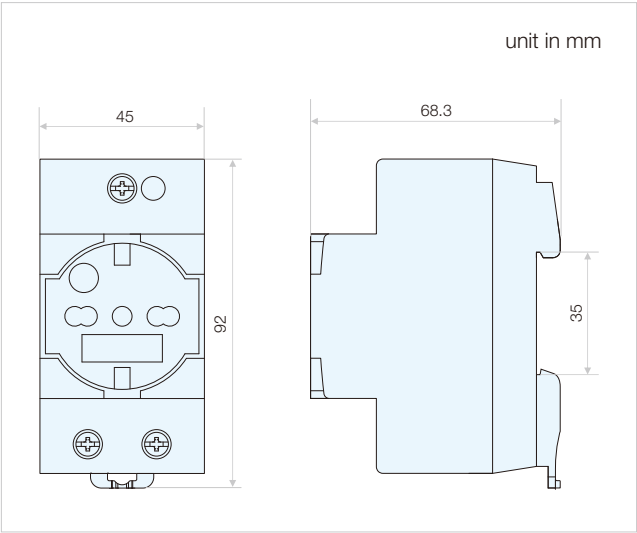
Technical specifications

- Standard: IEC 60884-1
- Rated current (A): 16
- Modules: 2.5
- Rated voltage Ue (V): 230/400
- Conductor cross-sections
- Solid and stranded (mm^2): 0.75-35

Selection and ordering data

	Number of poles (P)	Rated current In (A)	Type code	Order code
	2+E	16	MS71	**17727**

Outline and installation dimensions



Functions

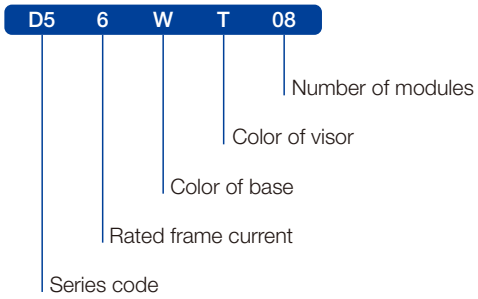
- Equipped with various modular electric for the function of terminal power distribution .
- Suited for the installation of all Sassin individual modular devices. (RCDs, MCBs, RCBO's, switch disconnectors etc).
- Used in residential building, non-residential building, industry.

Technical specifications

- Standard: IEC 61439-3
- Modules (No.): 4, 6, 8, 12, 18, 24, 36
- Row :
  - Single row for 4, 6, 8, 12, 18 modules
  - 2 rows for 24 modules
  - 3 rows for 36 modules
- Rated frame current In (A): 63, 100
- Color: White RAL 9003 and grey RAL 7035
- The color of door: Transparent, non transparent
- Mounting type: Surface, Flush.
- Degree of protection: IP30
- Material:
  - HIPS for body
  - SAN for door (4-18 modules)
  - PC for door (24 & 36 modules)
- Fire resistence: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

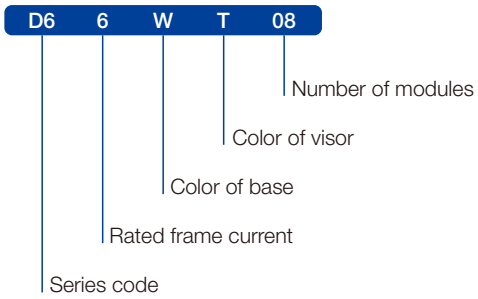


Instruction of type code





Instruction of type code



Selection and ordering data

Flush mounting 3SD5











Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code
63	White	White	4	D506WW04	**23157**
			6	D506WW06	**23163**
			8	D506WW08	**23169**
			12	D506WW12	**23137**
			18	D506WW18	**23143**
			24	D506WW24	**23149**
			36	D506WW36	**23153**
		Transparent	4	D506WT04	**23159**
			6	D506WT06	**23165**
			8	D506WT08	**23171**
			12	D506WT12	**23139**
			18	D506WT18	**23145**
			24	D506WT24	**23150**
			36	D506WT36	**23154**
	Grey	Grey	4	D506GG04	**24555**
			6	D506GG06	**24557**
			8	D506GG08	**24559**
			12	D506GG12	**24563**
			18	D506GG18	**24565**
			24	D506GG24	**24567**
			36	D506GG36	**24569**
		Transparent	4	D506GT04	**24556**
			6	D506GT06	**24558**
			8	D506GT08	**24560**
			12	D506GT12	**24564**
			18	D506GT18	**24566**
			24	D506GT24	**24568**
			36	D506GT36	**24570**
100	White	White	4	D510WW04	**30655**
			6	D510WW06	**30657**
			8	D510WW08	**30659**
			12	D510WW12	**30663**
			18	D510WW18	**30665**
			24	D510WW24	**30667**
			36	D510WW36	**30669**
		Transparent	4	D510WT04	**30656**
			6	D510WT06	**30658**
			8	D510WT08	**30660**
			12	D510WT12	**30664**
			18	D510WT18	**30666**
			24	D510WT24	**30668**
			36	D510WT36	**30670**
	Grey	Grey	4	D510GG04	**30697**
			6	D510GG06	**30699**
			8	D510GG08	**30701**
			12	D510GG12	**30705**
			18	D510GG18	**30707**
			24	D510GG24	**30709**
			36	D510GG36	**30711**
		Transparent	4	D510GT04	**30698**
			6	D510GT06	**30700**
			8	D510GT08	**30702**
			12	D510GT12	**30706**
			18	D510GT18	**30708**
			24	D510GT24	**30710**
			36	D510GT36	**30712**

Selection and ordering data

Surface mounting 3SD6











Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code
63	White	White	4	D606WW04	**23161**
			6	D606WW06	**23167**
			8	D606WW08	**23173**
			12	D606WW12	**23141**
			18	D606WW18	**23147**
			24	D606WW24	**23151**
			36	D606WW36	**23155**
		Transparent	4	D606WT04	**23162**
			6	D606WT06	**23168**
			8	D606WT08	**23174**
			12	D606WT12	**23142**
			18	D606WT18	**23148**
			24	D606WT24	**23152**
			36	D606WT36	**23156**
	Grey	Grey	4	D606GG04	**24571**
			6	D606GG06	**24573**
			8	D606GG08	**24575**
			12	D606GG12	**24579**
			18	D606GG18	**24581**
			24	D606GG24	**24583**
			36	D606GG36	**24585**
		Transparent	4	D606GT04	**24572**
			6	D606GT06	**24574**
			8	D606GT08	**24576**
			12	D606GT12	**24580**
			18	D606GT18	**24582**
			24	D606GT24	**24584**
			36	D606GT36	**24586**
100	White	White	4	D610WW04	**30671**
			6	D610WW06	**30673**
			8	D610WW08	**30675**
			12	D610WW12	**30679**
			18	D610WW18	**30681**
			24	D610WW24	**30683**
			36	D610WW36	**30685**
		Transparent	4	D610WT04	**30672**
			6	D610WT06	**30674**
			8	D610WT08	**30676**
			12	D610WT12	**30680**
			18	D610WT18	**30682**
			24	D610WT24	**30684**
			36	D610WT36	**30686**
	Grey	Grey	4	D610GG04	**30713**
			6	D610GG06	**30715**
			8	D610GG08	**30717**
			12	D610GG12	**30721**
			18	D610GG18	**30723**
			24	D610GG24	**30725**
			36	D610GG36	**30727**
		Transparent	4	D610GT04	**30714**
			6	D610GT06	**30716**
			8	D610GT08	**30718**
			12	D610GT12	**30722**
			18	D610GT18	**30724**
			24	D610GT24	**30726**
			36	D610GT36	**30728**

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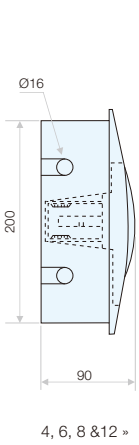
Fitting inside of the enclose

Attached with sticky label for marking on wire front panel; ready equipped with zero line and earth terminal bar and attached with zero bar, earth bar marks and alarm mark; users can select to connect with wire or insulating busbar method.

Neutral	Neutral bar length (mm)	Neutral bar holes (piece)	Earth bar length (mm)	Earth bar holes (piece)	Width (mm)	Height (mm)
4	37	4M4X7+M4X7	29.5	3M4X7+M4X7	6	8
6	52	6M4X7+M4X7	29.5	3M4X7+M4X7	6	8
8	67	8M4X7+M4X7	37	4M4X7+M4X7	6	8
12	37+52	10M4X7+2M4X7	52	6M4X7+M4X7	6	8
18	74.5+37	13M4X7+2M4X7	74.5	9M4X7+M4X7	6	8
24	60+60+28+28	20M4X7+4M4X7	28+28	6M4X7+2M4X7	6	8
36	60+60+60+28	24M4X7+4M4X7	60+28	10M4X7+2M4X7	6	8

Outline and installation dimensions (3SD5)

unit in mm



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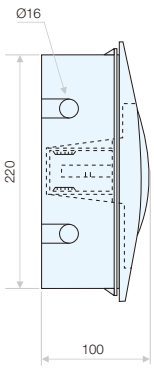

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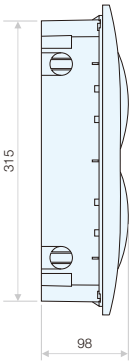

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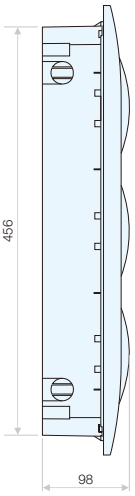

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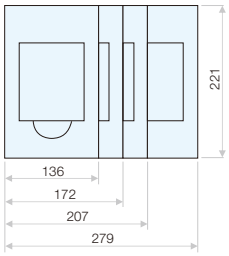

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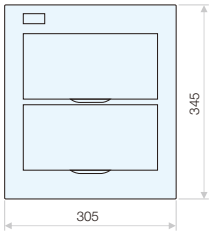

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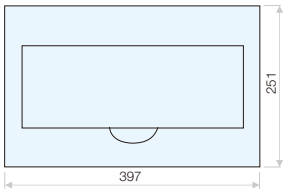

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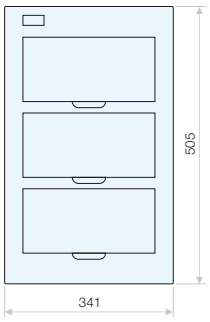

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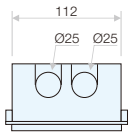

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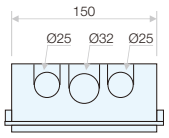

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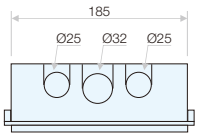

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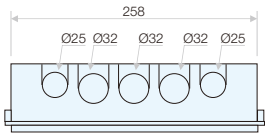

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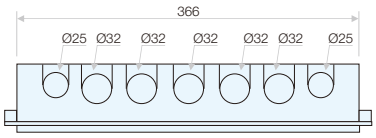

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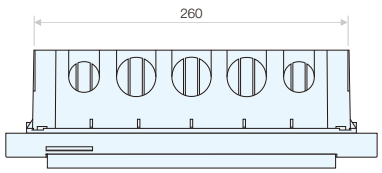

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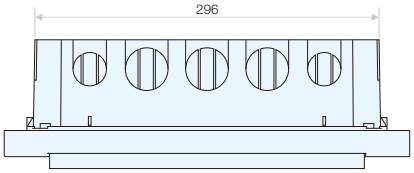

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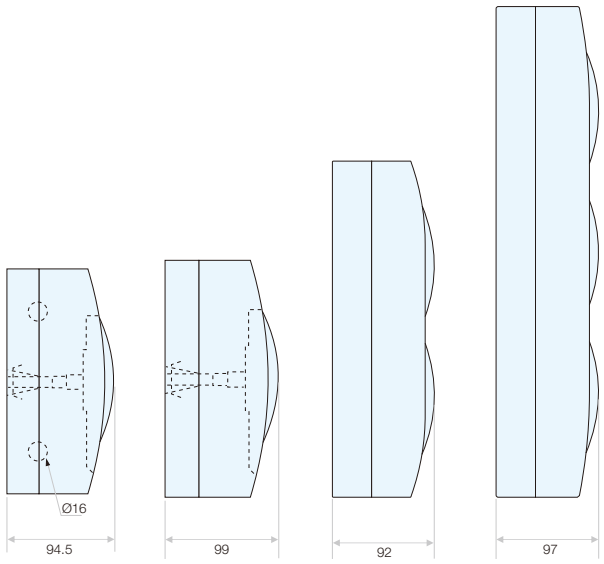
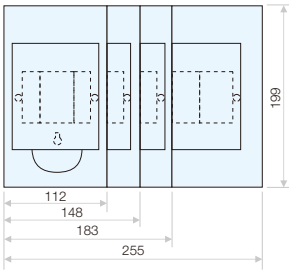
Outline and installation dimensions (3SD6)

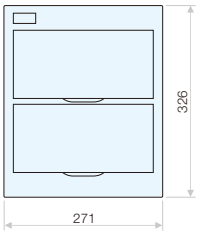
unit in mm



4, 6, 8 & 12 » 18 » 24 » 36 »



4, 6, 8 & 12 »



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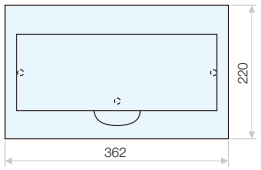

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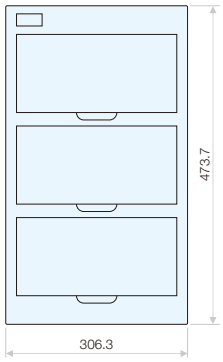

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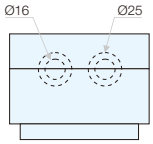

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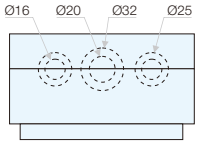

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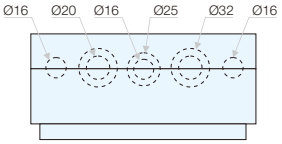

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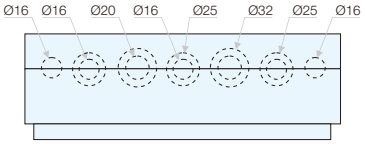

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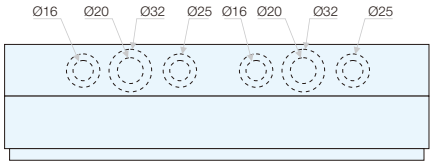

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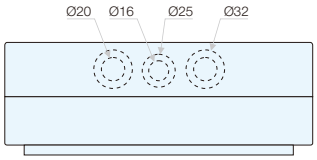

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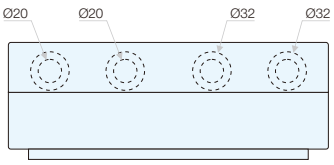


36 »

Distribution Boxes
Series 3SD8

Functions

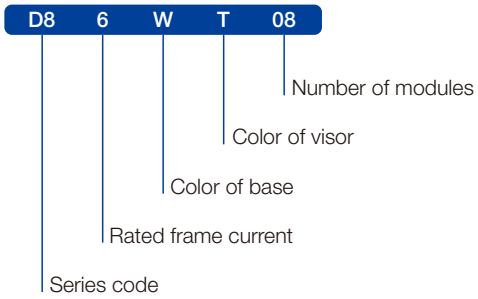
- Equipped with various modular electric for the function of terminal power distribution.
- Suited for the installation of all Sassin individual modular devices. (RCDs, MCBs, RCBO's, switch disconnectors etc).
- Used in residential building, non-residential building, industry.



Technical specifications

- Standard: IEC 61439-3
- Modules: 4, 7, 10, 13, 16, 21
- Row: Single
- Rated voltage In (A): 100
- Color: White RAL 9003
- Color of door: Transparent, non transparent
- Mounting type: Surface
- Degree of protection: IP30
- Material:
  - HIPS for body
  - AS for door
- Fire resistence: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

Instruction of type code



Selection and ordering data

3SD8 Surface Mounting

	Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code
 	100	White	White	4	D810WW04	**23176**
				7	D810WW07	**23178**
				10	D810WW10	**23180**
				13	D810WW13	**23182**
				16	D810WW16	**23184**
				21	D810WW21	**23186**
			Transparent	4	D810WT04	**23175**
				7	D810WT07	**23177**
				10	D810WT10	**23179**
				13	D810WT13	**23181**
				16	D810WT16	**23183**
				21	D810WT21	**23185**

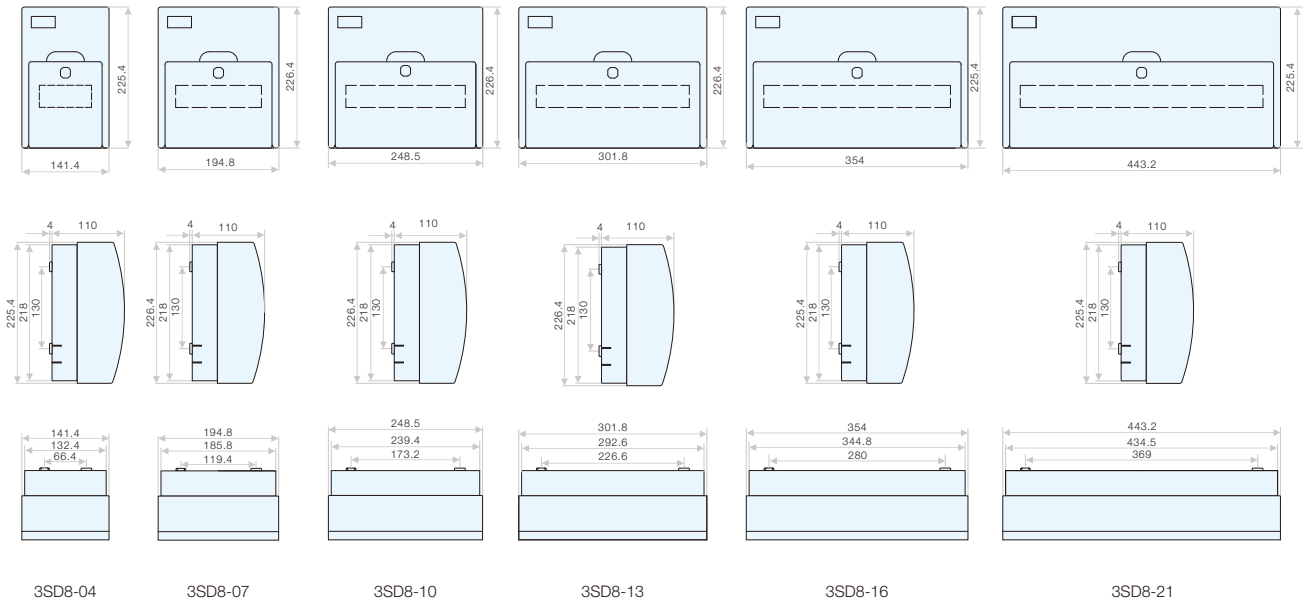
Fitting inside of the enclose

Attached with sticky label for marking on wire front panel; ready equipped with zero line and earth terminal bar and attached with zero bar, earth bar marks and alarm mark; users can select to connect with wire or insulating busbar method.

The Number of Module	Neutral bar holes 1	Neutral bar holes 2	Earth bar holes
4 module	1xØ6 + 1xØ5.8 + 3xØ5.4	-	1xØ6 + 1xØ5.8 + 3xØ5.4
7 module	1xØ6 + 1xØ5.8 + 6xØ5.4	-	1xØ6 + 1xØ5.8 + 4xØ5.4
10 module	1xØ6 + 1xØ5.8 + 10xØ5.4	-	1xØ6 + 1xØ5.8 + 8xØ5.4
13 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 6xØ5.4	1xØ6 + 1xØ5.8 + 11xØ5.4
16 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 14xØ5.4
21 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 11xØ5.4	1xØ6 + 1xØ5.8 + 18xØ5.4

Outline and installation dimensions (3SD8)

unit in mm



3SD8-04 3SD8-07 3SD8-10 3SD8-13 3SD8-16 3SD8-21

Distribution Boxes
Series 3SD5T (Metal Base)

Functions

- Equipped with various modular electric for the function of the terminal power distribution
- Suited for the installation of all the Sassin individual modular device (RCDs, MCBs, RCBOs, switch disconnectors etc.)
- Used in the residential buildings, non-residential buildings and industry
- Lifting installation rail, easy for installation



Technical specifications

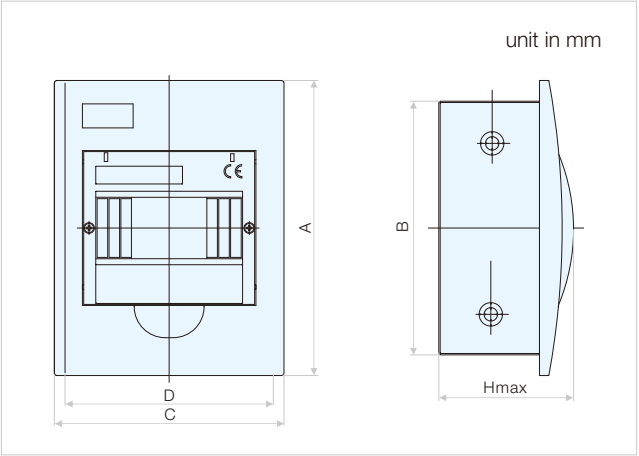
- Standard: IEC 61439-3
- Modules: 4, 6, 8, 12, 18
- Row: Single
- Rated frame current In (A): 63
- Color: White RAL 9003, Grey RAL7035
- The color of the door: Transparent, non transparent
- Mounting type: Flush
- Degree of the protection: IP40
- Material:
  - HIPS for the body
  - SAN for the door
  - Metal for the base
- Fire resistence: 650 ºC / 30 s
- Ambient temperature (ºC): -5 ~ +40, 50% humidity permitted under max +40 ºC
- Storage temperature (ºC): -40 ~ +75

Selection and ordering data

Flush mounting 3SD5T

	Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code
	63	Grey	Transparent	4	D5T06GT04	**23160**
				6	D5T06GT06	**23166**
				8	D5T06GT08	**23172**
				12	D5T06GT12	**23140**
				18	D5T06GT18	**23146**
			Grey	4	D5T06GG04	**23158**
				6	D5T06GG06	**23164**
				8	D5T06GG08	**23170**
				12	D5T06GG12	**23138**
				18	D5T06GG18	**23144**

Outline and installation dimensions



Type	A (mm)	B (mm)	C (mm)	D (mm)	H max (mm)
3SD5T-04	221	190.5	136	108.5	102
3SD5T-06	221	190.5	172	142.5	102
3SD5T-08	221	190.5	207	180.5	102
3SD5T-12	221	190.5	279	252.5	102
3SD5T-18	251	223.5	397	360.5	103

Functions

3SDTN2 series distribution box are fit for AC 50/60 Hz, rated voltage 400 V, rated current to 125 A in the home and similar field circuit, for the redistribution of electrical energy, offering overload and short-circuit protection through the switch.



Technical specifications

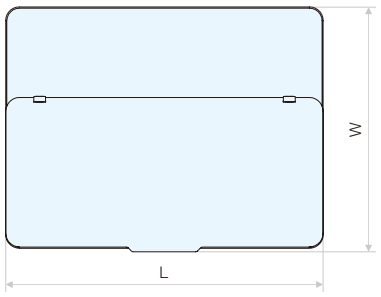
- Standard: IEC/EN 61439-3
- The base, top and buckle cover are made of metal alloy.
- Rated operaional voltage Un (Ue) (V): 220/400
- Rated operaional current In (Ie) (A): 125, 100, 80, 63 and below
- Rated impulse withstand voltage Uimp (A): 6 K
- Mounting type: surface
- Degree of protection: IP 2XC

Selection and ordering data

Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code
125	Grey	Grey	4	DTN2 04	**15227**
			8	DTN2 08	**15228**
			12	DTN2 12	**15229**
			16	DTN2 16	**15230**
			18	DTN2 18	**15231**
			22	DTN2 22	**15232**

Outline and installation dimensions

unit in mm

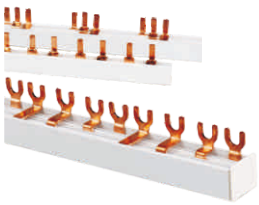


Type	L (mm)	W (mm)	D (mm)
3SDTN2-4	235	128	105
3SDTN2-8	264	199	123
3SDTN2-12	264	271	123
3SDTN2-16	264	343	123
3SDTN2-18	264	379	123
3SDTN2-22	264	451	123

Accessories for Distribution Boxes

Selection and ordering data

Busbar systems
Suitable for cutting



Connection type	Phases	Rated current (A)	Length (cm)	Type code	Order code
PIN type	1×54	63	100	SA-BB101	**24760**
	2×27	63	100	SA-BB201	**24762**
	3×18	63	100	SA-BB301	**24764**
	4×14	63	100	SA-BB401	**24766**
Fork type	1×54	63	100	SA-BB102	**24761**
	2×27	63	100	SA-BB202	**24763**
	3×18	63	100	SA-BB302	**24765**
	4×14	63	100	SA-BB402	**24767**

End caps



			Type code	Order code
For 1P	100	SA-BBEC1	**32676**
For 2P	100	SA-BBEC2	**32677**
For 3P	100	SA-BBEC3	**32678**
For 4P	100	SA-BBEC4	**32679**

Shock-protection caps



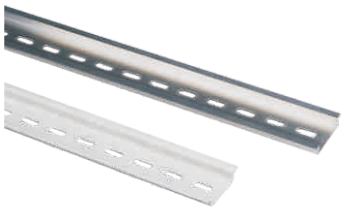
Discription	Phases	Type code	Order code
Yellow	5 parts	SA-BBSCY5	**32680**

Feeder terminals



Discription	Type code	Order code
Connection capacity: 6-25 mm^2 Max. electrical load: 63 A Max. tightening torque 2 N·m	FT1B	**32929**
Connection capacity: 6-25 mm^2 Max. electrical load: 63 A Max. tightening torque 2 N·m	FT2G	**32930**

DIN Rails



Discription	Type code	Order code
Aluminum, 100 cm	DR1	**32931**
Iron plated zinc, 100 cm	DR2	**32932**

Selection and ordering data

Terminal bars with screws



Rated current (A)	Sectioncross of brass (mm)	Way	Screw size	Type code	Order code
63	6×8	3+1	M4×7	TBS0631	**32933**
	6×8	4+1	M4×7	TBS0641	**32934**
	6×8	6+1	M4×7	TBS0661	**32935**
	6×8	6+2	M4×7	TBS0662	**32936**
	6×8	8+1	M4×7	TBS0681	**32937**
	6×8	9+1	M4×7	TBS0691	**32938**
	6×8	10+2	M4×7	TBS06102	**32939**
	6×8	13+2	M4×7	TBS06132	**32940**
	6×8	20+4	M4×7	TBS06204	**32941**
100	6×9	3+1	M4×7	TBS1031	**32942**
	6×9	4+1	M4×7	TBS1041	**32943**
	6×9	6+1	M4×7	TBS1061	**32944**
	6×9	6+2	M4×7	TBS1062	**32945**
	6×9	8+1	M4×7	TBS1081	**32946**
	6×9	9+1	M4×7	TBS1091	**32947**
	6×9	10+2	M4×7	TBS10102	**32948**
	6×9	13+2	M4×7	TBS10132	**32949**
	6×9	20+4	M4×7	TBS10204	**32950**

Accessories for Distribution Boxes

Selection and ordering data

Terminal blocks

Terminals with insulation holder for quick fastening onto DIN rails

	Way	Rated current (A)	Installation size (mm)	Dimension (mm)	Screw size	Sectioncross of brass (mm)	Type code	Order code
	7	100	35×7.5	50×21	M5×8	6×9	TBS1007	**32951**
	8	100	35×7.5	57×21	M5×8	6×9	TBS1008	**32952**
	10	100	35×7.5	70×21	M5×8	6×9	TBS1010	**32953**
	12	100	35×7.5	84×21	M5×8	6×9	TBS1012	**32954**
	13	100	35×7.5	91×21	M5×8	6×9	TBS1013	**32955**
	15	100	35×7.5	104×21	M5×8	6×9	TBS1015	**32956**

Blanking plates

Matched with distribution boxes for device covers

	Discription	Type code	Order code
 	width: 1 module = 17.5 mm, White	MBP1	**32957**
	width: 0.5 module = 9 mm, White	MBP2	**32958**

Applications and functions for AC contactor

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code

- For contactor

C8 K 06 10 P5

- P5: Coil code
- 10: Quantity of contact
  - 01: 3NO+1NC
  - 10: 3NO+1NO
  - 004: 4NO
  - 008: 2NO+2NC
- 06: Rated operational current in category AC-3 at 400V: 06, 09, 12
- K: Model code
- C8: Series code



- For auxiliary contactor

C8 A1 / N02

- N02: Code of auxiliary contact
  - N02: 2NC
  - N11: 1NO+1NC
  - N20: 2NO
  - N04: 4NC
  - N13: 1NO+3NC
  - N22: 2NO+2NC
  - N31: 3NO+1NC
  - N40: 4NO
- A1: Model code
- C8: Series code

Technical specifications for type 3SC8-K

Type		3SC8-K0610, 3SC8-K0601, 3SC8-K06004, 3SC8-K06008	3SC8-K0910, 3SC8-K0901, 3SC8-K09004, 3SC8-K09008	3SC8-K1210, 3SC8-K1201, 3SC8-K12004, 3SC8-K12008
Standard		IEC 60947-4-1		
Number of contacts		3NO+1NO, 3NO+1NC, 4NO, 2NO+2NC		
Rated conventional thermal current Ith (A)	AC-1	20		
Rated operational voltage Ue (V)		690		
Rated insulation voltage Ui (V)		690		
Rated impulse withstand voltage Uimp (kV)		6		
Rated frequency (Hz)		50/60		
Rated operational current (A)	AC-3 380/400 V	6	9	12
	AC-4 380/400 V	2.6	3.5	5
Number of poles		3,4	3,4	3,4
Rated operational power in category AC-3 (KW)	220/230/240 V	1.5	2.2	3
	380/400 V	2.2	4	5.5
	660/690 V	3	4	5.5
Rated making capacity (A)		110	110	114
Rated breaking capacity (A)	380 V	100	100	100
	690 V	70	70	70
Short-circuit protection (A)	gG fuse U ≤ 440 V	25		
Average impedance per pole (mW)		3		
Add-on auxiliary contact blocks	Front	3SC8-A1/KN		
	Side	-		
	Front time delay	-		
	Front dust and damp protected	-		
Reversing contactor type		3SC8-KN		
Associated thermal overload relays	3 Pins/5 Pins	3SR8-K		
Operation cycles(times/hour)	Electrical AC-3	1200		
	Electrical AC-4	300		
	Mechanical	3600		
Electrical life (× 10^4 times)	AC-3	100	120	
	AC-4	20		
Mechanical life (× 10^4 times)		1000		
Matching fuse model		RT16-16	RT16-20	
Tightening torque (N·m)		0.8		
Connection				
Screw clamp terminals	solid conductor (mm^2)	Max. 1×4+1×2.5		
	Flexible conductor without cable end (mm^2)	Max. 2×2.5		
	Flexible conductor with cable end (mm^2)	Max. 1×1.5+1×2.5		
Degree of protection		IP20		
Ambient air temperature (°C)		-5 to +40, max. 95 % humidity		
Storage temperature (°C)		-40 ~ +75		
Maximum operating altitude (meters)		2000		
Flame resistance	Conforming to UL 94	V1		

Technical specifications for auxiliary contact incorporated in the contactor type 3SC8-K

- Standard: IEC 60947-5-1
- Number of auxiliary contact: 2, 4
- Mounting type: Front
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 690
- Conventional thermal current Ith (A): 10
- Minimum switching capacity Im (mA): 5
- Short circuit protection (A): 10
- Rated making capacity (A): 110

Coil voltage of contactor 3SC8-K

Coil voltage Us (V)	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600 600/660	660/690
50 Hz	J5	-	B5	C5	-	D5	E5	-	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5
60 Hz	-	-	B6	-	-	-	E6	-	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	-	X7	Y7

Selection and ordering data

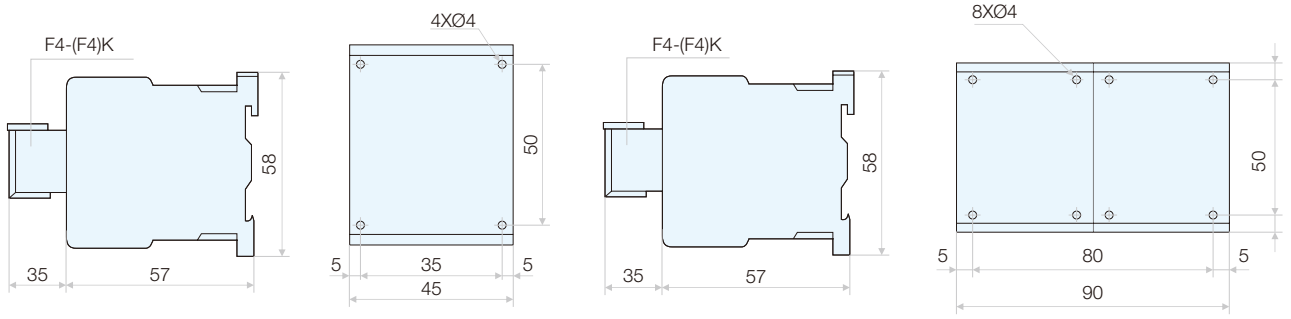
	Rated operational current in category AC-3 400 V (A)	Number of poles		Instantaneous auxiliary contacts		230 V 50 Hz Please contact us for other coil voltage	
						Type code	Order code
3SC8-K contactor	6	3	-	-	1	C8 K0601P5	**11373**
		3	-	1	-	C8 K0610P5	**11374**
	9	3	-	-	1	C8 K0901P5	**11377**
		3	-	1	-	C8 K0910P5	**11378**
	12	3	-	-	1	C8 K1201P5	**11381**
		3	-	1	-	C8 K1210P5	**11382**
	6	4	-	-	-	C8 K06004P5	**11375**
		2	2	-	-	C8 K06008P5	**11376**
	9	4	-	-	-	C8 K09004P5	**11379**
		2	2	-	-	C8 K09008P5	**11380**
	12	4	-	-	-	C8 K12004P5	**11383**
		2	2	-	-	C8 K12008P5	**11384**
3SC8-KN reversing contactors	6	3	-	-	1	C8 KN0601P5	**15576**
		3	-	1	-	C8 KN0610P5	**15697**
		4	-	-	-	C8 KN06004P5	**15703**
	9	3	-	-	1	C8 KN0901P5	**15577**
		3	-	1	-	C8 KN0910P5	**15698**
		4	-	-	-	C8 KN09004P5	**15704**
	12	3	-	-	1	C8 KN1201P5	**15578**
		3	-	1	-	C8 KN1210P5	**15699**
		4	-	-	-	C8 KN12004P5	**15705**

3SC8-A1/KN

Auxiliary contacts			
		Type code	Order code
0	2	C8K A1/N02	**33032**
1	1	C8K A1/N11	**33033**
2	0	C8K A1/N20	**33034**
0	4	C8K A1/N04	**33035**
1	3	C8K A1/N13	**33036**
2	2	C8K A1/N22	**33037**
3	1	C8K A1/N31	**33038**
4	0	C8K A1/N40	**33039**

Outline and installation dimensions

unit in mm



Contactors
Series 3SC8

Applications and functions for AC contactor 3SC8

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code

C8 09 10 P7

- P7 — Coil code
- 10 — Quantity of contact
  - 10: 3 NO + 1 NO (Ie ≤ 32A)
  - 01: 3 NO + 1 NC (Ie ≤ 32A)
  - 11: 3 NO + 1 NO + 1 NC
  - 004: 4 NO (except Ie = 18 A & Ie = 32 A)
  - 008: 2 NO + 2 NC (except Ie = 18 A & Ie = 32 A)
- 09 — Rated working current in category AC-3 at 400 V AC (A): 09, 12, 18, 25, 32, 40, 50, 65, 80, 95
- C8 — Series code

Technical specifications for type 3SC8

Type			3SC8-09	3SC8-12	3SC8-18	3SC8-25	3SC8-32	3SC8-40	3SC8-50	3SC8-65	3SC8-80	3SC8-95
Standard			IEC 60947-4-1									
Number of poles			3, 4	3, 4	3	3, 4	3	3, 4	3, 4	3, 4	3, 4	3, 4
Rated operational current Ie (A)	380 V	In AC-3	9	12	18	25	32	40	50	65	80	95
		In AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660 V	In AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		In AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
	440 V	In AC-1	20	25	32	40	50	60	80	80	110	125
Rated operational voltage Ue (V)		Up to	690									
Frequency limits of the operational current (time/h)			25-400									
Rated conventional thermal current Ith (A)			25	25	32	40	50	60	80	80	125	125
Rated insulation voltage Ui (V)			690									
Rated impulse withstand voltage Uimp (kV)			8									
Rated frequency (Hz)			50/60									
Rated making capacity (A)	400 V		10 × Ie AC-3 or 12 × Ie AC-4									
Rated breaking capacity (A)	400 V		8 × I e AC-3 or 10 × Ie AC-4									
Rated operational power in category AC-3 (kw)	220/230/240 V		2.2	3	4	5.5	7.5	11	15	18.5	22	25
	380/400 V		4	5.5	7.5	11	15	18.5	22	30	37	45
	660/690 V		5.5	7.5	10	15	18.5	30	33	37	45	45
Fuse protection against short-circuit (A)	Without thermal overload relay, Gg fuse Type 1		20	25	32	40	50	63	80	80	125	160
	Type 2		20	20	25	32	40	50	63	80	150	150
	With thermal overload relay		see specification and ordering data of 3SR8, for aM or gG fuse ratings corresponding to the associated thermal overload relay									
Average impedance per pole (mΩ)			2.5	2.5	2.5	2	2	1.5	1.5	1.5	0.8	0.8
Add-on auxiliary contact blocks	Front		3SC8-A1 and 3SC8-A1D									
	Side		3SC8-A1C									
	Front time delay		3SC8-A2									
	Front dust and damp protected		■									
Reversing contactor type			3SC8-DN									
Associated thermal overload relays			3SR8-25				3SR8-36	3SR8-93				
Operation cycles (times/hour)	Electrical AC-3		1200	1200	1200	1200	600	600	600	600	600	600
	Electrical AC-4		300	300	300	300	300	300	300	300	300	300
	Mechanical		3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
Electrical life (× 10^3 times)	AC-3		1000	1000	1000	1000	800	800	600	600	600	600
	AC-4		200	200	200	200	200	150	150	150	100	100
Mechanical life (× 10^6 times)			10	10	10	10	8	8	8	8	6	6
Matching fuse model			RT16-20	RT16-20	RT16-32	RT16-40	RT16-50	RT16-63	RT16-80	RT16-80	RT16-100	RT16-125
Tightening torque (N · m) Connection			1.2	1.2	1.7	2.0	2.5	5	5	5	9	9
Cabling cross section (CU)	Flexible cable with cold-pressed 2 socket (mm^2)		1/2.5	1/2.5	1/4	1/4	1.5/4	2.5/10	2.5/10	2.5/10	4/16	4/16
	Flexible cable without cold-pressed 2 socket (mm^2)		1/4	1/4	1.5/6	1.5/6	2.5/10	2.5/16	2.5/16	2.5/16	4/25	4/25
	Inflexible 2 cable (mm^2)		1/4	1.5/4	1.5/6	1.5/6	1.5/10	2.5/25	2.5/25	2.5/25	4/50	4/50
Screw size			M3.5	M3.5	M3.5	M4	M4	M8	M8	M8	M10	M10
Degree of protection			IP20									
Ambient air temperature (°C)			-5 to +40, max. 95 % humidity									
Storage temperature (°C)			-40 ~ +75									
Maximum operating altitude (meters)			2000									
Flame resistance	Conforming to UL 94		V1									

Technical specifications for auxiliary contacts incorporated in the contactor 3SC8

- Standard: IEC 60947-5-1
- Number of auxiliary contacts: 2, 4
- Mounting type: Front, side
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 690
- Conventional thermal current Ith (A): 10
- Minimum switching capacity Imin (mA): 5
- Short circuit protection (A): gG fuse: 10 A
- Rated making capacity (A): 140

Technical specifications for time delay contact incorporated in the contactor 3SC8

- Standard: IEC 60255-5
- Number of contacts: 2
- Mounting type: Front
- Delay time type making time delay, breaking time delay
- Timing ranges: 0.1-3, 0.1-30, 10-180
- Repeat accuracy: ± 3 % (10 ms minimum)
- Reset time
- During time delay period (ms): 150
- After time delay period (ms): 50
- Conventional heating current (A): 10
- Rated operational voltage Ue (V): Up to 690
- Rated insulation voltage Ui (V): 250
- Conventional thermal current Ith (A): 10

Coil voltage of contactor 3SC8

Coil voltage Us (V)	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600 600/660	660/690
50 Hz	J5	-	B5	C5	-	D5	E5	-	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5
60 Hz	-	-	B6	-	-	-	E6	-	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	-	X7	Y7

Technical specifications for coil incorporated in contactor 3SC8

Type			3SC8-09	3SC8-12	3SC8-18	3SC8-25	3SC8-32	3SC8-40	3SC8-50	3SC8-65	3SC8-80	3SC8-95
Coil consumption	Pick-up (VA)		70	70	70	100	100	245	245	245	245	245
	Holding (VA)	50 Hz, 60 Hz	9.0	9.0	9.0	10	10	30	30	30	30	30
		50/60 Hz	10	10	10	11	11	32	32	32	32	32
	Power (W)		2~3.5	2~3.5	2~3.5	3~4	3~4	6~10	6~10	6~10	6~10	6~10

Selection and ordering data

	Standard control circuit voltages (V AC)	Rated frequency (Hz)	Rated operational current in category AC-3 400 V (A)	Number of poles		Instantaneous auxiliary contacts		230 V 50/60 Hz Please contact us for other coil voltage	
								Type code	Order code
	230	50/60	9	3	-	1	-	C8N 0910P7	**27432**
				3	-	-	1	C8N 0901P7	**27431**
				3	-	1	1	C8N 0911P7	**27433**
				4	-	-	-	C8N 09004P7	**27451**
				2	2	-	-	C8N 09008P7	**27452**
			12	3	-	1	-	C8N 1210P7	**27435**
				3	-	-	1	C8N 1201P7	**27434**
				3	-	1	1	C8N 1211P7	**27436**
				4	-	-	-	C8N 12004P7	**27453**
				2	2	-	-	C8N 12008P7	**27454**
			18	3	-	1	-	C8N 1810P7	**27438**
				3	-	-	1	C8N 1801P7	**27437**
				3	-	1	1	C8N 1811P7	**27439**
			25	3	-	1	-	C8N 2510P7	**27441**
				3	-	-	1	C8N 2501P7	**27440**
				3	-	1	1	C8N 2511P7	**27442**
				4	-	-	-	C8N 25004P7	**27455**
				2	2	-	-	C8N 25008P7	**27456**
			32	3	-	1	-	C8N 3210P7	**27444**
				3	-	-	1	C8N 3201P7	**27443**
				3	-	1	1	C8N 3211P7	**27445**
			40	3	-	1	1	C8N 4011P7	**27446**
				4	-	-	-	C8N 40004P7	**27457**
				2	2	-	-	C8N 40008P7	**27458**
			50	3	-	1	1	C8N 5011P7	**27447**
				4	-	-	-	C8N 50004P7	**27459**
				2	2	-	-	C8N 50008P7	**27460**
			65	3	-	1	1	C8N 6511P7	**27448**
				4	-	-	-	C8N 65004P7	**27461**
				2	2	-	-	C8N 65008P7	**27462**
			80	3	-	1	1	C8N 8011P7	**27449**
				4	-	-	-	C8N 80004P7	**27463**
				2	2	-	-	C8N 80008P7	**27464**
			95	3	-	1	1	C8N 9511P7	**27450**
				4	-	-	-	C8N 95004P7	**27465**
				2	2	-	-	C8N 95008P7	**27466**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor" on page 1-222

3SC8-DN reversing contactors

	Rated operating current 400 V AC-3 (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3					Poles	230 V 50 Hz Please contact us for other coil voltage	
		220 V 230 V (KW)	380 V 400 V (KW)	415 V (KW)	440 V (KW)	660 V 690 V (KW)		Type code	Order code
	9	2.2	4	4	4	5.5	3	C8 DN9P5	**15913**
	12	3	5.5	5.5	5.5	7.5	3	C8 DN12P5	**15914**
	18	4	7.5	9	9	10	3	C8 DN18P5	**15915**
	25	5.5	11	11	11	15	3	C8 DN25P5	**15916**
	32	7.5	15	15	15	18.5	3	C8 DN32P5	**15917**
	40	11	18.5	22	22	30	3	C8 DN40P5	**15918**
	50	15	22	25	30	33	3	C8 DN50P5	**15919**
	65	18.5	30	37	37	37	3	C8 DN65P5	**15920**
	80	22	37	45	45	45	3	C8 DN80P5	**15921**
	95	25	45	45	45	45	3	C8 DN95P5	**15922**

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor" on page 1-222

1

Selection and ordering data

Coil for contactor 3SC8

	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
3SC8X-D2	Suitable for contactors with auxiliary contact 1NO or 1NC				
for AC contactor 3SC8-9...18	24	50/60	B7	C8X-D2B7	**17359**
	48	50/60	E7	C8X-D2E7	**25323**
	110	50/60	F7	C8X-D2F7	**32043**
	127	50/60	FC7	C8X-D2FC7	**32046**
	220	50/60	M7	C8X-D2M7	**17362**
	230	50/60	P7	C8X-D2P7	**32049**
	240	50/60	U7	C8X-D2U7	**32052**
	380	50/60	Q7	C8X-D2Q7	**32055**
	400	50/60	V7	C8X-D2V7	**27278**
	440	50/60	R7	C8X-D2R7	**32058**
	Suitable for contactors with auxiliary contact 1NO+1NC				
	24	50/60	B7	C8X-D2NB7	**14101**
	48	50/60	E7	C8X-D2NE7	**14102**
	110	50/60	F7	C8X-D2NF7	**14103**
	127	50/60	FC7	C8X-D2NFC7	**14104**
	220	50/60	M7	C8X-D2NM7	**14105**
	230	50/60	P7	C8X-D2NP7	**14106**
	240	50/60	U7	C8X-D2NU7	**14107**
	380	50/60	Q7	C8X-D2NQ7	**14108**
	400	50/60	V7	C8X-D2NV7	**14109**
	440	50/60	R7	C8X-D2NR7	**14110**
3SC8X-D4	Suitable for contactors with auxiliary contact 1NO or 1NC				
for AC contactor 3SC8-25...32	24	50/60	B7	C8X-D4B7	**17360**
	48	50/60	E7	C8X-D4E7	**25324**
	110	50/60	F7	C8X-D4F7	**32044**
	127	50/60	FC7	C8X-D4FC7	**32047**
	220	50/60	M7	C8X-D4M7	**17363**
	230	50/60	P7	C8X-D4P7	**32050**
	240	50/60	U7	C8X-D4U7	**32053**
	380	50/60	Q7	C8X-D4Q7	**32056**
	400	50/60	V7	C8X-D4V7	**27279**
	440	50/60	R7	C8X-D4R7	**32059**
	Suitable for contactors with auxiliary contact 1NO+1NC				
	24	50/60	B7	C8X-D4NB7	**14111**
	48	50/60	E7	C8X-D4NE7	**14112**
	110	50/60	F7	C8X-D4NF7	**14113**
	127	50/60	FC7	C8X-D4NFC7	**14114**
	220	50/60	M7	C8X-D4NM7	**14115**
	230	50/60	P7	C8X-D4NP7	**14116**
	240	50/60	U7	C8X-D4NU7	**14117**
	380	50/60	Q7	C8X-D4NQ7	**14118**
	400	50/60	V7	C8X-D4NV7	**14119**
	440	50/60	R7	C8X-D4NR7	**14120**
3SC8X-D6	24	50/60	B7	C8X-D6B7	**17361**
for AC contactor 3SC8-40...95	48	50/60	E7	C8X-D6E7	**25325**
	110	50/60	F7	C8X-D6F7	**32045**
	127	50/60	FC7	C8X-D6FC7	**32048**
	220	50/60	M7	C8X-D6M7	**17364**
	230	50/60	P7	C8X-D6P7	**32051**
	240	50/60	U7	C8X-D6U7	**32054**
	380	50/60	Q7	C8X-D6Q7	**32057**
	400	50/60	V7	C8X-D6V7	**27280**
	440	50/60	R7	C8X-D6R7	**32060**

Please contact us for other coil voltages.

Auxiliary contact

- Instruction of type code

C8 A1 02

- 02 — Code of auxiliary contact
  - 02: 2NC
  - 11: 1NO+1NC
  - 20: 2NO
  - 04: 4NC
  - 13: 1NO+3NC
  - 22: 2NO+2NC
  - 31: 3NO+1NC
  - 40: 4NO
- A1 — Model code
  - A1: Front type
  - A1C: Side type
  - A1D: Front type
- C8 — Series code

Time-delay auxiliary contact

- Instruction of type code

C8 A2 T0

- T0 — Delay scope
  - T0: 0.1-30 s (A2)
  - T2: 0.1-30 s (A2)
  - T4: 10-180 s (A2)
  - R0: 0.1-30 s (A3)
  - R2: 0.1-30 s (A3)
  - R4: 10-180 s (A3)
- A2 — Delay type
  - A2: Making time-delay
  - A3: Breaking time-delay
- C8 — Series code

Selection and ordering data

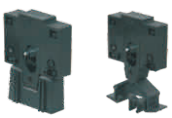
Auxiliary contact blocks

	Mounting type	Auxiliary contacts		Type code	Order code
	Front	0	2	C8 A1/02	**29578**
		1	1	C8 A1/11	**29579**
		2	0	C8 A1/20	**29580**
	Front	0	4	C8 A1/04	**29581**
		1	3	C8 A1/13	**29582**
		2	2	C8 A1/22	**29583**
		3	1	C8 A1/31	**29584**
		4	0	C8 A1/40	**29585**
	Front	1	0	C8 A1D/10	**29587**
		0	1	C8 A1D/01	**29588**
	Side	1	1	C8 A1C	**29586**

Time-delay auxiliary contact

	Delay type	Auxiliary contacts		Delay scope	Type code	Order code
	making time-delay	1	1	0.1~3 s	C8 A2/T0	**29589**
				0.1~30 s	C8 A2/T2	**29590**
				10~180 s	C8 A2/T4	**29591**
	breaking time-delay			0.1~3 s	C8 A3/R0	**29592**
				0.1~30 s	C8 A3/R2	**29593**
				10~180 s	C8 A3/R4	**29594**

Mechanical interlock

	Matched contactor	Type code	Order code
	3SC8-09...32	3SC8-A4X	**29595**
	3SC8-40...95	3SC8-A4D	**29596**

Contactors
Series 3SC8

Derivative products of AC contactor





Time-delay auxiliary contact

Contactor





Mechanical interlock

Reversing contactor





Thermal relay

DOL Starter





Auxiliary block

Capacitor Switching Contactor






Time-delay auxiliary contact

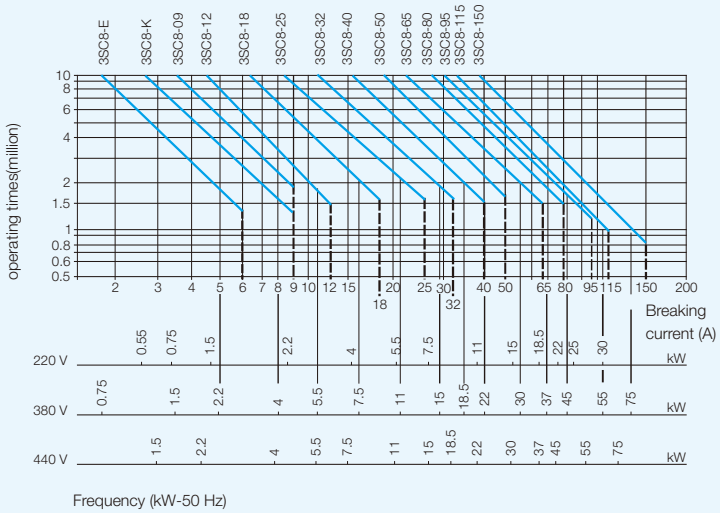
Auxiliary contact block

Star-delta starter

Electrical life curve for AC contactor 3SC8

For breaking control when AC-3 type work. (Ue ≤ 440 V)
The breaking current is equal to rated making current.

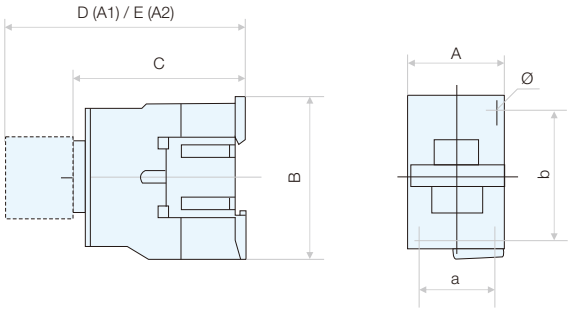
Notes:
Asynchronous, P = 5.5 kW,
Ue = 400 V, Ie = 11 A, Ic = Ie = 11 A
motor or asynchronous, P = 5.5 kW,
Ue = 415 V, Ie = 11 A, Ic = Ie = 11 A
For 30 million electrical life.



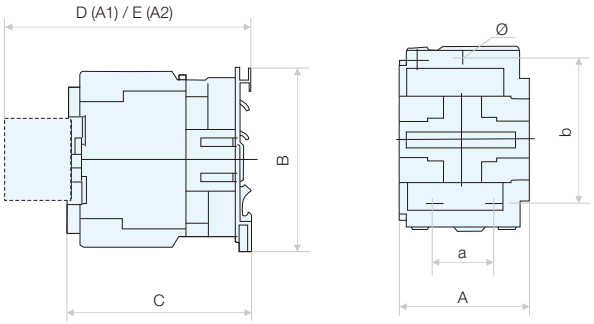
Outline and installation dimensions

unit in mm

3SC8-09...32



3SC8-40...95



Type		A max	B max	C max	D max	E max	a	b	Ø
3	3SC8-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	3SC8-18	47	76	87	118	138	34/35	50/60	2-Ø4.5
	3SC8-25	57	86	95	126	146	40	48	2-Ø4.5
	3SC8-32	57	86	100	131	151	40	48	2-Ø4.5
	3SC8-40...65	77	129	116	145	165	40	100/110	3-Ø6.5
	3SC8-80...95	87	129	127	156	176	40	100/110	3-Ø6.5
4	3SC8-09...12	47	76	82	113	133	34/35	50/60	2-Ø4.5
	3SC8-25	57	86	95	126	146	40	48	2-Ø4.5
	3SC8-40...65	86	129	116 (129)	145	165	40	100/110	3-Ø6.5
	3SC8-80...95	97	129	127 (140)	156	176	40	100/110	3-Ø6.5

Notes: The dimensions in brackets are for 008 (4P) type

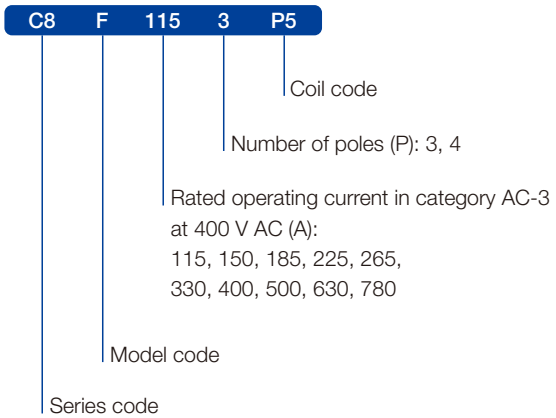
Contactors
Series 3SC8-F

Applications and functions for AC contactor 3SC8-F

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.



Instruction of type code



Technical specifications for contactor 3SC8-F

Model		3SC8-F115	3SC8-F150	3SC8-F185	3SC8-F225	3SC8-F265	3SC8-F330	3SC8-F400	3SC8-F500	3SC8-F630	3SC8-F780
Standard		IEC 60947-4-1									
Number of poles		3, 4	3, 4	3, 4	3, 4	3	3	3, 4	3, 4	3, 4	3, 4
Rated operational current Ie (A)	In AC-3	115	150	185	225	265	330	400	500	630	780
	In AC-1	200	250	275	315	350	400	500	700	1000	1600
Rated operational voltage Ue (V)	Up to	1000									
Frequency limits of the operational current (time/h)		16-200									
Rated conventional thermal current Ith (A)		200	250	275	315	350	400	500	700	1000	1600
Rated insulation voltage Ui (V)		1000									
Rated impulse withstand voltage Uimp (kV)		8									
Rated frequency (Hz)		50/60									
Rated making capacity (A)		10 × In AC-3 or 12 × In AC-4									
Rated breaking capacity (A)	400 V	8 × In AC-3 or 10 × In AC-4									
Rated operational power in category AC-3 (kw)	220/230/240 V	30	40	55	68	75	100	129	147	200	220
	380/400 V	55	75	90	100	132	160	200	250	335	400
	660/690 V	80	100	120	129	180	220	280	355	450	475
Short-circuit protection by fuse (A)	Motor circuit (type aM)	125	160	200	250	315	400	400	500	630	-
	With thermal overload relay (type gG)	200	200	315	315	500	500	630	800	800	-
	gG fuses	200	250	315	315	400	500	500	800	1000	
Average impedance per pole (mW)		0.37	0.35	0.33	0.32	0.3	0.28	0.26	0.18	0.12	0.1
Add-on auxiliary contact blocks	Front	identical to those used on 3SC8 contactors									
	Side	-									
	Front time delay	identical to those used on 3SC8 contactors									
	Front dust and damp protected	-									
Reversing contactor type		3SC8-FN									
Associated thermal overload relays		3SR8-F53					3SR8-F73				
Operation cycles (times/hour)	In AC-3	1200	1200	600	600	600	600	600	600	600	600
Electrical life (× 10^6 times)		1.2	1.2	1	1	0.8	0.8	0.8	0.8	0.8	0.8
Mechanical life (× 10^6 times)		10	10	6	6	6	6	6	6	6	6
Matching fuse model		RT16-1	RT16-1	RT16-2	RT16-2	RT16-2	RT16-3	RT16-3	RT16-4	RT16-4	RT16-4
Tightening torque (N·m) Connection		0.8	0.8	0.8	1.2	1.2	1.2	1.2	1.2	4	4
Cabling cross section CU (mm^2)		95	120	150	185	240	240	2 x 150	2 x 240	240	300
Screw size		M6	M8	M8	M10	M10	M10	M10	M12	M12	M4
Degree of protection		IP20									
Ambient air temperature (°C)		-5 to +40, max. 95 % humidity									
Storage temperature (°C)		-40 ~ +70									
Maximum operating altitude (meters)		2000									
Flame resistance	Conforming to UL 94	V1									

Selection and ordering data

3SC8-F contactor







Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V 440 V (KW)	Poles	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
115	200	30	55	59	3	C8 F1153P5	**12093**
					4	C8 F1154P5	**12103**
150	220	40	75	80	3	C8 F1503P5	**12094**
					4	C8 F1504P5	**12104**
185	275	55	90	100	3	C8 F1853P5	**12095**
					4	C8 F1854P5	**12105**
225	315	63	110	110	3	C8 F2253P5	**12096**
					4	C8 F2254P5	**12106**
265	350	75	132	140	3	C8 F2653P5	**12097**
					4	C8 F2654P5	**12107**
330	400	100	165	180	3	C8 F3303P5	**12098**
					4	C8 F3304P5	**12108**
400	500	115	200	220	3	C8 F4003P5	**12099**
					4	C8 F4004P5	**12109**
500	700	147	250	280	3	C8 F5003P5	**12100**
					4	C8 F5004P5	**12110**
630	1000	200	335	375	3	C8 F6303P5	**12101**
					4	C8 F6304P5	**12111**
780	1500	220	400	425	3	C8 F7803P5	**12102**
					4	C8 F7804P5	**12112**

3SC8-FN reversing contactors





Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V 440 V (KW)	Poles	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
115	200	30	55	60	3	C8 FN115P5	**15718**
					4	C8 FN1154P5	**15719**
150	250	40	75	80	3	C8 FN150P5	**15720**
					4	C8 FN1504P5	**15721**
185	275	55	90	100	3	C8 FN185P5	**15722**
					4	C8 FN1854P5	**15723**
225	315	63	110	120	3	C8 FN225P5	**15724**
					4	C8 FN2254P5	**15725**
265	350	75	132	140	3	C8 FN265P5	**15726**
					4	C8 FN2654P5	**15727**
330	400	100	165	180	3	C8 FN330P5	**15728**
					4	C8 FN3304P5	**15729**
400	500	115	200	220	3	C8 FN400P5	**15730**
					4	C8 FN4004P5	**15731**
500	700	147	250	280	3	C8 FN500P5	**15732**
					4	C8 FN5004P5	**15733**
630	1000	200	335	375	3	C8 FN630P5	**15734**
					4	C8 FN6304P5	**15735**
780	1500	220	400	425	3	C8 FN780P5	**15736**
					4	C8 FN7804P5	**15737**

Selection and ordering data

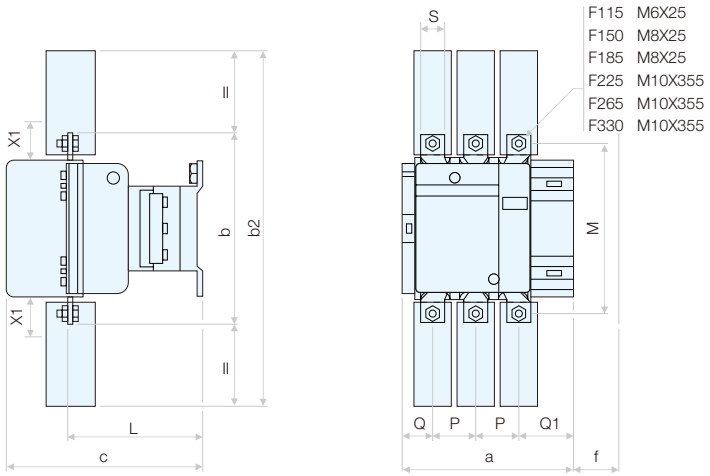
Coil for contactor 3SC8-F

	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
3SC8X-FF for AC contactor 3SC8-F115...150 	230	50/60	P7	C8X-FFP7	**32002**
	240	50/60	U7	C8X-FFU7	**32003**
	380	50/60	Q7	C8X-FFQ7	**32004**
	440	50/60	R7	C8X-FFR7	**32006**
3SC8X-FG for AC contactor 3SC8-F185...225 	230	50/60	P7	C8X-FGP7	**32008**
	240	50/60	U7	C8X-FGU7	**32009**
	380	50/60	Q7	C8X-FGQ7	**32010**
	440	50/60	R7	C8X-FGR7	**32012**
3SC8X-FH for AC contactor 3SC8-F265...330 	230	50/60	P7	C8X-FHP7	**32014**
	240	50/60	U7	C8X-FHU7	**32015**
	380	50/60	Q7	C8X-FHQ7	**32016**
	440	50/60	R7	C8X-FHR7	**32018**
3SC8X-FJ for AC contactor 3SC8-F400 	230	50/60	P7	C8X-FJP7	**32020**
	240	50/60	U7	C8X-FJU7	**32021**
	380	50/60	Q7	C8X-FJQ7	**32022**
	440	50/60	R7	C8X-FJR7	**32024**
3SC8X-FK for AC contactor 3SC8-F500 	230	50/60	P7	C8X-FKP7	**32026**
	240	50/60	U7	C8X-FKU7	**32027**
	380	50/60	Q7	C8X-FKQ7	**32028**
	440	50/60	R7	C8X-FKR7	**32030**
3SC8X-FL for AC contactor 3SC8-F630 	230	50/60	P7	C8X-FLP7	**32032**
	240	50/60	U7	C8X-FLU7	**32033**
	380	50/60	Q7	C8X-FLQ7	**32034**
	440	50/60	R7	C8X-FLR7	**32036**
3SC8X-FX for AC contactor 3SC8-F780 	230	50/60	P7	C8X-FXP7	**32038**
	240	50/60	U7	C8X-FXU7	**32039**
	380	50/60	Q7	C8X-FXQ7	**32040**
	440	50/60	R7	C8X-FXR7	**32042**

Outline and installation dimensions (Series 3SC8-F)

unit in mm

3SC8-F115...330

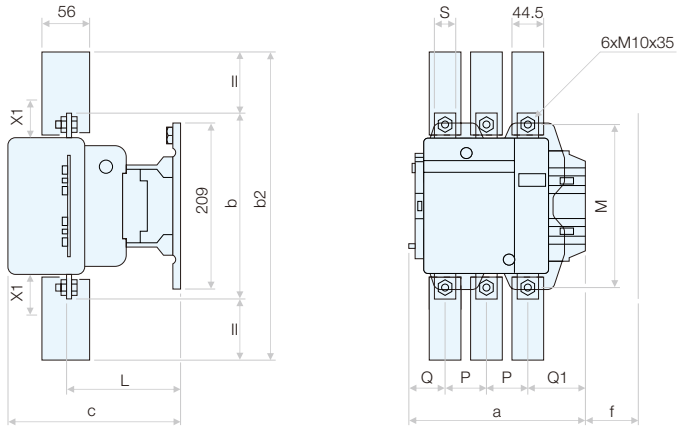


3SC8-F		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	1	Y	Z
115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	44	13.5
150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4P	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	44	13.5
185	3P	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
	4P	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
225	3P	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	44	13.5
	4P	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	44	13.5
265	3P	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	38	21.5
	4P	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	38	21.5
330	3P	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5
	4P	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5

f = minimum distance required for coil removal

unit in mm

3SC8-F400...500

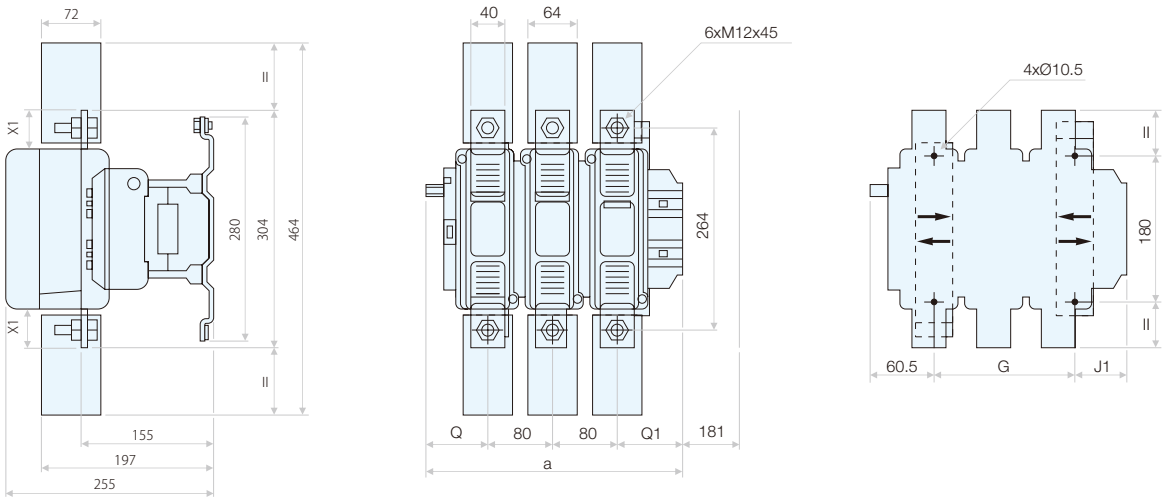


3SC8-F		a	b	b2	c	f	G*	G min.	G max.	G1*	G1 min.	G1 max.	J	L	M	P	Q	Q1	S
400	2P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	69	96	25
	3P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	43	74	25
	4P	261	206	375	219	119	80	66	150	170	156	240	67.5	145	181	48	43	74	25
500	2P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	76	102	30
	3P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	46	77	30
	4P	288	288	400	232	141	140	66	175	230	156	265	34.5	146	208	55	46	77	30

Outline and installation dimensions (Series 3SC8-F)

unit in mm

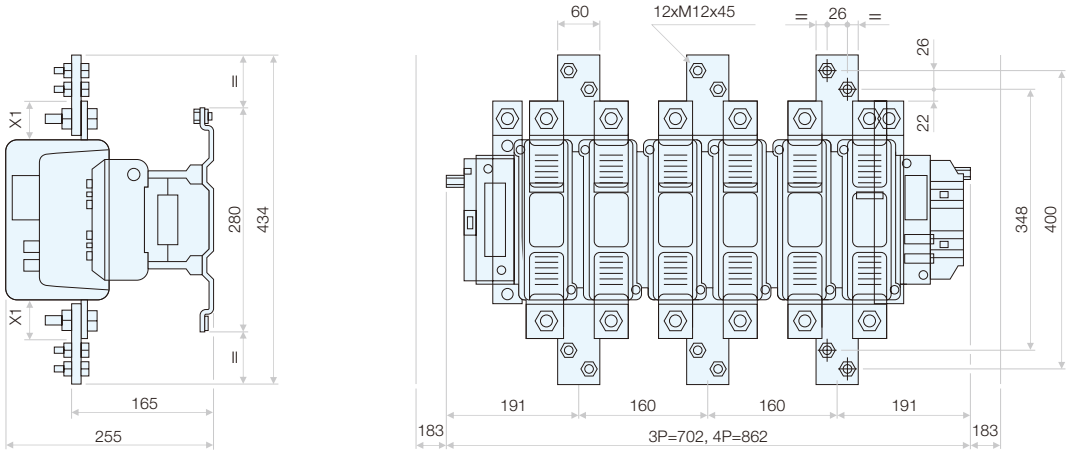
3SC8-F630...800



3SC8-F		a	G	G min.	G max.	J1	Q	Q1
630	2P	309	180	100	195	68.5	102	127
630, 800	3P	309	180	100	195	68.5	60	89
630	4P	309	240	150	275	68.5	60	89

unit in mm

3SC8-F780



Applications and functions

- Switching parallel connection capacitance from low voltage reactive power compensating equipments
- Reducing efficiently the impact to capacitor and restraining over-voltage when switching ON/OFF with special flow-cut equipment



Instruction of type code

C19 25 11 P5

- P5: Coil code
- 11: Quantity of auxiliary contact
  - 11: 1NO+1NC
  - 02: 2NC
  - 20: 2NO
- 25: Rated thermal current
- C19: Series code

Technical specifications

Type			3SC19-25	3SC19-32	3SC19-43	3SC19-50	3SC19-63	3SC19-80	3SC19-95	3SC19-125
Rated insulating voltage Ui		V	690	690	690	690	690	690	690	690
Rated conventional thermal current Ith		A	25	32	43	50	63	80	95	125
Controllable power AC-6b	220/230 V	Kvar	6	8.5	10	12	15	22	23	25
	380/400 V	Kvar	12	16	20	25	30	37	45	50
	660/690 V	Kvar	12	16	20	25	30	37	45	50
Rated current of capacitor	400 V	A	17.3	23	29	36	43	53	65	72
Rated working current 1.3Ie		A	22.5	30	37.7	47	56	69	85	94
Restrained surge capacity			≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie
Coil consumed power	Starting	VA	70	100	100	245	245	245	245	245
	Holding	VA	9	10	10	30	30	30	30	30
Auxiliary contact type	2NO		√	√	√	-	-	-	-	-
	2NC		√	√	√	-	-	-	-	-
	1NO + 1NC		√	√	√	-	-	-	-	-
	2NO + 1NC		-	-	-	√	√	√	√	√
	1NO + 2NC		-	-	-	√	√	√	√	√
Mechanical life	10^4	times	300	300	300	100	100	100	80	80
Electrical life	10^4	times	10	10	10	6	6	6	6	6
Operating frequency		times/h	120	120	120	120	120	120	120	120
Pollution grade			3	3	3	3	3	3	3	3
Installation category			3	3	3	3	3	3	3	3
Installation type	screws		√	√	√	√	√	√	√	√
	35mm DIN-rail		√	√	√	√	√	√	√	√
	75mm DIN-rail		-	-	-	-	√	√	√	√
Ambient air temperature		℃	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Altitude	max.	meter	2000	2000	2000	2000	2000	2000	2000	2000
Coil sectional area (mm^2)			4	6	10	10	16	25	35	50
Tightening torque (N·m)			1.7	2.0	2.5	5	5	5	9	9

Capacitor Switching Contactors
Series 3SC19

1

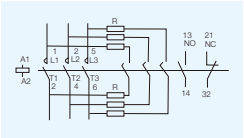
Selection and ordering data



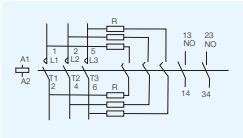


Rated conventional thermal current Ith (A)	Controllable power 220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)	Auxiliary contact		230 V AC 50Hz Please contact us for other coil specifications Type code	Order code
25	6	12	12	1	1	C19 2511 P5	**27308**
				0	2	C19 2502 P5	**27309**
				2	0	C19 2520 P5	**27310**
32	8.5	16	16	1	1	C19 3211 P5	**27311**
				0	2	C19 3202 P5	**27312**
				2	0	C19 3220 P5	**27313**
43	10	20	20	1	1	C19 4311 P5	**27314**
				0	2	C19 4302 P5	**27315**
				2	0	C19 4320 P5	**27316**
50	12	25	25	1	2	C19 5012 P5	**27317**
				2	1	C19 5021 P5	**27318**
63	15	30	30	1	2	C19 6312 P5	**27319**
				2	1	C19 6321 P5	**27320**
80	22	37	37	1	2	C19 8012P5	**27321**
				2	1	C19 8021P5	**27322**
95	23	45	45	1	2	C19 9512 P5	**25496**
				2	1	C19 9521 P5	**25686**
125	25	50	50	1	2	C19 12512 P5	**27323**
				2	1	C19 12521 P5	**27324**

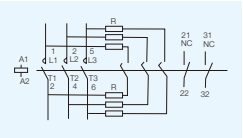
Terminal and electric diagram



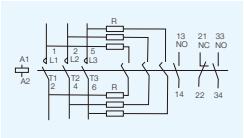
3SC19-2511
3SC19-3211
3SC19-4311



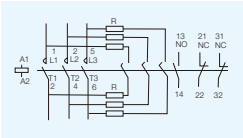
3SC19-2520
3SC19-3220
3SC19-4320



3SC19-2502
3SC19-3202
3SC19-4302



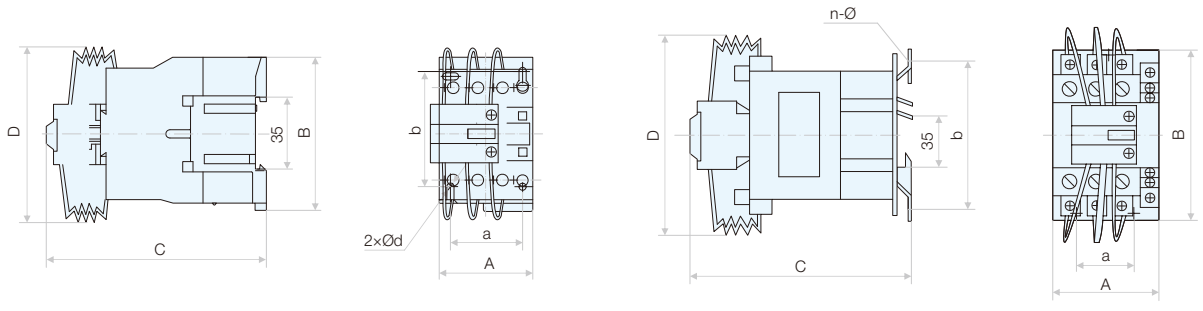
3SC19-5021
3SC19-6321
3SC19-8021
3SC19-9521
3SC19-12521



3SC19-5012
3SC19-6312
3SC19-8012
3SC19-9512
3SC19-12512

Outline and installation dimensions

unit in mm



Type	Outline dimensions A	B	C	D	Installation dimensions a	b	C
3SC19-25	47	76	124	100	34/35	50/60	2-Ø4.5
3SC19-32	57	86	132	110	40	50/60	2-Ø4.5
3SC19-43	57	86	136	110	40	50/60	2-Ø4.5
3SC19-50	77	129	152	155	40	100/110	3-Ø6.5
3SC19-63	77	129	152	155	40	100/110	3-Ø6.5
3SC19-80	77	129	152	155	40	100/110	3-Ø6.5
3SC19-95	87	129	162	165	40	100/110	3-Ø6.5
3SC19-125	87	129	162	165	40	100/110	3-Ø6.5

Applications and functions for thermal relay

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code

R8 K 0301 3

- 3: Number of pins (3: 3 pins; 5: 5 pins)
- 0301: Code of setting current range
- K: Model code
- R8: Series code

Techinical specifications for assembled thermal relay of type 3SC8-K

- Type: 3SR8-K
- Standard: IEC 60947-4-1
- Tripping class: 10 A
- Number of connecting pin: 4
- Rated operational voltage Ue (V): up to 690
- Rated insulation voltage Ui (V): 690
- Rated impulse withstand voltage Uimp (kV): 6
- Rated current range In (A):
  0.11-0.16, 0.16-0.23, 0.23-0.36, 0.36-0.54,
  0.54-0.8, 0.8-1.2, 1.8-2.6, 2.6-3.7,
  3.7-5.5, 5.-8, 8-11.5, 10-14
- Signalling: Trip indicator
- Tightening torque (N·m): 0.8
- Degree of protection: IP20
- Ambient air temperature (ºC): -5 to +40, max. 95 % humidity
- Storage temperature (ºC): -40 ~ +75
- Maximum operating altitude (meters): 2000
- Flame resistance: V1
- Mounting: directly under the contactor

Selection and ordering data

3SR8-K thermal relay matched with contactor 3SC8-K

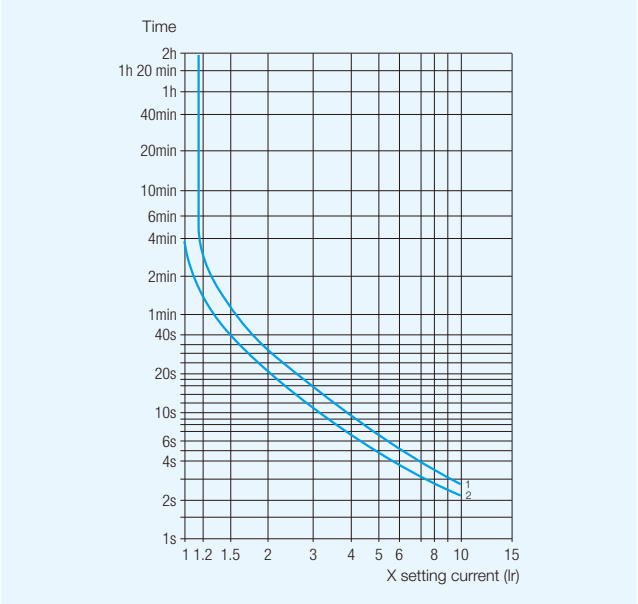
	Current setting range (A)	Fuses to be used with selected relay			
		aM Type (A)	gG Type (A)	Type code	Order code
3SR8-K 5 Pins	0.11-0.16	0.25	0.5	R8 K0301/5	**15594**
	0.16-0.23	0.25	0.5	R8 K0302/5	**15595**
	0.23-0.36	0.5	1	R8 K0303/5	**15596**
	0.36-0.54	1	1.6	R8 K0304/5	**15597**
	0.54-0.8	1	2	R8 K0305/5	**15598**
	0.8-1.2	2	6	R8 K0306/5	**15599**
	1.8-2.6	4	8	R8 K0308/5	**15600**
	2.6-3.7	4	10	R8 K0310/5	**15601**
	3.7-5.5	6	16	R8 K0312/5	**15602**
	5.-8	8	20	R8 K0314/5	**15603**
	8-11.5	10	25	R8 K0316/5	**15604**
	10-14	16	32	R8 K0321/5	**15605**



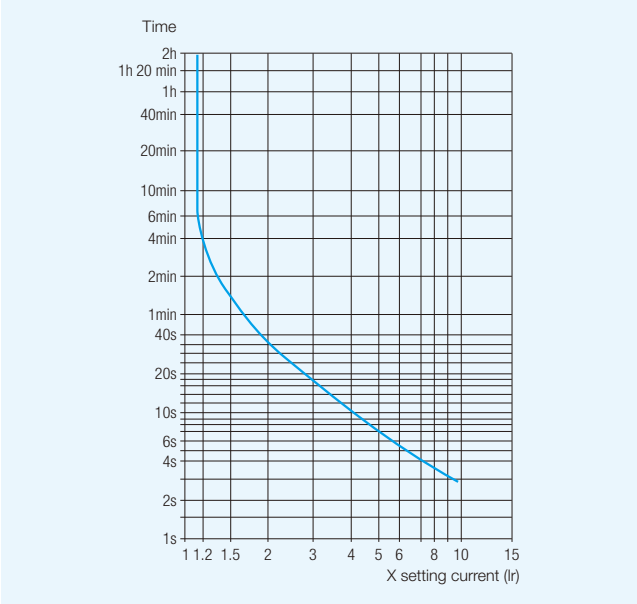
Tripping curve of thermal relay 3SR8-K

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state



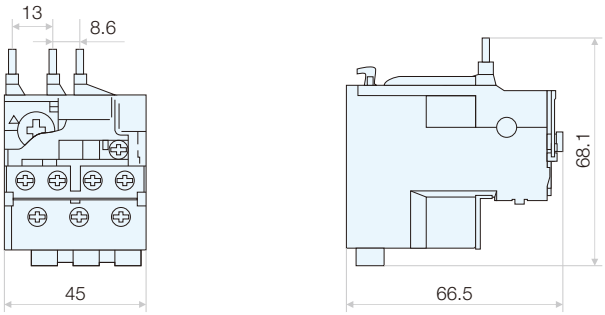
Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Outline and installation dimensions (3SC8-K, 3SR8-K)

unit in mm



Applications and functions for thermal relay 3SR8

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code

R8 25 0.16

Max. setting current range (A):

0.16: 0.1-0.16	10: 7-10
0.25: 0.16-0.25	13: 9-13
0.4: 0.25-0.4	18: 12-18
0.63: 0.4-0.63	25: 17-25
1: 0.63-1	32: 23-32
1.6: 1-1.6	36: 28-36
2: 1.25-2	40: 30-40
2.5: 1.6-2.5	50: 37-50
4: 2.5-4	65: 48-65
6: 4-6	70: 55-70
8: 5.5-8	80: 63-80
	93: 80-93

Rated frame current (A): 25, 36, 93

Series code

Technical specifications for assembled thermal relay of type 3SR8

Type	3SR8-D13	3SR8-D23	3SR8-D33
Standard	IEC 60947-4-1		
Tripping class	10 A		
Rated working current Ie (A)	25	36	93
Setting range (A)	0.1-25	23-36	23-93
Rated insulation voltage Ui (V)	690		
Rated impulse withstand voltage Uimp (kV)	6		
Signalling Trip indicator	Trip indicator		
Tightening torque (N·m)	0.8		
Degree of protection	IP20		
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity		
Storage temperature (°C)	-40 ~ +75		
Maximum operating altitude (meters)	2000		
Flame resistance	V1		
Mounting	Directly under the contactor		

Thermal overload relays
Series 3SR8

Selection and ordering data

Series 3SR8







Rated frame current (A)	Current setting range (A)	Matched fuse type aM (A)	Matched fuse type gG (A)	Matched AC contactor	Type code	Order code
25	0.1~0.16	0.25	2	3SC8-09	R8 25/0.16	**22875**
	0.16~0.25	0.25	2	3SC8-09	R8 25/0.25	**22876**
	0.25~0.4	1	2	3SC8-09	R8 25/0.40	**22877**
	0.4~0.63	1	2	3SC8-09	R8 25/0.63	**22878**
	0.63~1	2	4	3SC8-09	R8 25/1	**22879**
	1~1.6	2	4	3SC8-09	R8 25/1.6	**22880**
	1.25~2	4	6	3SC8-09	R8 25/2	**22881**
	1.6~2.5	4	6	3SC8-09	R8 25/2.5	**22882**
	2.5~4	6	10	3SC8-09	R8 25/4	**22883**
	4~6	8	16	3SC8-09	R8 25/6	**22884**
	5.5~8	12	20	3SC8-09	R8 25/8	**22885**
	7~10	12	20	3SC8-12	R8 25/10	**22886**
	9~13	16	25	3SC8-12	R8 25/13	**22887**
	12~18	20	35	3SC8-18	R8 25/18	**22888**
	17~25	25	50	3SC8-25	R8 25/25	**22889**
36	23~32	40	63	3SC8-32	R8 36/32	**22890**
	28~36	40	80	3SC8-32	R8 36/36	**22891**
93	23~32	40	63	3SC8-40	R8 93/32	**22892**
	30~40	40	100	3SC8-40	R8 93/40	**22893**
	37~50	63	100	3SC8-50	R8 93/50	**22894**
	48~65	63	100	3SC8-65	R8 93/65	**22895**
	55~70	80	125	3SC8-80	R8 93/70	**22896**
	63~80	80	125	3SC8-80	R8 93/80	**22897**
	80~93	100	160	3SC8-95	R8 93/93	**22898**

Mounting block

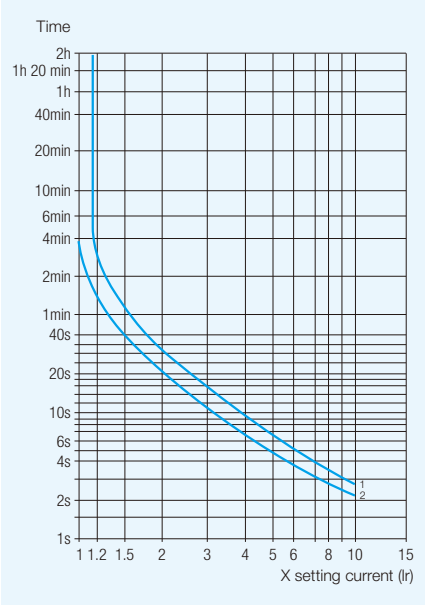


Matechd relay	Type code	Order code
R8 25	C8 A7D1064	**15971**
R8 36	C8 A7D2064	**15972**
R8 93	C8 A7D3064	**15973**

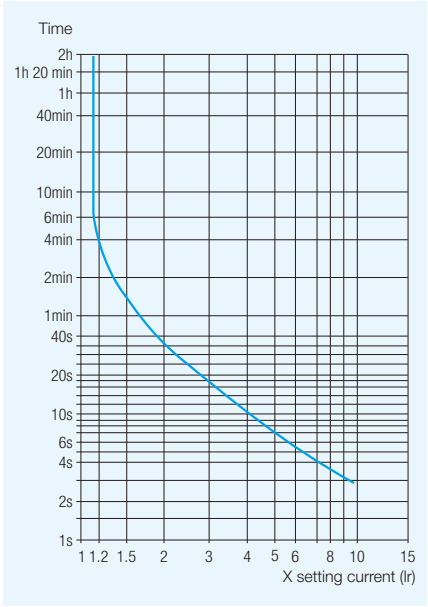
Action characterisitics for thermal relay 3SR8

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state

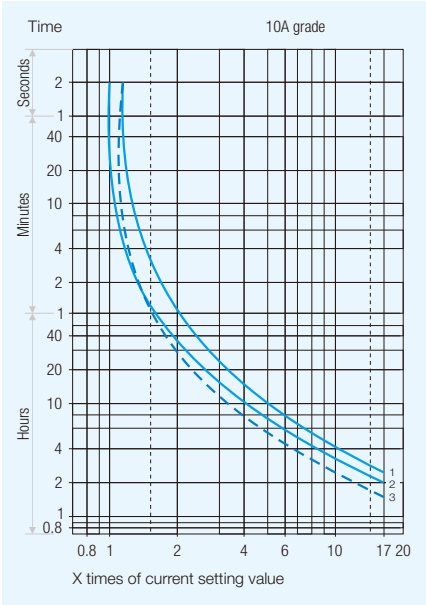


Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Tripping curve for thermal relay 3SR8

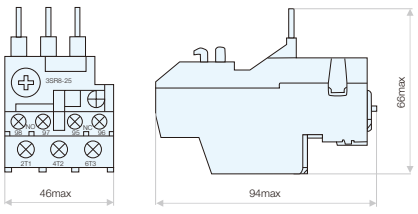


1. Equilibrium running, 3 phase, start from cold state
2. Equilibrium running, 2 phase, start from cold state
3. Equilibrium running, 3 phase, after long period of setting current (hot state)

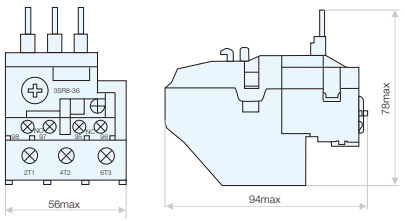
Outline and installation dimensions

unit in mm

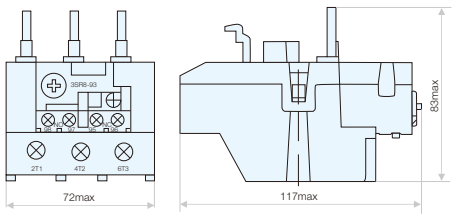
3SR8-25



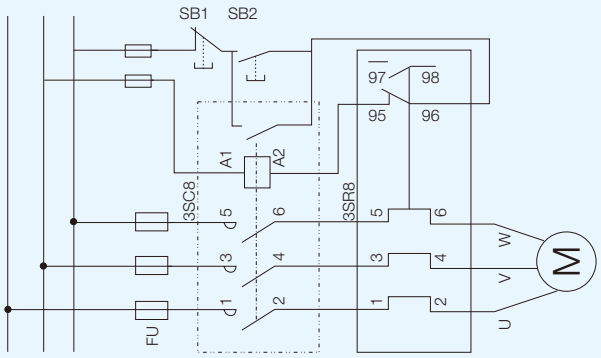
3SR8-36



3SR8-93



Operating principle diagram of overload relay



FU - fuse
3SC8 - AC contactor
3SR8 - thermal relay
SB1 - stop button
SB2 - start button

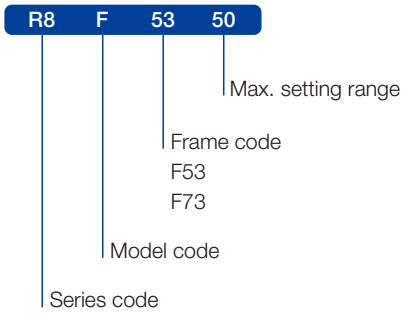
Thermal overload relays
Series 3SR8-F

Applications and functions for thermal relay 3SR8-F

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of fuse or circuit breaker.
- Used for the protection of motors.



Instruction of type code



Techinical specifications for thermal relay 3SR8-F

Type	3SR8-F53	3SR8-F73
Standard	IEC 60947-4-1	
Tripping class	10 A, 20 A	
Rated operational voltage Ue (V)	1000	
Rated working current Ie (A)	220	630
Setting range (A)	30-220	200-630
Reset	Manual on front of relay	
Rated insulation voltage Ui (V)	1000	
Rated impulse withstand voltage Uimp (kV)	6	
Tightening torque (N·m)	0.8	
Degree of protection	IP20	
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity	
Storage temperature (°C)	-40 ~ +75	
Maximum operating altitude (meters)	2000	
Flame resistance	V1	

Selection and ordering data

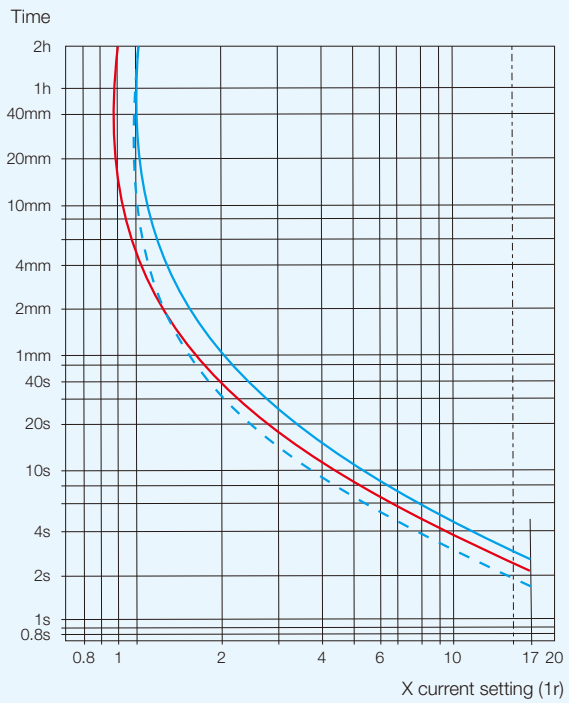
3SR8-F thermal relay matched with contactor 3SC8-F





Current setting range	Fuses to be used with selected relay maximum rating		Matched contactor		
	aM Type	gG Type			
(A)	(A)	(A)		Type code	Order code
30-50	50	80	3SC8-F115…F185	R8 F53/50	**15710**
48-80	80	125	3SC8-F115…F185	R8 F53/80	**15711**
60-100	100	200	3SC8-F115…F185	R8 F53/100	**15712**
90-150	160	250	3SC8-F115…F185	R8 F53/150	**15713**
132-220	250	315	3SC8-F225…F265	R8 F53/220	**15714**
200-330	400	500	3SC8-F225…F500	R8 F73/330	**15715**
300-500	500	800	3SC8-F225…F500	R8 F73/500	**15716**
380-630	630	800	3SC8-F400…F630	R8 F73/630	**15717**

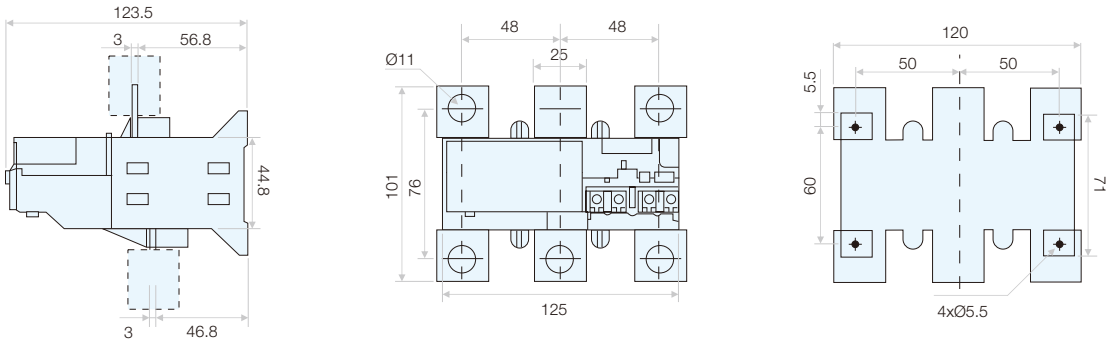
Tripping curve for thermal relay 3SR8-F



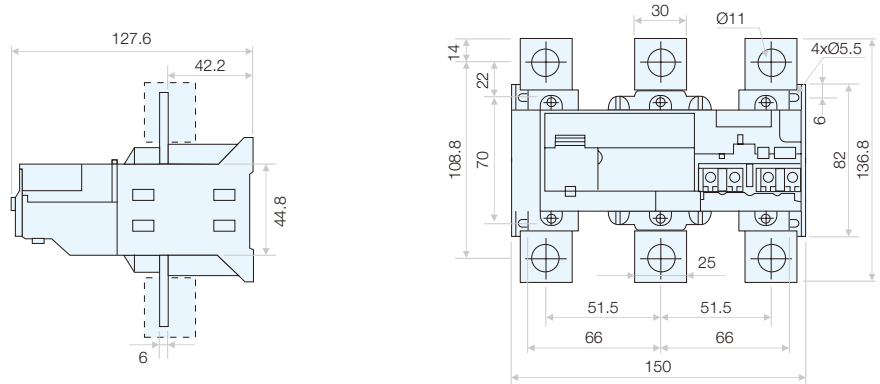
Outline and installation dimensions (Series 3SR8-F)

unit in mm

3SR8-F53



3SR8-F73



Dol Starters
Series 3SQ1

Applications and functions

- Controlling the direct start and halt of the electromotor
- Protecting the motor from overload and phase failure
- Used in remote making and breaking circuit and frequently starting and controlling motor.



Instruction of type code

Q1 09 P5

- P5 — Coil code
- 09 — Rated working current in category AC-3
- Q1 — Series code

Technical specifications

- Type: 3SQ1
- Standards: IEC 60947-4-1, IEC 60439-1
- Rated working current (A): 09, 12, 18, 25, 32, 40, 50, 65, 80, 95
- Rated operational voltage Ue (V): 690
- Rated insulation voltage Ui (V): 690
- Rated impulse withstand voltage Uimp (kV): 8
- Rated frequency (Hz): 50/60
- Control (2 pushbuttons mounted on enclosure cover): 1 green Start button “I”; 1 red Stop/Reset button “O”
- Enclosure: 3SQ1-09/12/18 Double insulated, degree of protection IP65;
  3SQ1-25/32 Double insulated, degree of protection IP55;
  3SQ1-40/50/65/80/95 Metal, degree of protection IP65
- Electrical life (× 10^5 times): 5
- Mechanical life (× 10^5 times): 50
- The model of matched AC contactor: 3SC8
- The model of matched thermal relay: 3SR8
- Ambient air temperature (ºC): -5 to +40, max. 95 % humidity
- Storage temperature (ºC): -40 ~ +75
- Maximum operating altitude (meters): 2000

Selection and ordering data

Standard power ratings of 3 phase motors 50-60 Hz in category AC-3			Rated working current in category AC-3, 380 V	Conventional thermal current Ith	Type code of matched contactor	Type code of matched thermal relay	230 V 50 Hz Please contact us for other coil voltage	
220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)	(A)	(A)			Type code	Order code
2.2	4	5.5	9	20	C809	R8 D13	Q1 09P5	**25606**
3	5.5	7.5	12	20	C812	R8 D13	Q1 12P5	**25607**
4	7.5	9	18	32	C818	R8 D13	Q1 18P5	**25608**
5.5	11	15	25	40	C825	R8 D13	Q1 25P5	**25609**
7.5	15	18.5	32	50	C832	R8 D13	Q1 32P5	**25610**
11	18.5	30	40	60	C840	R8 D33	Q1 40P5	**25611**
15	22	33	50	80	C850	R8 D33	Q1 50P5	**25612**
18.5	30	37	65	80	C865	R8 D33	Q1 65P5	**25613**
22	37	45	80	110	C880	R8 D33	Q1 80P5	**25614**
25	45	45	95	125	C895	R8 D33	Q1 95P5	**25615**

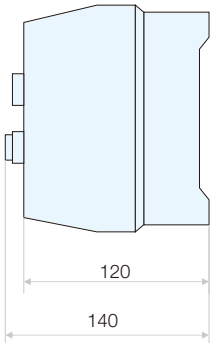


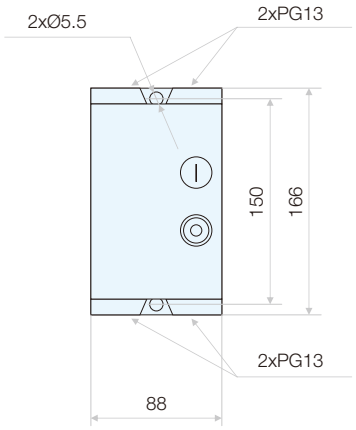


Outline and installation dimensions

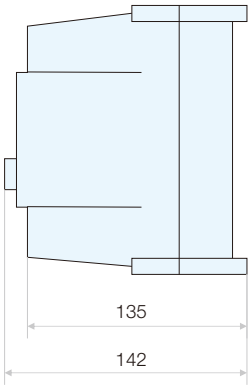
unit in mm

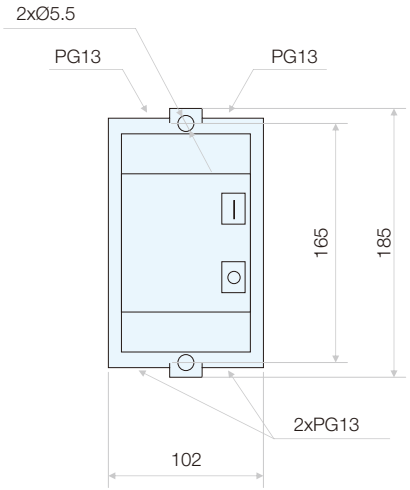
3SQ1-09/12/18



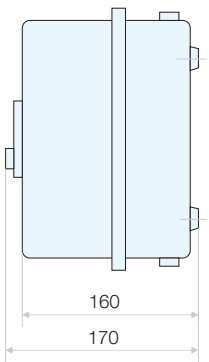


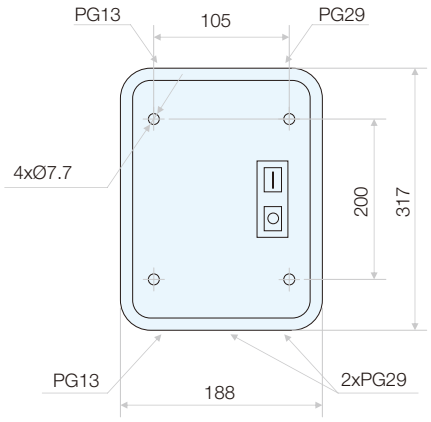
3SQ1-25/32





3SQ1-40/50/65/80/95





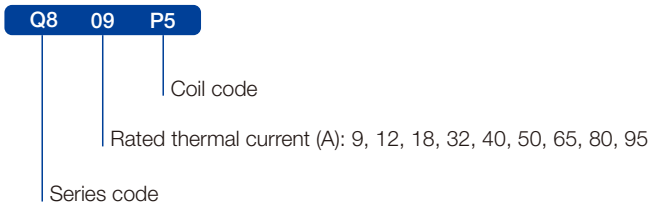
Star-delta Starters
Series 3SQ8-D

Applications and functions

- For startup of motor that has heavy duty and current used is high
- Reducing the starting current and starting torque when motor starts up
- Smaller circuit breakers and thinner 3-phase line wires can be installed to supply power to the motor



Instruction of type code



Selection and ordering data

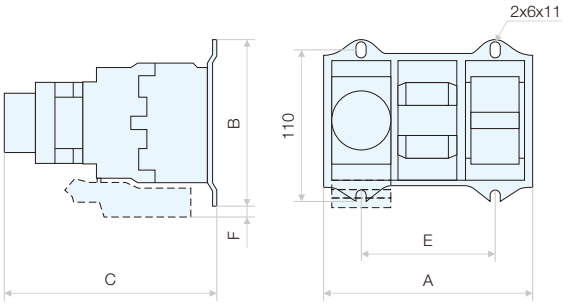


Rated operating current 380V AC-3 (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3 220 V 230 V (KW)	380 V 400 V (KW)	415 V (KW)	445 V (KW)	230 V 50 Hz Please contact us for other coil voltage Type code	Order code
9	4	7.5	7.5	7.5	Q8 D093P5	**12981**
12	5.5	11	11	11	Q8 D123P5	**12982**
18	7.5	15	15	18.5	Q8 D183P5	**12983**
25	11	18.5	18.5	22	Q8 D253P5	**12984**
32	15	25	25	30	Q8 D323P5	**12985**
40	18.5	33	33	37	Q8 D403P5	**12986**
50	25	45	45	59	Q8 D503P5	**12987**
65	30	55	55	59	Q8 D653P5	**12988**
80	37	63	63	75	Q8 D803P5	**12989**
95	45	80	80	80	Q8 D953P5	**12990**

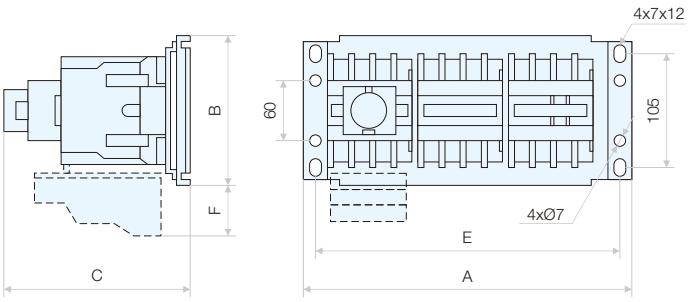
Outline and installation dimensions

unit in mm

3SQ8-09~32



3SQ8-40~95



Model	A	B	C	E	F
3SQ8-09~18	135	124	153	90±0.5	22
3SQ8-25~32	166	124	165	90±0.5	35
3SQ8-40~65	285	143	178	267±1.0	50
3SQ8-80~95	315	143	187	297±1.0	80

Applications and functions

- Providing motor overload protection and short-circuit protection.



Instruction of type code

M18 2 M 0.16

- **0.16** — Max. setting current range
  - 0.1-0.16 0.16-0.25
  - 0.25-0.4 0.4-0.63
  - 0.63-1 1-1.6
  - 1.6-2.5 2.5-4
  - 4-6.3 6-10
  - 9-14 13-18
  - 17-23 20-25
  - 24-32 25-40
  - 40-63 56-80
- **M** — Pushbutton type
- **2** — Frame code
  - 2: 0.16~32A
  - 3: 40~80A
- **M18** — Series code

1

Technical specifications

Type			3SM18-25~32																3SM18-63~80	
Standards			IEC 60947-2, IEC 60947-4-1																	
Utilization category	according to IEC 60947-2		A																	
	according to IEC 60947-4-1		AC-3																	
Rated insulation voltage Ui (V)			690																	
Rated operational voltage Ue (V)			230/240, 400/415, 440, 500, 660/690																	
Rated impulse withstand voltage Uimp (kA)			8																	
Rated range of setting current (A)			0.1-0.16	0.16-0.25	0.25-0.4	0.4-0.63	0.63-1	1-1.6	1.6-2.5	2.5-4	4-6.3	6-10	9-14	13-18	17-23	20-25	24-32	25-40	40-63	56-80
Rated current of release (A)			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	10	14	18	23	25	32	40	63	80
Rated frequency (Hz)			50/60																	
Rated ultimate short-circuit breaking capacity Icu (kA)	230/240 V		100	100	100	100	100	100	100	100	100	100	100	100	50	50	100	100	100	100
	400/415 V		100	100	100	100	100	100	100	100	100	100	15	15	15	15	35	35	35	35
	440 V		100	100	100	100	100	100	100	100	100	100	8	8	6	6	-	25	25	25
	500 V		100	100	100	100	100	100	100	100	100	100	6	6	4	4	-	8	8	8
	660/690 V		100	100	100	100	100	100	3	3	3	3	3	3	3	3	-	4	4	4
Rated service short-ciurcuit breaking capacity Ics (kA)	230/240 V		100	100	100	100	100	100	100	100	100	100	100	100	50	50	75	75	75	75
	400/415 V		100	100	100	100	100	100	100	100	100	100	7.5	6	7.5	6	17.5	17.5	17.5	17.5
	440 V		100	100	100	100	100	100	100	100	100	100	4	4	3	3	-	12.5	12.5	12.5
	500 V		100	100	100	100	100	100	100	100	100	100	4.5	4.5	3	3	-	4	4	4
	660/690 V		100	100	100	100	100	100	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	-	2	2	2
Arcing distance(mm)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50
Standard rated power of three-phase (kW)	230/240 V		-	-	-	-	-	-	0.37	0.75	1.1	2.2	3	4	5.5	5.5	5.5	11	15	22
	400 V		-	-	-	-	-	0.37	0.75	1.5	2.2	4	5.5	7.5	11	11	11	18.5	30	40
	500 V		-	-	-	-	-	-	0.75	1.5	2.2	4	5.5	9	11	11	11	22	33	45
	440 V		-	-	-	-	0.37	0.55	1.1	1.5	3	4	7.5	9	11	11	-	22	33	45
	500 V		-	-	-	-	0.37	0.75	1.1	2.2	3.7	5.5	7.5	9	11	11	-	25	40	55
	660/690 V		-	-	-	0.37	0.55	1.1	1.5	3	4	7.5	9	11	15	15	-	33	55	63
Current setting value of instantaneous eletromagnetic release Ir (A)			1.5	2.4	5	8	13	22.5	33.5	51	78	138	170	223	327	327	327	480	756	960
Current rating off use-link of back-up fuse, which is only needed in case of Icc>Icu (Icc: prospective short-circuit breaking current) ● Fuse is not required	230/240 V	aM A	●	●	●	●	●	●	●	●	●	●	●	●	80	80	●	●	●	●
		gl/gG A	●	●	●	●	●	●	●	●	●	●	●	●	100	100	●	●	●	●
	400/415 V	aM A	●	●	●	●	●	●	●	●	●	●	63	63	63	63	●	250	315	315
		gl/gG A	●	●	●	●	●	●	●	●	●	●	80	80	80	80	●	315	400	400
	440 V	aM A	●	●	●	●	●	●	●	●	50	50	50	50	50	50	-	250	315	315
		gl/gG A	●	●	●	●	●	●	●	●	63	63	63	63	63	63	-	315	400	400
	500 V	aM A	●	●	●	●	●	●	●	●	50	50	50	50	50	50	-	160	200	200
		gl/gG A	●	●	●	●	●	●	●	●	63	63	63	63	63	63	-	200	250	250
	500 V	aM A	●	●	●	●	●	●	16	25	32	32	40	40	40	40	-	160	200	200
		gl/gG A	●	●	●	●	●	●	20	32	40	40	50	50	50	50	-	200	250	250
Add-on auxiliary contact blocks	Front mounting		1NO+1NC, 2NO															-		
	Side mounting		1NO+1NC, 2NO															-		
Shunt release			●															-		
Under voltage release			●															-		
Auxiliary alarm			1NO+1NO, 1NO+1NC, 1NC+1NO, 1NC+1NC															-		
Enclosure			●															-		
Electrical life in AC-3 (times)			10000																	
Mechanical life (times)			20000																	
Tightening torque (N·m)			1.7																	
Degree of protection			IP20; IP65 with enclosure																	
Ambient air temperature (°C)			-5 to +40, max. 95 % humidity																	
Storage temperature (°C)			-40~+75																	
Maximum operating altitude (meters)			2000																	

Selection and ordering data

3SM18





Setting range of thermal trips (A)	Rated current of release (A)	Type code	Order code
0.1-0.16	0.16	M18 2M0.16	**12730**
0.16-0.25	0.25	M18 2M0.25	**12731**
0.25-0.4	0.4	M18 2M0.4	**12732**
0.4-0.63	0.63	M18 2M0.63	**12733**
0.63-1	1	M18 2M1.0	**12734**
1-1.6	1.6	M18 2M1.6	**12735**
1.6-2.5	2.5	M18 2M2.5	**12736**
2.5-4	4	M18 2M4.0	**12737**
4-6.3	6.3	M18 2M6.3	**12738**
6-10	10	M18 2M10	**12739**
9-14	14	M18 2M14	**12740**
13-18	18	M18 2M18	**12741**
17-23	23	M18 2M23	**12742**
20-25	25	M18 2M25	**12743**
24-32	32	M18 2M32	**12744**
25-40	40	M18 3/40	**12767**
40-63	63	M18 3/63	**12768**
56-80	80	M18 3/80	**12769**

3SM18 with enclosure



Setting range of thermal trips (A)	Rated current of release (A)	Type code	Order code
0.1-0.16	0.16	M18 4M0.16	**12770**
0.16-0.25	0.25	M18 4M0.25	**12771**
0.25-0.4	0.4	M18 4M0.4	**12772**
0.4-0.63	0.63	M18 4M0.63	**12773**
0.63-1	1	M18 4M1.0	**12774**
1-1.6	1.6	M18 4M1.6	**12775**
1.6-2.5	2.5	M18 4M2.5	**12776**
2.5-4	4	M18 4M4.0	**12777**
4-6.3	6.3	M18 4M6.3	**12778**
6-10	10	M18 4M10	**12779**
9-14	14	M18 4M14	**12780**
13-18	18	M18 4M18	**12781**
17-23	23	M18 4M23	**12782**
20-25	25	M18 4M25	**12783**
24-32	32	M18 4M32	**12784**

3SM18-2-AV Under-voltage release



Rated operational voltage Ue (V)	Voltage range of operation	Frequency (HZ)	Type code	Order code
110-127	35%-70% Ue	50/60	AU115	**12790**
220-240	35%-70% Ue	50/60	AU225	**12791**
380-415	35%-70% Ue	50/60	AU385	**12792**

3SM18-2-AS Shunt release



Rated operational voltage Ue (V)	Voltage range of operation	Frequency (HZ)	Type code	Order code
110-127	70%-110% Ue	50/60	AS115	**12793**
220-240	70%-110% Ue	50/60	AS225	**12794**
380-415	70%-110% Ue	50/60	AS385	**12795**

Motor Protection Circuit Breakers
Series 3SM18

Selection and ordering data

3SM18-2-AN11 Auxiliary contact



Mounting type	Contact position	Conventional thermal current Ith (A)	Type code	Order code
Top	1NO+1NC	2.5	AE11	**12786**
Top	2NO	2.5	AE20	**12787**
Side	1NO+1NC	6	AN11	**12788**
Side	2NO	6	AN20	**12789**

3SM18-2-AD Auxiliary Alarm



Contact position	Conventional thermal current Ith (A)	Type code	Order code
1NO+1NO	6	AD1010	**12796**
1NO+1NC	6	AD1001	**12797**
1NC+1NO	6	AD0110	**12798**
1NC+1NC	6	AD0101	**12799**

Enclosure

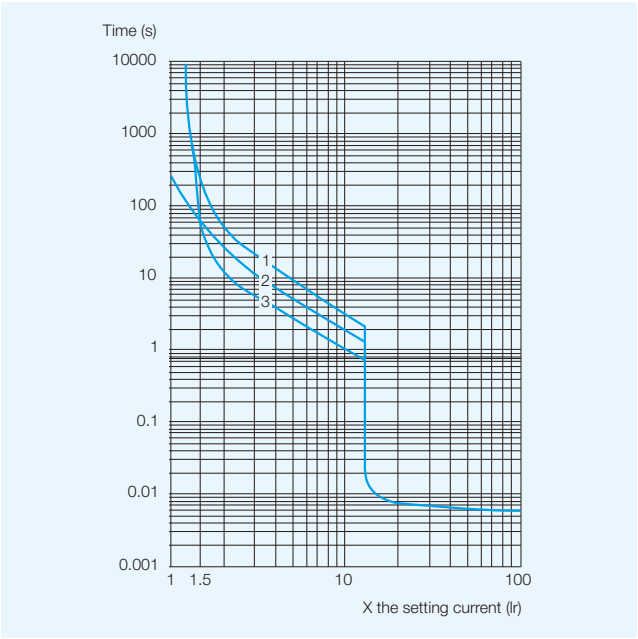


Type	Type code	Order code
3SM18-2B	M18 2B	**12785**

Tripping Curve

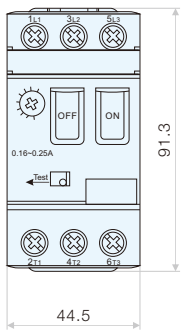
Average operating times at 20 °C related to multiples of the setting current

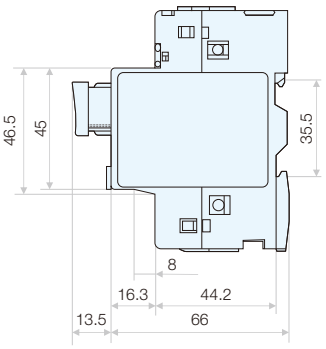
1: 3 poles from cold state; 2: 2 poles from cold state; 3: 3 poles from hot state



Outline and installation dimensions

unit in mm





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10139	M8NA 3M16L	1-91
10140	M8NA 3M20L	1-91
10141	M8NA 3M25L	1-91
10142	M8NA 3M32L	1-91
10143	M8NA 3M40L	1-91
10144	M8NA 3M50L	1-91
10145	M8NA 3M63L	1-91
10148	M8NA 3M16M	1-91
10149	M8NA 3M20M	1-91
10150	M8NA 3M25M	1-91
10151	M8NA 3M32M	1-91
10152	M8NA 3M40M	1-91
10153	M8NA 3M50M	1-91
10154	M8NA 3M63M	1-91
10157*	M8NA 4*M16M	1-91
10158*	M8NA 4*M20M	1-91
10159*	M8NA 4*M25M	1-91
10160*	M8NA 4*M32M	1-91
10161*	M8NA 4*M40M	1-91
10162*	M8NA 4*M50M	1-91
10163*	M8NA 4*M63M	1-91
10164	M8NB 3M016L	1-91
10165	M8NB 3M020L	1-91
10166	M8NB 3M025L	1-91
10167	M8NB 3M032L	1-91
10168	M8NB 3M040L	1-91
10169	M8NB 3M050L	1-91
10170	M8NB 3M063L	1-91
10171	M8NB 3M080L	1-91
10172	M8NB 3M100L	1-91
10173	M8NB 3M16M	1-91
10174	M8NB 3M20M	1-91
10175	M8NB 3M25M	1-91
10176	M8NB 3M32M	1-91
10177	M8NB 3M40M	1-91
10178	M8NB 3M50M	1-91
10179	M8NB 3M63M	1-91
10180	M8NB 3M8N0M	1-91
10181	M8NB 3M100M	1-91
10182*	M8NB 4*M16M	1-91
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10184*	M8NB 4*M25M	1-91
10185*	M8NB 4*M32M	1-91
10186*	M8NB 4*M40M	1-91
10187*	M8NB 4*M50M	1-91
10188*	M8NB 4*M63M	1-91
10189*	M8NB 4*M8N0M	1-91
10190*	M8NB 4*M100M	1-91
10191	M8NB 3M016H	1-92
10192	M8NB 3M020H	1-92
10193	M8NB 3M025H	1-92
10194	M8NB 3M032H	1-92
10195	M8NB 3M040H	1-92
10196	M8NB 3M050H	1-92
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10198	M8NB 3M080H	1-92
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10201	M8NC 3M125L	1-92
10202	M8NC 3M160L	1-92
10203	M8NC 3M180L	1-92
10204	M8NC 3M200L	1-92
10205	M8NC 3M225L	1-92
10206	M8NC 3M100M	1-92
10207	M8NC 3M125M	1-92
10208	M8NC 3M160M	1-92
10209	M8NC 3M180M	1-92
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10211	M8NC 3M225M	1-92
10212*	M8NC 4*M100M	1-92
10213*	M8NC 4*M125M	1-92
10214*	M8NC 4*M160M	1-92
10215*	M8NC 4*M180M	1-92
10216*	M8NC 4*M200M	1-92
10217*	M8NC 4*M225M	1-92
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10219	M8NC 3M125H	1-92
10220	M8NC 3M160H	1-92
10221	M8NC 3M180H	1-92
10222	M8NC 3M200H	1-92
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10227	M8ND 3M350L	1-92
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10229	M8ND 3M225M	1-92
10230	M8ND 3M250M	1-92
10231	M8ND 3M315M	1-92
10232	M8ND 3M350M	1-92
10233	M8ND 3M400M	1-92
10234*	M8ND 4*M225M	1-92
10235*	M8ND 4*M250M	1-92
10236*	M8ND 4*M315M	1-92
10237*	M8ND 4*M350M	1-92
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10246	M8NC SR110D	1-94
10247	M8ND SR110D	1-94
10248	M8NE SR110D	1-94
10249	M8NF SR110D	1-94
10250	M8NA SR220D	1-94
10251	M8NB SR220D	1-94
10252	M8NC SR220D	1-94
10253	M8ND SR220D	1-94
10254	M8NE SR220D	1-94
10255	M8NF SR220D	1-94
10256	M8NA ACR	1-94
10257	M8NB ACR	1-94
10258	M8NC ACR	1-94
10259	M8ND ACR	1-94
10260	M8NE ACR	1-94
10261	M8NF ACR	1-94
10387	M8LC 4BM315/5	1-119
10388	M8LC 4BM350/5	1-119
10389	M8LC 4BM400/5	1-119
10390	M8LD 4BM400/3	1-119
10391	M8LD 4BM500/3	1-119
10392	M8LD 4BM630/3	1-119
10393	M8LD 4BM400/5	1-119
10394	M8LD 4BM500/5	1-119
10395	M8LD 4BM630/5	1-119
10396	M8LC 3M250/3	1-119
10397	M8LC 3M315/3	1-119
10398	M8LC 3M350/3	1-119
10399	M8LC 3M400/3	1-119
10400	M8LC 3M200/5	1-119
10401	M8LC 3M225/5	1-119
10402	M8LC 3M250/5	1-119
10403	M8LC 3M315/5	1-119
10404	M8LC 3M350/5	1-119
10405	M8LC 3M400/5	1-119
10406	M8LD 3M400/3	1-119
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10413	M8LA 4BP020/1	1-118
10414	M8LA 4BP025/1	1-118
10415	M8LA 4BP032/1	1-118
10416	M8LA 4BP040/1	1-118
10417	M8LA 4BP050/1	1-118
10418	M8LA 4BP063/1	1-118
10419	M8LA 4BP080/1	1-118
10420	M8LA 4BP100/1	1-118
10421	M8LA 4BP016/3	1-118
10422	M8LA 4BP020/3	1-118
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10424	M8LA 4BP032/3	1-118
10425	M8LA 4BP040/3	1-118
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10456	M8LD 4BP400/3	1-118
10457	M8LD 4BP500/3	1-118
10458	M8LD 4BP630/3	1-118
10459	M8LD 4BP400/5	1-118
10460	M8LD 4BP500/5	1-118
10461	M8LD 4BP630/5	1-118
10462	M8LA 4BM016/1	1-119
10463	M8LA 4BM020/1	1-119
10464	M8LA 4BM025/1	1-119
10465	M8LA 4BM032/1	1-119
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10765	AQ3 M2I 2NBR50N	1-155
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10771	AQ3 M2I 2NBR25J	1-156
10772	AQ3 M2I 2NBR32J	1-156
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10855	AQ3 M2I 3NGR50N	1-155
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10898	AQ3 M2I 4NBS32J	1-156
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