

Benefits

- High rated breaking capacity of up to 15 000 A acc. to EN 60898/up to 25 kA acc. to EN 60947-2
- Excellent current limiting and selectivity characteristics
- Tripping characteristic A, B, C and D
- Terminals offer touch protection with fingers or the back of the hand acc. to the German accident prevention regulations VBG 4/BGV A2
- Combined terminals enable a simultaneous connection of busbars and feeder cables
- Uniform supplementary components which can be mounted individually, fast and on-site thanks to their snap-on technique
- The handle locking device effectively prevents any unauthorized operation of the handle

Features of 5SX

- Especially suited for installation in flat distribution boards for building installations

Features of 5SY

- Safe and rapid connection of the feeder cables thanks to the possibility of relocating the busbars to the back
- Identical terminals at both sides for an optional infeed from the top or the bottom
- No tool required for mounting or dismounting
- Supports fast and comfortable removal from the assembly
- Variable labeling system
- Separate switch position indication

Features of 5SP4

- Disconnection characteristics acc. to DIN VDE 0660 Part 107
- Main switch characteristics acc. to EN 60204
- Variable labeling system
- Can be screwed onto bases
- Separate switch position indication

Area of application

The miniature circuit-breakers of the *N.System* primarily serve the purpose of protecting cables and conductors against overload and short circuits. Thus, they also serve to protect electrical equipment against excessive overheating acc. to DIN VDE 0100 Part 430.

Under certain conditions, miniature circuit-breakers also offer protection against shock currents caused by excessive touch voltage due to insulation failures acc. to DIN VDE 0100 Part 410.

Thanks to their fixed rated current settings, the miniature circuit-breakers may also be used for limited motor protection applications.

Various tripping characteristics are available, depending on the respective application. They are explained in detail in the catalog ET B1.T ("Technical Information on the ET B1 Catalog"). The EN 60898, DIN VDE 0641 Part 11 and IEC 60898 standards form the basis for the design and approval of the miniature circuit-breakers.

When used for industrial applications and for system and plant engineering applications, the miniature circuit-breakers of the *N.System* are supplemented by individually mountable supplementary components such as auxiliary switches, fault signal contacts, shunt trips, undervoltage releases, RCCB modules and individually mountable accessories such as busbar systems and mounting parts.

Design

Miniature circuit-breakers of the *N.System* are equipped with a delayed overload/time-dependent thermal release (thermal bimetal) for low overcurrents and with an instantaneous electromagnetic release for high overload and short-circuit currents.

The special contact materials used guarantee a long service life and offer a high degree of protection against contact welding.

Mode of operation

Thanks to the extremely fast contact separation in cases of failures and the rapid quenching of the arc consequently generated in the arcing chamber, the miniature circuit-breakers of the *N.System* assure safe, current-limiting off-switching.

The permissible limit- I^2t -values of the energy limitation class 3 specified in DIN VDE 0641 Part 11 are generally undercut by 50 %. This guarantees an excellent selectivity towards upstream overcurrent protection devices.

BETA Miniature Circuit-Breakers

Introduction

Technical specifications

		5SX2	5SX4	5SY4	5SY5	5SY6	5SY6 ...-KV	5SY7	5SY8	5SP4
Tripping characteristic		B, C	B, C	A, B, C, D	B, C	B, C, D	B, C	B, C, D	C, D	B, C, D
Number of poles	1	•	•	•	•	•		•	•	•
	1 + N	•	•	•		•	•	•	•	
	2	•	•	•	•	•		•	•	•
	3	•	•	•		•		•	•	•
	3 + N	•	•	•		•		•	•	•
4	•	•	•		•		•	•	•	
Rated voltage	AC V	230/400					230	230/400		
	DC V	-				220/440	-			
Operational voltage	min. AC/DC V	24					24			
	max. DC V/pole	60 ¹⁾				220	60 ¹⁾	60 ¹⁾		
	max. AC V	440				440	440	250	440	
Rated breaking capacity acc. to EN 60898	AC kA	6	10			6		15		10
	DC kA	-				10	-			
	acc. to EN 60947-2 AC kA	-								25
Insulation coordination	Rated insulation voltage AC V	250/440								
	Degree of pollution for overvoltage category III	2								3
Protection against contact acc. to DIN VDE 106 Part 100		•	•	•	•	•	•	•	•	•
Main switch characteristics acc. to EN 60204				•	•	•		•	•	•
Sealability in handle end position		•	•	•	•	•	•	•	•	•
Device depth acc. to DIN 43880	mm	55			70					
Degree of protection		IP00 acc. to DIN 40050, IP20 acc. to DIN 40050 for 5SY., IP40 when mounting in distribution boards								
Free of CFC and silicon		yes								
Mounting technique		for snapping onto standard mounting rails 35 mm (EN 60175, or EN 50022 for 5SY6...-KV); additionally with • 5SY: quick-assembly system (no tools required for assembly) • 5SP4: screw mounting also possible								
Terminals		5SX2, 5SX4: combined terminals at the bottom for a simultaneous connection of busbars (fork-type) and feeder cables 5SY: combined terminals at both sides for a simultaneous connection of busbars (fork-type) and feeder cables 5SP4 and 5SY6...-KV: combined tunnel terminals								
Terminal tightening torque recommended	Nm	2.5 - 3								3 - 3.5
Conductor cross-sections Solid and stranded, max. • upper terminal • lower terminal Finely stranded with end sleeves, max. • upper terminal • lower terminal Differing conductor cross-sections may be clamped together simultaneously; details are available upon request.	mm ²	16		35		16		35		50
	mm ²	25		35		16		35		50
	mm ²	10		25		10		25		35
	mm ²	16		25		10		25		35
Supply connection		As required, the specified polarity must be observed for DC applications								
Mounting position		As required								
Endurance		On average 20 000 operations at the rated load ²⁾								
Ambient temperature	°C	-25 ... +45; temporarily: +55; max. humidity: 95 %; storage temperature: -40 ... +75								
Resistance to climate		6 cycles acc. to IEC 60068-2-30								
Resistance to vibrations	m/s ²	60 at 10 Hz up to 150 Hz acc. to IEC 60068-2-6								

1) ≙ Battery charging voltage of 72 V.

2) ≙ 10 000 operations for 5SY5, 40 A, 50 A and 63 A at the rated load.

BETA Miniature Circuit-Breakers Standard Product Range

Introduction

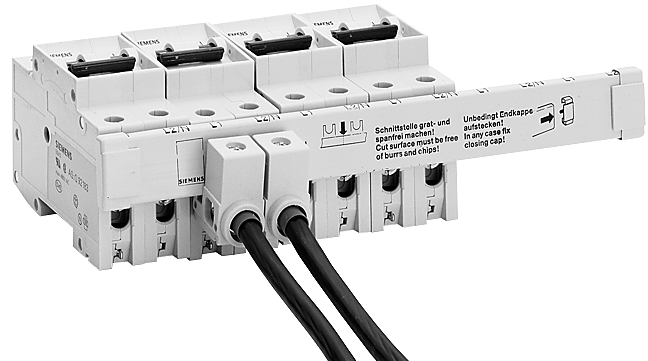
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Benefits

Application examples for 5SX miniature circuit-breakers.



Simultaneous connection of the bottom feeder cables with cross-sections of up to 25 mm² and the 5ST2 144 3-pole busbar to the combined terminal of the miniature circuit-breaker.

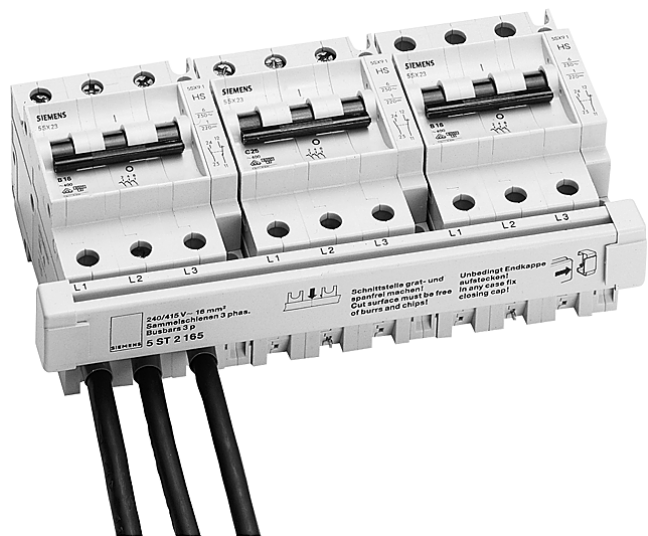


Simultaneous connection of the bottom feeder cables with cross-sections of up to 35 mm² and the 5ST2 143 2-pole busbar via the 5ST2 166 connection terminal.

The same connection principle applies to the application of top feeder cables.



Connection of the top feeder cables with cross-sections of up to 35 mm² to the 5ST2 144 busbar via the 5ST2 157 supplementary terminal.



Simultaneous connection of the feeder cables with cross-sections of up to 25 mm² and the 5ST2 165 busbar to the miniature circuit-breakers' combined terminal via locally retrofitted auxiliary switches. For a description of busbars and connection terminals, please see page 2/37.

BETA Miniature Circuit-Breakers

Standard Product Range



6 000
3

N-type, 6 kA
55 mm mounting depth

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted individually.





Characteristic B

Line protection mainly used in residential building installations; no proof required regarding personal safety.

Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Selection and ordering data

	I_n	MW	DC	Characteristic B Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	
	1-pole										
		0.3	1	-	-	-	-	A	5SX2 114-7	12	0.140
		0.5	-	-	-	-	-	A	5SX2 105-7	12	0.140
		1	-	-	-	-	-	A	5SX2 101-7	12	0.140
		1.6	-	-	-	-	-	A	5SX2 115-7	12	0.140
		2	-	-	-	-	-	A	5SX2 102-7	12	0.140
		3	-	-	-	-	-	A	5SX2 103-7	12	0.140
		4	-	-	-	-	-	A	5SX2 104-7	12	0.140
		6	A	5SX2 106-6	12	0.140	A	5SX2 106-7	12	0.140	
		8	-	-	-	-	-	A	5SX2 108-7	12	0.140
		10	A	5SX2 110-6	12	0.140	A	5SX2 110-7	12	0.140	
		13	A	5SX2 113-6	12	0.140	A	5SX2 113-7	12	0.140	
		16	A	5SX2 116-6	12	0.140	A	5SX2 116-7	12	0.140	
		20	A	5SX2 120-6	12	0.140	A	5SX2 120-7	12	0.140	
		25	A	5SX2 125-6	12	0.140	A	5SX2 125-7	12	0.140	
		32 ¹⁾	A	5SX2 132-6	12	0.140	A	5SX2 132-7	12	0.140	
40		A	5SX2 140-6	12	0.115	A	5SX2 140-7	12	0.115		
50	A	5SX2 150-6	12	0.115	A	5SX2 150-7	12	0.115			
63 ²⁾	-	-	-	-	-	A	5SX2 163-7	12	0.150		
	1-pole + N										
	6	2	A	5SX2 506-6	6	0.210	A	5SX2 506-7	6	0.210	
	10	A	5SX2 510-6	6	0.210	A	5SX2 510-7	6	0.210		
	13	A	5SX2 513-6	6	0.210	A	5SX2 513-7	6	0.210		
	16	A	5SX2 516-6	6	0.210	A	5SX2 516-7	6	0.210		
	20	A	5SX2 520-6	6	0.210	A	5SX2 520-7	6	0.210		
	25	A	5SX2 525-6	6	0.210	A	5SX2 525-7	6	0.210		
	32	C	5SX2 532-6	6	0.210	A	5SX2 532-7	6	0.210		
	40	D	5SX2 540-6	6	0.300	A	5SX2 540-7	6	0.300		
	50	D	5SX2 550-6	6	0.300	D	5SX2 550-7	6	0.300		
	2-pole										
	0.5	2	-	-	-	-	A	5SX2 205-7	6	0.280	
	1	-	-	-	-	-	A	5SX2 201-7	6	0.280	
	1.6	-	-	-	-	-	A	5SX2 215-7	6	0.280	
	2	-	-	-	-	-	A	5SX2 202-7	6	0.280	
	3	-	-	-	-	-	A	5SX2 203-7	6	0.280	
	4	-	-	-	-	-	A	5SX2 204-7	6	0.280	
	6	A	5SX2 206-6	6	0.280	A	5SX2 206-7	6	0.280		
	8	-	-	-	-	-	A	5SX2 208-7	6	0.280	
	10	A	5SX2 210-6	6	0.280	A	5SX2 210-7	6	0.280		
	13	A	5SX2 213-6	6	0.280	A	5SX2 213-7	6	0.280		
	16	A	5SX2 216-6	6	0.280	A	5SX2 216-7	6	0.280		
	20	A	5SX2 220-6	6	0.280	A	5SX2 220-7	6	0.280		
	25	A	5SX2 225-6	6	0.280	A	5SX2 225-7	6	0.280		
	32	A	5SX2 232-6	6	0.280	A	5SX2 232-7	6	0.280		
	40	A	5SX2 240-6	6	0.300	A	5SX2 240-7	6	0.300		
	50	D	5SX2 250-6	6	0.300	A	5SX2 250-7	6	0.300		
	63 ²⁾	-	-	-	-	-	A	5SX2 263-7	6	0.300	

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

2) Without 

Designs 5SX2 B 6 ... 50 and C 0.5 ... 50 1-pole, 2-pole and 3-pole are certified acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole design) and AC 480 V (2-pole and 3-pole design).

For supplementary components, please see page 2/34.
For accessories, please see pages 2/35 to 2/38.

6 000
3




BETA Miniature Circuit-Breakers

Standard Product Range

N-type, 6 kA
55 mm mounting depth

2

Selection and ordering data

	I_n	MW	DC	Characteristic B Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg			
	3-pole												
		3-pole + N											
			4-pole										
			0.5	3	-	-	-	-	A	5SX2 305-7	4	0.440	
			1	-	-	-	-	-	A	5SX2 301-7	4	0.440	
			1.6	-	-	-	-	-	A	5SX2 315-7	4	0.440	
			2	-	-	-	-	-	A	5SX2 302-7	4	0.440	
			3	-	-	-	-	-	A	5SX2 303-7	4	0.440	
			4	-	-	-	-	-	A	5SX2 304-7	4	0.440	
			6	A	5SX2 306-6	4	0.440	A	5SX2 306-7	4	0.440		
			8	-	-	-	-	-	A	5SX2 308-7	4	0.440	
			10	A	5SX2 310-6	4	0.440	A	5SX2 310-7	4	0.440		
		13	A	5SX2 313-6	4	0.440	A	5SX2 313-7	4	0.440			
		16	A	5SX2 316-6	4	0.440	A	5SX2 316-7	4	0.440			
		20	A	5SX2 320-6	4	0.440	A	5SX2 320-7	4	0.440			
25		A	5SX2 325-6	4	0.440	A	5SX2 325-7	4	0.440				
32 ¹⁾	A	5SX2 332-6	4	0.440	A	5SX2 332-7	4	0.440					
40	A	5SX2 340-6	4	0.450	A	5SX2 340-7	4	0.450					
50	A	5SX2 350-6	4	0.450	A	5SX2 350-7	4	0.450					
63 ²⁾	-	-	-	-	-	A	5SX2 363-7	4	0.450				
6	4	-	-	-	-	A	5SX2 606-7	3	0.450				
10	-	-	-	-	-	A	5SX2 610-7	3	0.450				
13	A	5SX2 613-6	3	0.450	A	5SX2 613-7	3	0.450					
16	A	5SX2 616-6	3	0.450	A	5SX2 616-7	3	0.450					
20	A	5SX2 620-6	3	0.450	A	5SX2 620-7	3	0.450					
25	C	5SX2 625-6	3	0.450	A	5SX2 625-7	3	0.450					
32	C	5SX2 632-6	3	0.450	A	5SX2 632-7	3	0.450					
40	D	5SX2 640-6	3	0.610	A	5SX2 640-7	3	0.610					
50	D	5SX2 650-6	3	0.610	A	5SX2 650-7	3	0.610					
6 ²⁾	4	-	-	-	-	A	5SX2 406-7	3	0.590				
10 ²⁾	-	-	-	-	-	A	5SX2 410-7	3	0.590				
13 ²⁾	-	-	-	-	-	C	5SX2 413-7	3	0.590				
16 ²⁾	-	-	-	-	-	A	5SX2 416-7	3	0.590				
20 ²⁾	C	5SX2 420-6	3	0.590	A	5SX2 420-7	3	0.590					
25 ²⁾	C	5SX2 425-6	3	0.590	A	5SX2 425-7	3	0.590					
32 ²⁾	C	5SX2 432-6	3	0.590	A	5SX2 432-7	3	0.590					
40	D	5SX2 440-6	3	0.590	A	5SX2 440-7	3	0.590					
50	-	-	-	-	-	A	5SX2 450-7	3	0.590				

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

2) Without 

Designs 5SX2 B 6 ... 50 and C 0.5 ... 50, 1-pole, 2-pole and 3-pole have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" for applications of up to AC 277 V (1-pole design) and AC 480 V (2-pole and 3-pole design).

For supplementary components, please see page 2/34.

For accessories, please see pages 2/35 to 2/38.

BETA Miniature Circuit-Breakers

Standard Product Range



10 000
3

N-type, 10 kA
55 mm mounting depth

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted individually.







Characteristic B

Line protection mainly used in residential building installations; no proof required regarding personal safety.

Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Selection and ordering data

	I_n	MW	DC	Characteristic B			Characteristic C			
				Order No.	Pack. unit*	Weight per unit approx. kg	Order No.	Pack. unit*	Weight per unit approx. kg	
 <p>1-pole</p> 	0.5	1	-	-	-	A	5SX4 105-7	12	0.140	
	1	-	-	-	-	A	5SX4 101-7	12	0.140	
	1.6	-	-	-	-	A	5SX4 115-7	12	0.140	
	2	-	-	-	-	A	5SX4 102-7	12	0.140	
	3	-	-	-	-	A	5SX4 103-7	12	0.140	
	4	-	-	-	-	A	5SX4 104-7	12	0.140	
	6	A	5SX4 106-6	12	0.140	A	5SX4 106-7	12	0.140	
	8	-	-	-	-	A	5SX4 108-7	12	0.140	
	10	A	5SX4 110-6	12	0.140	A	5SX4 110-7	12	0.140	
	13	A	5SX4 113-6	12	0.140	A	5SX4 113-7	12	0.140	
	16	A	5SX4 116-6	12	0.140	A	5SX4 116-7	12	0.140	
	20	A	5SX4 120-6	12	0.140	A	5SX4 120-7	12	0.140	
	25	A	5SX4 125-6	12	0.140	A	5SX4 125-7	12	0.140	
	32 ¹⁾	A	5SX4 132-6	12	0.140	A	5SX4 132-7	12	0.140	
40	D	5SX4 140-6	12	0.115	A	5SX4 140-7	12	0.115		
50	D	5SX4 150-6	12	0.115	A	5SX4 150-7	12	0.115		
 <p>1-pole + N</p> 	6	2	C	5SX4 506-6	6	0.210	A	5SX4 506-7	6	0.210
	10	-	C	5SX4 510-6	6	0.210	A	5SX4 510-7	6	0.210
	13	-	C	5SX4 513-6	6	0.210	A	5SX4 513-7	6	0.210
	16	-	C	5SX4 516-6	6	0.210	A	5SX4 516-7	6	0.210
	20	-	C	5SX4 520-6	6	0.210	C	5SX4 520-7	6	0.210
	25	-	C	5SX4 525-6	6	0.210	C	5SX4 525-7	6	0.210
	32	-	C	5SX4 532-6	6	0.210	C	5SX4 532-7	6	0.210
	40	-	D	5SX4 540-6	6	0.300	D	5SX4 540-7	6	0.300
	50	-	D	5SX4 550-6	6	0.300	D	5SX4 550-7	6	0.300
	 <p>2-pole</p> 	0.5	2	-	-	-	C	5SX4 205-7	6	0.280
1		-	-	-	-	A	5SX4 201-7	6	0.280	
1.6		-	-	-	-	A	5SX4 215-7	6	0.280	
2		-	-	-	-	A	5SX4 202-7	6	0.280	
3		-	-	-	-	A	5SX4 203-7	6	0.280	
4		-	-	-	-	A	5SX4 204-7	6	0.280	
6		A	5SX4 206-6	6	0.280	A	5SX4 206-7	6	0.280	
8		-	-	-	-	A	5SX4 208-7	6	0.280	
10		A	5SX4 210-6	6	0.280	A	5SX4 210-7	6	0.280	
13		C	5SX4 213-6	6	0.280	A	5SX4 213-7	6	0.280	
16		A	5SX4 216-6	6	0.280	A	5SX4 216-7	6	0.280	
20		C	5SX4 220-6	6	0.280	A	5SX4 220-7	6	0.280	
25		C	5SX4 225-6	6	0.280	A	5SX4 225-7	6	0.280	
32		C	5SX4 232-6	6	0.280	A	5SX4 232-7	6	0.280	
40		D	5SX4 240-6	6	0.300	A	5SX4 240-7	6	0.300	
50		D	5SX4 250-6	6	0.300	D	5SX4 250-7	6	0.300	

¹⁾ Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

For supplementary components, please see page 2/34.
For accessories, please see pages 2/35 to 2/38.

10 000
3




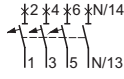

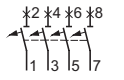
BETA Miniature Circuit-Breakers

Standard Product Range

N-type, 10 kA
55 mm mounting depth

2

Selection and ordering data

	I_n	MW	Characteristic B Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg		
	3-pole										
		0.5	3	-			C	5SX4 305-7	4	0.440	
		1		-			A	5SX4 301-7	4	0.440	
		1.6		-			C	5SX4 315-7	4	0.440	
		2		-			A	5SX4 302-7	4	0.440	
		3		-			A	5SX4 303-7	4	0.440	
		4		-			A	5SX4 304-7	4	0.440	
		6	A	5SX4 306-6	4	0.440	A	5SX4 306-7	4	0.044	
		8		-			C	5SX4 308-7	4	0.440	
		10	A	5SX4 310-6	4	0.440	A	5SX4 310-7	4	0.440	
		13	C	5SX4 313-6	4	0.440	A	5SX4 313-7	4	0.440	
		16	A	5SX4 316-6	4	0.440	A	5SX4 316-7	4	0.440	
		20	A	5SX4 320-6	4	0.440	A	5SX4 320-7	4	0.440	
		25	A	5SX4 325-6	4	0.440	A	5SX4 325-7	4	0.440	
	32 ¹⁾	A	5SX4 332-6	4	0.440	A	5SX4 332-7	4	0.440		
	40	D	5SX4 340-6	4	0.450	A	5SX4 340-7	4	0.450		
	50	D	5SX4 350-6	4	0.450	A	5SX4 350-7	4	0.450		
	3-pole + N										
		6	4	-			C	5SX4 606-7	3	0.450	
		10		C	5SX4 610-6	3	0.450	A	5SX4 610-7	1	0.450
		13		C	5SX4 613-6	3	0.450	C	5SX4 613-7	3	0.450
		16		C	5SX4 616-6	3	0.450	A	5SX4 616-7	3	0.450
		20		C	5SX4 620-6	3	0.450	A	5SX4 620-7	3	0.450
		25		C	5SX4 625-6	3	0.450	A	5SX4 625-7	3	0.450
		32		C	5SX4 632-6	3	0.450	A	5SX4 632-7	3	0.450
		40		D	5SX4 640-6	3	0.610	A	5SX4 640-7	3	0.610
50			D	5SX4 650-6	3	0.610	D	5SX4 650-7	3	0.610	
	4-pole										
		6	4	-			C	5SX4 406-7	3	0.590	
		10		-			C	5SX4 410-7	3	0.590	
		13		-			C	5SX4 413-7	3	0.590	
		16		-			C	5SX4 416-7	3	0.590	
		20		-			C	5SX4 420-7	3	0.590	
		25		-			C	5SX4 425-7	3	0.590	
		32		-			C	5SX4 432-7	3	0.590	
		40		-			D	5SX4 440-7	3	0.590	
		50		-			D	5SX4 450-7	3	0.590	

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

For supplementary components, please see page 2/34.
For accessories, please see pages 2/35 to 2/38.

BETA Miniature Circuit-Breakers

Standard Product Range

Supplementary components
55 mm mounting depth

Benefits

Supplementary components

- Can be retrofitted individually
- Connectable to *instabus* EIB and AS-Interface bus via binary inputs.

Auxiliary switches (AS) and fault signal contacts (FC)

- Mounting with factory-installed clips
- Max. contact loading acc. to DIN VDE 0660 Part 200, EN 60947-5-1:
6 A, AC 230 V, AC-15
1 A, DC 220 V, DC-13
- Short-circuit protection via 5SX miniature circuit-breakers; with $I_n = 6$ A or gL fuses 6 A, depending on design ...-6, -7.

Function

Remote indication of the miniature circuit-breaker's switching state:

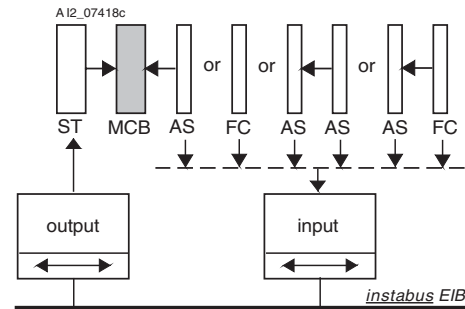
- AS: ON/OFF
- FC: tripped.

Shunt trips (ST)







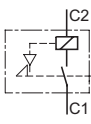
- Assembly with enclosed screws
- Applicable for voltages of AC 110 to 415 V
- Short-circuit protection via 5SX...-7 miniature circuit-breaker with $I_n \geq 16$ A

Function

- Remote tripping of the miniature circuit-breaker.



Selection and ordering data

	MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg
Auxiliary switches (AS)					
	1 NO + 1 NC	0.5	A	5SX9 100	1 0.040
	2 NO		A	5SX9 101	1 0.040
	2 NC		A	5SX9 102	1 0.040
Fault signal contacts (FC)					
	1 NO + 1 NC	0.5	A	5SX9 200	1 0.040
	2 NO		A	5SX9 201	1 0.040
	2 NC		A	5SX9 202	1 0.040
Shunt trip (ST) 100% duty ratio					
		1	A	5SX9 300	1 0.141



BETA Miniature Circuit-Breakers Standard Product Range

Accessories
for 55 mm mounting depth

2


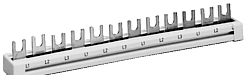

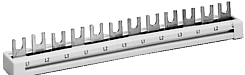








Benefits

5ST2 1 busbar system

- Acc. to DIN 57606 and DIN 57659
- Load for one-side/central infeed:
50 A/90 A for 10 mm²
65 A/120 A for 16 mm²

- Fork-type connections
- Single and multi-phase
- Cu: 10 mm² and 16 mm², fully insulated
- 18 mm lug spacing
- No additional connection terminal required for bottom connection.

Selection and ordering data

	Length mm	DC	Order No.	Pack. unit*	Weight per unit approx. kg	
Cu busbars 10 mm²						
	210	A	1-phase	25	0.088	
			2-phase			5ST2 137
			3-phase			5ST2 138
	1 000	A	1-phase	10	0.103	
			2-phase			5ST2 140
			3-phase			5ST2 146
	210	A	1-phase	10	0.154	
			2-phase			5ST2 142
			3-phase			5ST2 143
	1 000	A	3-phase + N	5	0.523	
			1-phase			5ST2 144
			2-phase			5ST2 145
	1 000	A	3-phase + N	10	0.231	
			1-phase			5ST2 148
			2-phase			5ST2 149
	1 000	A	Lug spacing acc. to the devices' busbar mounting; 1-pole, 2-pole, 3-pole with one auxiliary switch each	5	0.460	
			1-phase + AS			5ST2 151
			2-phase + AS			5ST2 152
	1 000	A	3-phase + AS	5	0.692	
			1-phase + AS			5ST2 153
			2-phase + AS			5ST2 154
End caps						
		A	for lateral insulation of cut-to-length busbars	10	0.013	
			1- and 2-phase			5ST2 155
		A	3- and 4-phase	10	0.017	
			3- and 4-phase			5ST2 156
Connection terminals up to 35 mm² (stranded)						
		A	for top or bottom direct infeed into miniature circuit-breakers; side-by-side mounting possible	10	0.020	
			for 1- and 2-phase busbars			5ST2 166
		A	for 3- and 4-phase busbars	10	0.020	
			for 3- and 4-phase busbars			5ST2 167
Connection terminal up to 35 mm² (stranded)						
		A	for direct infeed into miniature circuit-breakers, side-by-side mounting possible	1	0.030	

For application examples of busbars, please see page 2/29.

* This quantity or a multiple thereof can be ordered.

BETA Miniature Circuit-Breakers

Standard Product Range

Accessories for 55 mm mounting depth


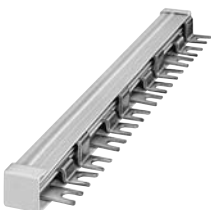
2

Area of application

5ST2 18 busbar system

- Acc. to DIN 57606 and DIN 57659
- Load for one-side/central infeed:
50 A/90 A for 10 mm²
65 A/120 A for 16 mm²
- Fork-type connections
- Single and multi-phase
- Cu: 10 mm² and 16 mm², fully insulated
- 17.8 mm lug spacing

Selection and ordering data

	Length mm	DC	Order No.	Pack. unit*	Weight per unit approx. kg
Cu busbars 10 mm²					
	With end caps				
	1-phase	220	X	5ST2 180	50 0.060
	2-phase		X	5ST2 181	25 0.080
	3-phase		X	5ST2 182	25 0.110
	Without end caps				
	1-phase	1 000	X	5ST2 183	20 0.290
		X	5ST2 184	20 0.600	
		X	5ST2 185	20 0.820	
Cu busbars 16 mm²					
	With end caps				
	1-phase	220	X	5ST2 186	50 0.090
	2-phase		X	5ST2 187	25 0.160
	3-phase		X	5ST2 188	25 0.230
	Without end caps				
	1-phase	1 000	X	5ST2 190	20 0.500
	2-phase		X	5ST2 191	20 0.710
	3-phase		X	5ST2 192	20 1.100
	Without end caps				
	Lug spacing acc. to the devices' busbar mounting;				
1-pole, 2-pole, 3-pole with one auxiliary switch each					
1-phase + AS	1 000	X	5ST2 193	10 0.450	
2-phase + AS		X	5ST2 194	10 0.890	
3-phase + AS		X	5ST2 195	10 1.470	
End caps					
for 10 mm ² Cu busbars, for use as lateral insulating end barrier with cut-to-length busbars					
1- and 2-phase		X	5ST2 196	10 0.001	
3- and 4-phase		X	5ST2 197	10 0.001	

For application examples of busbars, please see page 2/29

BETA Miniature Circuit-Breakers Standard Product Range

Accessories
for 55 mm mounting depth

2


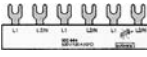
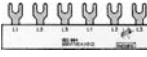

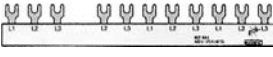


Benefits

5ST2 4 busbar system

- Acc. to IEC 60664, 500 V (40 °C), fully insulated
- Load for centered infeed: 1-phase up to 70 A, 2-phase to 4-phase up to 120 A.
- Fork-type connection: any length possible thanks to the combination of 3 fixed busbar lengths

- Favorable current and temperature conduction thanks to the overlapping of individual components
- Time-consuming work such as cutting, cutting to length, deburring, cleaning of cut surfaces as well as mounting of end caps is made unnecessary
- Safe touch protection for non-assigned connections.

Selection and ordering data

	Number of circuits	DC	Order No.	Pack. unit*	Weight per unit approx. kg
Cu busbars					
	1-phase				
	2 x 1-phase	A	5ST2 400	20	0.006
	6 x 1-phase	A	5ST2 401	20	0.017
	12 x 1-phase	A	5ST2 402	20	0.033
	2 x (1-phase + AS/FC)	A	5ST2 403	20	0.008
	6 x (1-phase + AS/FC)	A	5ST2 404	20	0.024
	9 x (1-phase + AS/FC)	A	5ST2 405	20	0.036
	2-phase				
	2 x 2-phase	A	5ST2 406	10	0.011
	3 x 2-phase	A	5ST2 407	10	0.017
	6 x 2-phase	A	5ST2 408	10	0.033
	2 x (2-phase + AS/FC)	A	5ST2 410	10	0.023
	3 x (2-phase + AS/FC)	A	5ST2 411	10	0.034
	5 x (2-phase + AS/FC)	A	5ST2 412	10	0.056
	3-phase				
	2 x 3-phase	A	5ST2 413	10	0.037
	3 x 3-phase	A	5ST2 414	10	0.055
	4 x 3-phase	A	5ST2 415	10	0.086
	2 x (3-phase + AS/FC)	A	5ST2 416	10	0.057
	4 x (3-phase + AS/FC)	A	5ST2 417	10	0.065
	2 x (1-phase x (3 + AS/FC))	A	5ST2 418	10	0.057
	3 x (1-phase x (3 + AS/FC))	A	5ST2 420	10	0.086
	4-phase				
	2 x 4-phase	A	5ST2 421	5	0.046
	3 x 4-phase	A	5ST2 422	5	0.091
	2 x 3 x (1-phase + N)	A	5ST2 423	5	0.060
	3-phase, for a 5SM1 4-pole RCCB module with 8 miniature circuit-breakers				
	3/N + 8 connections	A	5ST2 424	5	0.091
	Feeder terminal	A	5ST2 425	10	0.024
	side-by-side mounting possible, for infeed into 35 mm ² busbar system (stranded)				
	Touch protection	A	5ST2 426	10	0.004
	for unassigned connections, yellow (RAL 1004)				











* This quantity or a multiple thereof can be ordered.

BETA Miniature Circuit-Breakers

Standard Product Range

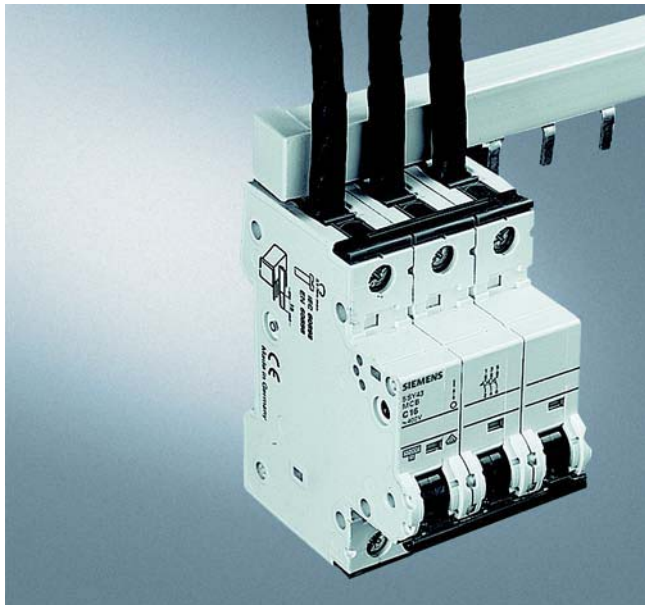
Accessories for 55 mm mounting depth

Selection and ordering data

	Length mm	DC	Order No.	Pack. unit*	Weight per unit approx. kg
Mounting and covering components					
	Cable links conductor cross-section: 6 mm ² ; both ends equipped with end sleeves; 5SX miniature circuit-breakers				
	125	A	5ST1 292	50	0.008
	250	A	5ST1 293	50	0.017
	Snap-on terminal for 16 mm ² 1-wire or 10 mm ² stranded width: 0.5 MW				
		A	5ST2 112	50	0.008
	Spacer (contour of N-type, 0.5 MW miniature circuit-breakers)				
		A	5ST2 122	10	0.009
	Packer for height increase from 53 to 60 mm; snap-snap adapter; 1 MW				
		A	5ST2 120	10	0.002
	Mounting components 1 MW (sheet metal)				
		A	5ST2 121	10	0.017
		A	5ST2 201	20	0.012
	Handle locking device for N-type, 1-pole 5SX miniature circuit-breakers; for protection against unintended mechanical: on-switching (red part)				
		A	5ST2 168	10	0.007
		A	5ST2 170	10	0.007
	Terminal covers, gray For surface mounting; degree of protection IP40 with 35 mm standard mounting rail; sealable up to 2.5 MW				
		A	5SW3 004	10	0.084
		A	5SW3 005	5	0.114
	Terminal covers, gray For flush mounting; degree of protection IP40 with 35 mm standard mounting rail up to 2.5 MW				
		A	5SW3 006	5	0.126
		A	5SW3 007	5	0.147
	Molded-plastic enclosure For surface mounting, IP54 with 35 mm standard mounting rail; sealable with transparent flap cover up to 4.5 MW				
		A	5SW1 200	1	0.500
	Cover Can be combined with miniature distribution board Sections are prepared for side-by-side mounting of standard label caps consisting of				
		A	5ST2 134	10	0.022
		A	5ST2 135	5	0.330
		A	5ST2 136	5	0.260

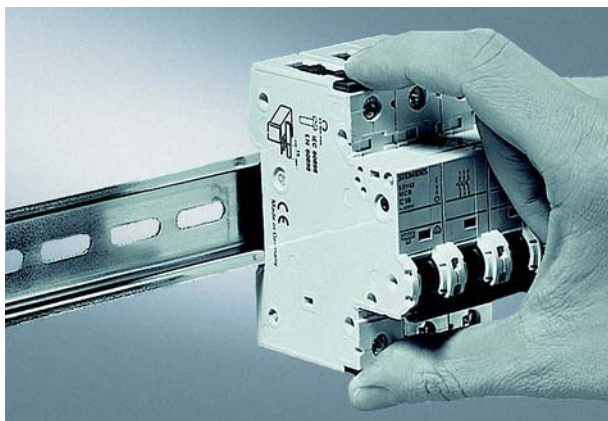
Benefits

Features of 5SY miniature circuit-breakers



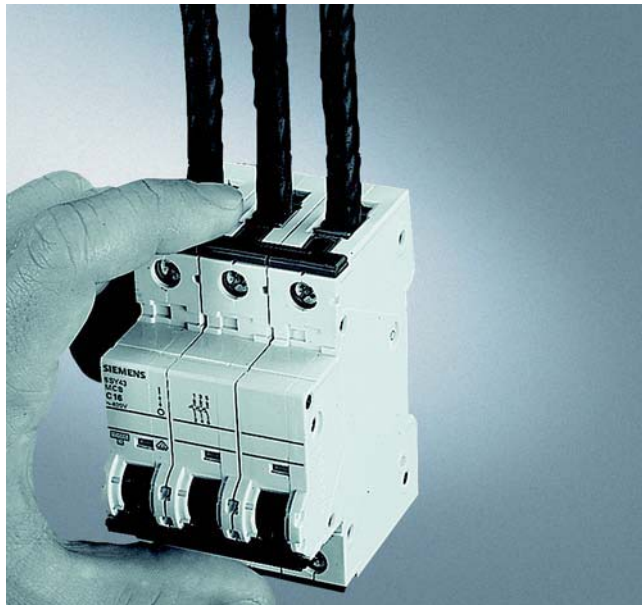
Easier, faster, enlarged wiring space

- Identical top and bottom terminals
- Connection of feeder cables vis-à-vis of the busbar
- Enlarged and easily accessible wiring space for the feeder cables
- Comfortable insertion of the feeder cables into the terminal
- Defined, visible and controllable connection of the feeder cables
- Universal infeed with top and bottom busbar mounting options.



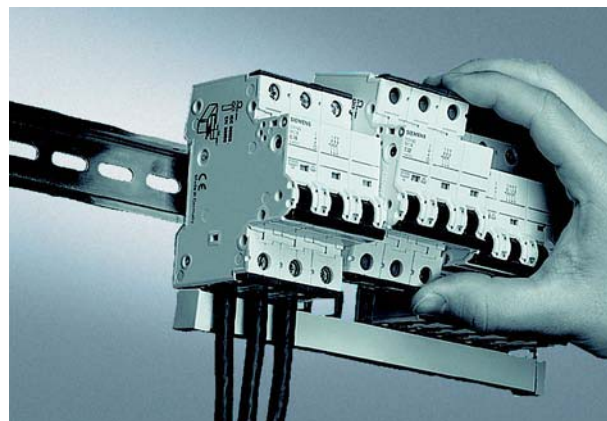
Flexible and no use of tools required

- Manually operable quick-assembly and disassembly systems not requiring the use of tools
- Fast assembly and disassembly of the 5SY miniature circuit-breakers to and from the standard mounting rail acc. to EN 60175
- All devices can be easily and comfortably replaced at any time.



Touch protection with clear advantages

- Integrated movable terminal covers located at the feeder cable input section
- The terminals are completely closed when screws are fully tightened
- Effective touch protection, also when the device is fully grabbed
- The requirements specified in the German VBG 4/BGV A2 accident prevention regulations are exceeded by far.



Removal from the assembly

Thanks to the combination of the various features stated above, the 5SY miniature circuit-breakers can be easily and rapidly removed from the assembly when circuits need to be changed - with these devices, a removal of the busbar is no longer necessary.

BETA Miniature Circuit-Breakers

Industry Product Range

6 kA
70 mm mounting depth

2

Area of application

- U_n : AC 230 V, 50-60 Hz
- Standards: EN 60898, DIN VDE 0641 Part 11, IEC 60898



Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.

Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Selection and ordering data

	I_n	MW	DC	Characteristic B Order No.	Pack. unit*	Weight per unit approx.	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx.
	A					kg				kg
 <p>1-pole + N</p> 	2	1	-	-	12	0.132	A	5SY6 002-7KV	12	0.132
	4		-	-	12	0.132	A	5SY6 004-7KV	12	0.132
	6		A	5SY6 006-6KV	12	0.132	A	5SY6 006-7KV	12	0.132
	8		-	-	12	0.132	A	5SY6 008-7KV	12	0.132
	10		A	5SY6 010-6KV	12	0.132	A	5SY6 010-7KV	12	0.132
	13		A	5SY6 013-6KV	12	0.132	A	5SY6 013-7KV	12	0.132
	16		A	5SY6 016-6KV	12	0.132	A	5SY6 016-7KV	12	0.132
	20		A	5SY6 020-6KV	12	0.132	A	5SY6 020-7KV	12	0.132
	25		A	5SY6 025-6KV	12	0.132	A	5SY6 025-7KV	12	0.132
	32		A	5SY6 032-6KV	12	0.132	A	5SY6 032-7KV	12	0.132
	40		A	5SY6 040-6KV	12	0.132	A	5SY6 040-7KV	12	0.132

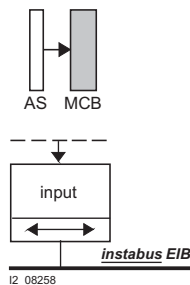
Benefits

Auxiliary switch (AS)


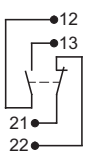
- Can be retrofitted individually
- Mounting with factory-installed clips
- max. contact loading acc. to DIN VDE 0660 Part 200, EN 60947-5-1:
6 A, AC 230 V, AC-15
1 A, DC 220 V, DC-13
- Short-circuit protection ensured by circuit-breakers with characteristic B or C with $I_n = 6$ A or fuse gL 6 A
- Conductor cross-section 0.5 to 2.5 mm²

Functions

- Remote indication of the miniature circuit-breaker's switching state: AS: ON/OFF
- Connectable to *instabus EIB* and AS-Interface bus via binary inputs.



Selection and ordering data

	MW	DC	Order No.	Pack. unit*	Weight per unit approx.	
					kg	
 <p>Auxiliary switch (AS)</p> 	1 NO + 1 NC	0.5	A	5ST3 018-0KV	1	0.037










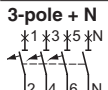

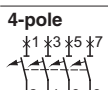
Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted.

Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.

Selection and ordering data

	I_n	MW	DC	Characteristic B Order No.	Pack. unit*	Weight per unit approx. kg
 <p>1-pole</p> 	6	1	A	5SY6 106-6	12	0.165
	10		A	5SY6 110-6	12	0.165
	13		A	5SY6 113-6	12	0.165
	16		A	5SY6 116-6	12	0.165
	20		B	5SY6 120-6	12	0.165
	25		A	5SY6 125-6	12	0.165
	32 ¹⁾		A	5SY6 132-6	12	0.165
	40		A	5SY6 140-6	12	0.165
	50		A	5SY6 150-6	12	0.165
	63		A	5SY6 163-6	12	0.165
 <p>1-pole + N</p> 	6	2	A	5SY6 506-6	6	0.330
	10		A	5SY6 510-6	6	0.330
	13		B	5SY6 513-6	6	0.330
	16		A	5SY6 516-6	6	0.330
	20		A	5SY6 520-6	6	0.330
	25		A	5SY6 525-6	6	0.330
	32		B	5SY6 532-6	6	0.330
	40		B	5SY6 540-6	6	0.330
	50		B	5SY6 550-6	6	0.330
	63		B	5SY6 563-6	6	0.330
 <p>2-pole</p> 	6	2	A	5SY6 206-6	6	0.330
	10		A	5SY6 210-6	6	0.330
	13		A	5SY6 213-6	6	0.330
	16		A	5SY6 216-6	6	0.330
	20		A	5SY6 220-6	6	0.330
	25		A	5SY6 225-6	6	0.330
	32		B	5SY6 232-6	6	0.330
	40		A	5SY6 240-6	6	0.330
	50		B	5SY6 250-6	6	0.330
	63		B	5SY6 263-6	6	0.330
 <p>3-pole</p> 	6	3	B	5SY6 306-6	4	0.495
	10		B	5SY6 310-6	4	0.495
	13		B	5SY6 313-6	4	0.495
	16		A	5SY6 316-6	4	0.495
	20		A	5SY6 320-6	4	0.495
	25		A	5SY6 325-6	4	0.495
	32 ¹⁾		A	5SY6 332-6	4	0.495
	40		B	5SY6 340-6	4	0.495
	50		A	5SY6 350-6	4	0.495
	63		A	5SY6 363-6	4	0.495
 <p>3-pole + N</p> 	6	4	B	5SY6 606-6	3	0.660
	10		A	5SY6 610-6	3	0.660
	13		B	5SY6 613-6	3	0.660
	16		A	5SY6 616-6	3	0.660
	20		B	5SY6 620-6	3	0.660
	25		B	5SY6 625-6	3	0.660
	32		A	5SY6 632-6	3	0.660
	40		B	5SY6 640-6	3	0.660
	50		B	5SY6 650-6	3	0.660
	63		B	5SY6 663-6	3	0.660
 <p>4-pole</p> 	6	4	B	5SY6 406-6	3	0.660
	10		A	5SY6 410-6	3	0.660
	13		B	5SY6 413-6	3	0.660
	16		A	5SY6 416-6	3	0.660
	20		B	5SY6 420-6	3	0.660
	25		B	5SY6 425-6	3	0.660
	32		B	5SY6 432-6	3	0.660
	40		B	5SY6 440-6	3	0.660
	50		A	5SY6 450-6	3	0.660
	63		A	5SY6 463-6	3	0.660

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY6 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see page 2/57.
For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range



6 000
3

6 kA
70 mm mounting depth

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted.







Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Characteristic D

Tripping range adapted to operating equipment involving significant pulse generation (transformers, solenoid valves).

Selection and ordering data

	I_n	MW	DC	Characteristic C		Pack. unit*	Weight per unit approx.	DC	Characteristic D		Pack. unit*	Weight per unit approx.
				Order No.	Order No.							
	A					kg				kg		
 <p>1-pole</p> 	0.3	1	C	5SY6 114-7	12	0.165	C	5SY6 114-8	12	0.165		
	0.5		A	5SY6 105-7	12	0.165	C	5SY6 105-8	12	0.165		
	1		A	5SY6 101-7	12	0.165	A	5SY6 101-8	12	0.165		
	1.6		B	5SY6 115-7	12	0.165	C	5SY6 115-8	12	0.147		
	2		A	5SY6 102-7	12	0.165	A	5SY6 102-8	12	0.165		
	3		A	5SY6 103-7	12	0.165	A	5SY6 103-8	12	0.165		
	4		A	5SY6 104-7	12	0.165	A	5SY6 104-8	12	0.165		
	6		A	5SY6 106-7	12	0.165	A	5SY6 106-8	12	0.165		
	8		A	5SY6 108-7	12	0.165	A	5SY6 108-8	12	0.165		
	10		A	5SY6 110-7	12	0.165	A	5SY6 110-8	12	0.165		
	13		A	5SY6 113-7	12	0.165	C	5SY6 113-8	12	0.165		
	16		A	5SY6 116-7	12	0.165	A	5SY6 116-8	12	0.165		
	20		A	5SY6 120-7	12	0.165	A	5SY6 120-8	12	0.165		
	25		A	5SY6 125-7	12	0.165	A	5SY6 125-8	12	0.165		
	32 ¹⁾		A	5SY6 132-7	12	0.165	C	5SY6 132-8	12	0.165		
	40		A	5SY6 140-7	12	0.165	C	5SY6 140-8	12	0.165		
50		A	5SY6 150-7	12	0.165	C	5SY6 150-8	12	0.165			
63		A	5SY6 163-7	12	0.165	C	5SY6 163-8	12	0.165			
 <p>1-pole + N</p> 	0.3	2	A	5SY6 514-7	6	0.330	C	5SY6 514-8	6	0.330		
	0.5		A	5SY6 505-7	6	0.330	C	5SY6 505-8	6	0.330		
	1		C	5SY6 501-7	6	0.330	C	5SY6 501-8	6	0.330		
	1.6		C	5SY6 515-7	6	0.330	C	5SY6 515-8	6	0.330		
	2		A	5SY6 502-7	6	0.330	C	5SY6 502-8	6	0.330		
	3		C	5SY6 503-7	6	0.330	C	5SY6 503-8	6	0.330		
	4		A	5SY6 504-7	6	0.330	C	5SY6 504-8	6	0.330		
	6		A	5SY6 506-7	6	0.330	C	5SY6 506-8	6	0.330		
	8		C	5SY6 508-7	6	0.330	C	5SY6 508-8	6	0.330		
	10		A	5SY6 510-7	6	0.330	C	5SY6 510-8	6	0.330		
	13		A	5SY6 513-7	6	0.330	C	5SY6 513-8	6	0.330		
	16		A	5SY6 516-7	6	0.330	C	5SY6 516-8	6	0.330		
	20		A	5SY6 520-7	6	0.330	C	5SY6 520-8	6	0.330		
	25		A	5SY6 525-7	6	0.330	C	5SY6 525-8	6	0.330		
	32		A	5SY6 532-7	6	0.330	C	5SY6 532-8	6	0.330		
	40		A	5SY6 540-7	6	0.330	C	5SY6 540-8	6	0.330		
50		A	5SY6 550-7	6	0.330	C	5SY6 550-8	6	0.330			
63		C	5SY6 563-7	6	0.330	C	5SY6 563-8	6	0.330			
 <p>2-pole</p> 	0.3	2	C	5SY6 214-7	6	0.330	C	5SY6 214-8	6	0.330		
	0.5		A	5SY6 205-7	6	0.330	A	5SY6 205-8	6	0.330		
	1		A	5SY6 201-7	6	0.330	A	5SY6 201-8	6	0.330		
	1.6		B	5SY6 215-7	6	0.330	A	5SY6 215-8	6	0.330		
	2		A	5SY6 202-7	6	0.330	A	5SY6 202-8	6	0.330		
	3		A	5SY6 203-7	6	0.330	A	5SY6 203-8	6	0.330		
	4		A	5SY6 204-7	6	0.330	A	5SY6 204-8	6	0.330		
	6		A	5SY6 206-7	6	0.330	A	5SY6 206-8	6	0.330		
	8		A	5SY6 208-7	6	0.330	A	5SY6 208-8	6	0.330		
	10		A	5SY6 210-7	6	0.330	A	5SY6 210-8	6	0.330		
	13		A	5SY6 213-7	6	0.330	C	5SY6 213-8	6	0.330		
	16		A	5SY6 216-7	6	0.330	A	5SY6 216-8	6	0.330		
	20		A	5SY6 220-7	6	0.330	A	5SY6 220-8	6	0.330		
	25		A	5SY6 225-7	6	0.330	A	5SY6 225-8	6	0.330		
	32		A	5SY6 232-7	6	0.330	A	5SY6 232-8	6	0.330		
	40		A	5SY6 240-7	6	0.330	C	5SY6 240-8	6	0.330		
50		A	5SY6 250-7	6	0.330	C	5SY6 250-8	6	0.330			
63		B	5SY6 263-7	6	0.330	C	5SY6 263-8	6	0.330			

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY6 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see page 2/57.

For accessories, please see pages 2/60 and 2/61.

* This quantity or a multiple thereof can be ordered.



6,000
3




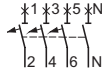

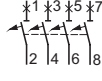
BETA Miniature Circuit-Breakers

Industry Product Range

6 kA
70 mm mounting depth

2

Selection and ordering data

	I_n	MW	DC	Characteristic C	Pack. unit*	Weight per unit approx.	DC	Characteristic D	Pack. unit*	Weight per unit approx.
				Order No.				Order No.		
	A					kg				kg
 <p>3-pole</p> 	0.3	3	C	5SY6 314-7	4	0.495	C	5SY6 314-8	4	0.495
	0.5		C	5SY6 305-7	4	0.495	C	5SY6 305-8	4	0.495
	1		C	5SY6 301-7	4	0.495	A	5SY6 301-8	4	0.495
	1.6		C	5SY6 315-7	4	0.495	C	5SY6 315-8	4	0.495
	2		A	5SY6 302-7	4	0.495	A	5SY6 302-8	4	0.495
	3		A	5SY6 303-7	4	0.495	A	5SY6 303-8	4	0.495
	4		A	5SY6 304-7	4	0.495	A	5SY6 304-8	4	0.495
	6		A	5SY6 306-7	4	0.495	A	5SY6 306-8	4	0.495
	8		C	5SY6 308-7	4	0.495	C	5SY6 308-8	4	0.495
	10		A	5SY6 310-7	4	0.495	A	5SY6 310-8	4	0.495
	13		A	5SY6 313-7	4	0.495	C	5SY6 313-8	4	0.495
	16		A	5SY6 316-7	4	0.495	A	5SY6 316-8	4	0.495
	20		A	5SY6 320-7	4	0.495	A	5SY6 320-8	4	0.495
	25		A	5SY6 325-7	4	0.495	A	5SY6 325-8	4	0.495
	32 ¹⁾		A	5SY6 332-7	4	0.495	A	5SY6 332-8	4	0.495
40		A	5SY6 340-7	4	0.495	A	5SY6 340-8	4	0.495	
50		A	5SY6 350-7	4	0.495	A	5SY6 350-8	4	0.495	
63		A	5SY6 363-7	4	0.495	A	5SY6 363-8	4	0.495	
 <p>3-pole + N</p> 	0.3	4	C	5SY6 614-7	3	0.660	C	5SY6 614-8	3	0.660
	0.5		C	5SY6 605-7	3	0.660	C	5SY6 605-8	3	0.660
	1		C	5SY6 601-7	3	0.660	C	5SY6 601-8	3	0.660
	1.6		C	5SY6 615-7	3	0.660	C	5SY6 615-8	3	0.660
	2		C	5SY6 602-7	3	0.660	C	5SY6 602-8	3	0.660
	3		C	5SY6 603-7	3	0.660	C	5SY6 603-8	3	0.660
	4		C	5SY6 604-7	3	0.660	C	5SY6 604-8	3	0.660
	6		C	5SY6 606-7	3	0.660	C	5SY6 606-8	3	0.660
	8		C	5SY6 608-7	3	0.660	C	5SY6 608-8	3	0.660
	10		A	5SY6 610-7	3	0.660	C	5SY6 610-8	3	0.660
	13		A	5SY6 613-7	3	0.660	C	5SY6 613-8	3	0.660
	16		A	5SY6 616-7	3	0.660	C	5SY6 616-8	3	0.660
	20		A	5SY6 620-7	3	0.660	C	5SY6 620-8	3	0.660
	25		A	5SY6 625-7	3	0.660	C	5SY6 625-8	3	0.660
	32		A	5SY6 632-7	3	0.660	C	5SY6 632-8	3	0.660
40		A	5SY6 640-7	3	0.660	C	5SY6 640-8	3	0.660	
50		A	5SY6 650-7	3	0.660	C	5SY6 650-8	3	0.660	
63		A	5SY6 663-7	3	0.660	C	5SY6 663-8	3	0.660	
 <p>4-pole</p> 	0.3	4	C	5SY6 414-7	3	0.660	C	5SY6 414-8	3	0.660
	0.5		C	5SY6 405-7	3	0.660	C	5SY6 405-8	3	0.660
	1		A	5SY6 401-7	3	0.660	C	5SY6 401-8	3	0.660
	1.6		C	5SY6 415-7	3	0.660	C	5SY6 415-8	3	0.660
	2		C	5SY6 402-7	3	0.660	C	5SY6 402-8	3	0.660
	3		C	5SY6 403-7	3	0.660	C	5SY6 403-8	3	0.660
	4		A	5SY6 404-7	3	0.660	C	5SY6 404-8	3	0.660
	6		A	5SY6 406-7	3	0.660	C	5SY6 406-8	3	0.660
	8		C	5SY6 408-7	3	0.660	C	5SY6 408-8	3	0.660
	10		A	5SY6 410-7	3	0.660	A	5SY6 410-8	3	0.660
	13		A	5SY6 413-7	3	0.660	C	5SY6 413-8	3	0.660
	16		A	5SY6 416-7	3	0.660	A	5SY6 416-8	3	0.660
	20		A	5SY6 420-7	3	0.660	A	5SY6 420-8	3	0.660
	25		A	5SY6 425-7	3	0.660	A	5SY6 425-8	3	0.660
	32		A	5SY6 432-7	3	0.660	A	5SY6 432-8	3	0.660
40		A	5SY6 440-7	3	0.660	A	5SY6 440-8	3	0.660	
50		A	5SY6 450-7	3	0.660	A	5SY6 450-8	3	0.660	
63		A	5SY6 463-7	3	0.660	A	5SY6 463-8	3	0.660	

1) Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY6 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see page 2/57.
For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range



10 000
3

10 kA
70 mm mounting depth

2

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted.

Characteristic A







- For limited semiconductor protection

- Protection of measuring circuits with converters
- Protection of circuits with large cable lengths and a requirement for off-switching after 0.4 s acc. to DIN VDE 0100 Part 410.

Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.

Selection and ordering data

	I_n	MW	DC	Characteristic A	Pack. unit*	Weight per unit approx.	DC	Characteristic B	Pack. unit*	Weight per unit approx.
				Order No.				Order No.		
	A					kg				kg
 <p>1-pole</p> 	1	1	C	5SY4 101-5	12	0.165	-			
	1.6		A	5SY4 115-5	12	0.165	-			
	2		B	5SY4 102-5	12	0.165	-			
	3		C	5SY4 103-5	12	0.165	-			
	4		A	5SY4 104-5	12	0.165	-			
	6		A	5SY4 106-5	12	0.165	A	5SY4 106-6	12	0.165
	8		C	5SY4 108-5	12	0.165	-			
	10		B	5SY4 110-5	12	0.165	A	5SY4 110-6	12	0.165
	13		C	5SY4 113-5	12	0.165	A	5SY4 113-6	12	0.165
	16		A	5SY4 116-5	12	0.165	A	5SY4 116-6	12	0.165
	20		A	5SY4 120-5	12	0.165	A	5SY4 120-6	12	0.165
	25		C	5SY4 125-5	12	0.165	A	5SY4 125-6	12	0.165
	32 ¹⁾		C	5SY4 132-5	12	0.165	A	5SY4 132-6	12	0.165
	40		C	5SY4 140-5	12	0.165	B	5SY4 140-6	12	0.165
	50		C	5SY4 150-5	12	0.165	A	5SY4 150-6	12	0.165
63		C	5SY4 163-5	12	0.165	A	5SY4 163-6	12	0.165	
 <p>1-pole + N</p> 	1	2	C	5SY4 501-5	6	0.330	-			
	1.6		C	5SY4 515-5	6	0.330	-			
	2		C	5SY4 502-5	6	0.330	-			
	3		C	5SY4 503-5	6	0.330	-			
	4		C	5SY4 504-5	6	0.330	-			
	6		C	5SY4 506-5	6	0.330	B	5SY4 506-6	6	0.330
	8		C	5SY4 508-5	6	0.330	-			
	10		C	5SY4 510-5	6	0.330	A	5SY4 510-6	6	0.330
	13		C	5SY4 513-5	6	0.330	A	5SY4 513-6	6	0.330
	16		C	5SY4 516-5	6	0.330	A	5SY4 516-6	6	0.330
	20		C	5SY4 520-5	6	0.330	C	5SY4 520-6	6	0.330
	25		C	5SY4 525-5	6	0.330	C	5SY4 525-6	6	0.330
	32		C	5SY4 532-5	6	0.330	C	5SY4 532-6	6	0.330
	40		C	5SY4 540-5	6	0.330	C	5SY4 540-6	6	0.330
	50		C	5SY4 550-5	6	0.330	C	5SY4 550-6	6	0.330
63		C	5SY4 563-5	6	0.330	C	5SY4 563-6	6	0.330	
 <p>2-pole</p> 	1	2	A	5SY4 201-5	6	0.330	-			
	1.6		C	5SY4 215-5	6	0.330	-			
	2		C	5SY4 202-5	6	0.330	-			
	3		C	5SY4 203-5	6	0.330	-			
	4		C	5SY4 204-5	6	0.330	-			
	6		C	5SY4 206-5	6	0.330	A	5SY4 206-6	6	0.330
	8		C	5SY4 208-5	6	0.330	-			
	10		C	5SY4 210-5	6	0.330	A	5SY4 210-6	6	0.330
	13		C	5SY4 213-5	6	0.330	B	5SY4 213-6	6	0.330
	16		C	5SY4 216-5	6	0.330	A	5SY4 216-6	6	0.330
	20		A	5SY4 220-5	6	0.330	A	5SY4 220-6	6	0.330
	25		C	5SY4 225-5	6	0.330	A	5SY4 225-6	6	0.330
	32		C	5SY4 232-5	6	0.330	B	5SY4 232-6	6	0.330
	40		A	5SY4 240-5	6	0.330	A	5SY4 240-6	6	0.330
	50		C	5SY4 250-5	6	0.330	C	5SY4 250-6	6	0.330
63		C	5SY4 263-5	6	0.330	C	5SY4 263-6	6	0.330	

1) Only applicable for 5SY4 132-6: Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY4 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see pages 2/55, 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.



10 000
3

BETA Miniature Circuit-Breakers Industry Product Range

10 kA
70 mm mounting depth

2

Selection and ordering data

Image	Diagram	I_n	MW	DC	Characteristic A			Characteristic B			
					Order No.	Pack. unit*	Weight per unit approx. kg	Order No.	Pack. unit*	Weight per unit approx. kg	
	<p>3-pole</p>	1	3	C	5SY4 301-5	4	0.495	-	-	-	
		1.6		C	5SY4 315-5	4	0.495	-	-	-	
		2		C	5SY4 302-5	4	0.495	-	-	-	
		3		C	5SY4 303-5	4	0.495	-	-	-	
		4		C	5SY4 304-5	4	0.495	-	-	-	
		6		C	5SY4 306-5	4	0.495	A	5SY4 306-6	4	0.495
		8		C	5SY4 308-5	4	0.495	-	-	-	
		10		A	5SY4 310-5	4	0.495	A	5SY4 310-6	4	0.495
		13		C	5SY4 313-5	4	0.495	C	5SY4 313-6	4	0.495
		16		C	5SY4 316-5	4	0.495	A	5SY4 316-6	4	0.495
		20		C	5SY4 320-5	4	0.495	A	5SY4 320-6	4	0.495
		25		A	5SY4 325-5	4	0.495	A	5SY4 325-6	4	0.495
		32 ¹⁾		A	5SY4 332-5	4	0.495	A	5SY4 332-6	4	0.495
		40		C	5SY4 340-5	4	0.495	B	5SY4 340-6	4	0.495
		50		C	5SY4 350-5	4	0.495	A	5SY4 350-6	4	0.495
63	C	5SY4 363-5	4	0.495	A	5SY4 363-6	4	0.495			
	<p>3-pole + N</p>	1	4	C	5SY4 601-5	3	0.660	-	-	-	
		1.6		C	5SY4 615-5	3	0.660	-	-	-	
		2		C	5SY4 602-5	3	0.660	-	-	-	
		3		C	5SY4 603-5	3	0.660	-	-	-	
		4		C	5SY4 604-5	3	0.660	-	-	-	
		6		C	5SY4 606-5	3	0.660	C	5SY4 606-6	3	0.660
		8		C	5SY4 608-5	3	0.660	-	-	-	
		10		C	5SY4 610-5	3	0.660	A	5SY4 610-6	3	0.660
		13		C	5SY4 613-5	3	0.660	C	5SY4 613-6	3	0.660
		16		C	5SY4 616-5	3	0.660	C	5SY4 616-6	3	0.660
		20		C	5SY4 620-5	3	0.660	A	5SY4 620-6	3	0.660
		25		C	5SY4 625-5	3	0.660	A	5SY4 625-6	3	0.660
		32		C	5SY4 632-5	3	0.660	A	5SY4 632-6	3	0.660
		40		C	5SY4 640-5	3	0.660	C	5SY4 640-6	3	0.660
		50		C	5SY4 650-5	3	0.660	C	5SY4 650-6	3	0.660
63	C	5SY4 663-5	3	0.660	C	5SY4 663-6	3	0.660			
	<p>4-pole</p>	1	4	C	5SY4 401-5	3	0.660	-	-	-	
		1.6		C	5SY4 415-5	3	0.660	-	-	-	
		2		C	5SY4 402-5	3	0.660	-	-	-	
		3		C	5SY4 403-5	3	0.660	-	-	-	
		4		C	5SY4 404-5	3	0.660	-	-	-	
		6		C	5SY4 406-5	3	0.660	C	5SY4 406-6	3	0.660
		8		C	5SY4 408-5	3	0.660	-	-	-	
		10		C	5SY4 410-5	3	0.660	A	5SY4 410-6	3	0.660
		13		C	5SY4 413-5	3	0.660	C	5SY4 413-6	3	0.660
		16		C	5SY4 416-5	3	0.660	A	5SY4 416-6	3	0.660
		20		C	5SY4 420-5	3	0.660	C	5SY4 420-6	3	0.660
		25		C	5SY4 425-5	3	0.660	A	5SY4 425-6	3	0.660
		32		C	5SY4 432-5	3	0.660	A	5SY4 432-6	3	0.660
		40		C	5SY4 440-5	3	0.660	A	5SY4 440-6	3	0.660
		50		C	5SY4 450-5	3	0.660	C	5SY4 450-6	3	0.660
63	C	5SY4 463-5	3	0.660	A	5SY4 463-6	3	0.660			

1) Only applicable for 5SY4 332-6.
Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY4 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see pages 2/55, 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range



10 000
3

10 kA
70 mm mounting depth

2

Area of application




Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Characteristic D

Tripping range adapted to operating equipment involving significant pulse generation (transformers, solenoid valves).

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg
 <p>1-pole</p> <p>1 2</p>	0.3	1	C	5SY4 114-7	12	0.165	C	5SY4 114-8	12	0.165
	0.5		A	5SY4 105-7	12	0.165	C	5SY4 105-8	12	0.165
	1		A	5SY4 101-7	12	0.165	C	5SY4 101-8	12	0.165
	1.6		B	5SY4 115-7	12	0.165	C	5SY4 115-8	12	0.165
	2		A	5SY4 102-7	12	0.165	A	5SY4 102-8	12	0.165
	3		A	5SY4 103-7	12	0.165	A	5SY4 103-8	12	0.165
	4		A	5SY4 104-7	12	0.165	C	5SY4 104-8	12	0.165
	6		A	5SY4 106-7	12	0.165	A	5SY4 106-8	12	0.165
	8		A	5SY4 108-7	12	0.165	C	5SY4 108-8	12	0.165
	10		A	5SY4 110-7	12	0.165	A	5SY4 110-8	12	0.165
	13		A	5SY4 113-7	12	0.165	C	5SY4 113-8	12	0.165
	16		A	5SY4 116-7	12	0.165	A	5SY4 116-8	12	0.165
	20		A	5SY4 120-7	12	0.165	A	5SY4 120-8	12	0.165
	25		A	5SY4 125-7	12	0.165	C	5SY4 125-8	12	0.165
	32 ¹⁾		A	5SY4 132-7	12	0.165	C	5SY4 132-8	12	0.165
	40		A	5SY4 140-7	12	0.165	C	5SY4 140-8	12	0.165
50	A	5SY4 150-7	12	0.165	A	5SY4 150-8	12	0.165		
63	A	5SY4 163-7	12	0.165	C	5SY4 163-8	12	0.165		
 <p>1-pole + N</p> <p>1 2 N</p>	0.3	2	C	5SY4 514-7	6	0.330	C	5SY4 514-8	6	0.330
	0.5		A	5SY4 505-7	6	0.330	C	5SY4 505-8	6	0.330
	1		C	5SY4 501-7	6	0.330	C	5SY4 501-8	6	0.330
	1.6		C	5SY4 515-7	6	0.330	C	5SY4 515-8	6	0.330
	2		A	5SY4 502-7	6	0.330	C	5SY4 502-8	6	0.330
	3		C	5SY4 503-7	6	0.330	C	5SY4 503-8	6	0.330
	4		A	5SY4 504-7	6	0.330	C	5SY4 504-8	6	0.330
	6		A	5SY4 506-7	6	0.330	C	5SY4 506-8	6	0.330
	8		C	5SY4 508-7	6	0.330	C	5SY4 508-8	6	0.330
	10		A	5SY4 510-7	6	0.330	A	5SY4 510-8	6	0.330
	13		C	5SY4 513-7	6	0.330	C	5SY4 513-8	6	0.330
	16		A	5SY4 516-7	6	0.330	B	5SY4 516-8	6	0.330
	20		A	5SY4 520-7	6	0.330	A	5SY4 520-8	6	0.330
	25		A	5SY4 525-7	6	0.330	C	5SY4 525-8	6	0.330
	32		A	5SY4 532-7	6	0.330	C	5SY4 532-8	6	0.330
	40		A	5SY4 540-7	6	0.330	C	5SY4 540-8	6	0.330
50	C	5SY4 550-7	6	0.330	C	5SY4 550-8	6	0.330		
63	C	5SY4 563-7	6	0.330	C	5SY4 563-8	6	0.330		
 <p>2-pole</p> <p>1 2 3 4</p>	0.3	2	C	5SY4 214-7	6	0.330	C	5SY4 214-8	6	0.330
	0.5		A	5SY4 205-7	6	0.330	B	5SY4 205-8	6	0.330
	1		A	5SY4 201-7	6	0.330	A	5SY4 201-8	6	0.330
	1.6		B	5SY4 215-7	6	0.330	C	5SY4 215-8	6	0.330
	2		A	5SY4 202-7	6	0.330	A	5SY4 202-8	6	0.330
	3		A	5SY4 203-7	6	0.330	A	5SY4 203-8	6	0.330
	4		A	5SY4 204-7	6	0.330	A	5SY4 204-8	6	0.330
	6		A	5SY4 206-7	6	0.330	A	5SY4 206-8	6	0.330
	8		A	5SY4 208-7	6	0.330	C	5SY4 208-8	6	0.330
	10		A	5SY4 210-7	6	0.330	A	5SY4 210-8	6	0.330
	13		A	5SY4 213-7	6	0.330	C	5SY4 213-8	6	0.330
	16		A	5SY4 216-7	6	0.330	A	5SY4 216-8	6	0.330
	20		A	5SY4 220-7	6	0.330	A	5SY4 220-8	6	0.330
	25		A	5SY4 225-7	6	0.330	A	5SY4 225-8	6	0.330
	32		A	5SY4 232-7	6	0.330	A	5SY4 232-8	6	0.330
	40		A	5SY4 240-7	6	0.330	B	5SY4 240-8	6	0.330
50	A	5SY4 250-7	6	0.330	B	5SY4 250-8	6	0.330		
63	A	5SY4 263-7	6	0.330	C	5SY4 263-8	6	0.330		

1) Only applicable for 5SY4 132-7:

Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY4 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see pages 2/55, 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.

* This quantity or a multiple thereof can be ordered.






10 000
3

BETA Miniature Circuit-Breakers Industry Product Range

10 kA
70 mm mounting depth

2

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg			
	3-pole												
		3-pole + N											
			4-pole										
			0.3	3	C	5SY4 314-7	4	0.495	C	5SY4 314-8	4	0.495	
			0.5	A	5SY4 305-7	4	0.495	C	5SY4 305-8	4	0.495		
			1	C	5SY4 301-7	4	0.495	C	5SY4 301-8	4	0.495		
			1.6	C	5SY4 315-7	4	0.495	C	5SY4 315-8	4	0.495		
			2	A	5SY4 302-7	4	0.495	A	5SY4 302-8	4	0.495		
			3	A	5SY4 303-7	4	0.495	C	5SY4 303-8	4	0.495		
			4	A	5SY4 304-7	4	0.495	A	5SY4 304-8	4	0.495		
			6	A	5SY4 306-7	4	0.495	A	5SY4 306-8	4	0.495		
			8	C	5SY4 308-7	4	0.495	C	5SY4 308-8	4	0.495		
			10	A	5SY4 310-7	4	0.495	A	5SY4 310-8	4	0.495		
			13	A	5SY4 313-7	4	0.495	A	5SY4 313-8	4	0.495		
			16	A	5SY4 316-7	4	0.495	A	5SY4 316-8	4	0.495		
20			A	5SY4 320-7	4	0.495	A	5SY4 320-8	4	0.495			
25	A		5SY4 325-7	4	0.495	A	5SY4 325-8	4	0.495				
32 ¹⁾	A	5SY4 332-7	4	0.495	A	5SY4 332-8	4	0.495					
40	A	5SY4 340-7	4	0.495	A	5SY4 340-8	4	0.495					
50	A	5SY4 350-7	4	0.495	A	5SY4 350-8	4	0.495					
63	A	5SY4 363-7	4	0.495	A	5SY4 363-8	4	0.495					
0.3	4	C	5SY4 614-7	3	0.660	C	5SY4 614-8	3	0.660				
0.5	C	5SY4 605-7	3	0.660	C	5SY4 605-8	3	0.660					
1	C	5SY4 601-7	3	0.660	C	5SY4 601-8	3	0.660					
1.6	C	5SY4 615-7	3	0.660	C	5SY4 615-8	3	0.660					
2	C	5SY4 602-7	3	0.660	C	5SY4 602-8	3	0.660					
3	C	5SY4 603-7	3	0.660	C	5SY4 603-8	3	0.660					
4	C	5SY4 604-7	3	0.660	C	5SY4 604-8	3	0.660					
6	A	5SY4 606-7	3	0.660	C	5SY4 606-8	3	0.660					
8	C	5SY4 608-7	3	0.660	C	5SY4 608-8	3	0.660					
10	A	5SY4 610-7	3	0.660	C	5SY4 610-8	3	0.660					
13	A	5SY4 613-7	3	0.660	C	5SY4 613-8	3	0.660					
16	A	5SY4 616-7	3	0.660	B	5SY4 616-8	3	0.660					
20	A	5SY4 620-7	3	0.660	A	5SY4 620-8	3	0.660					
25	A	5SY4 625-7	3	0.660	A	5SY4 625-8	3	0.660					
32	A	5SY4 632-7	3	0.660	A	5SY4 632-8	3	0.660					
40	A	5SY4 640-7	3	0.660	A	5SY4 640-8	3	0.660					
50	A	5SY4 650-7	3	0.660	A	5SY4 650-8	3	0.660					
63	A	5SY4 663-7	3	0.660	B	5SY4 663-8	3	0.660					
0.3	4	C	5SY4 414-7	3	0.660	C	5SY4 414-8	3	0.660				
0.5	C	5SY4 405-7	3	0.660	C	5SY4 405-8	3	0.660					
1	C	5SY4 401-7	3	0.660	C	5SY4 401-8	3	0.660					
1.6	C	5SY4 415-7	3	0.660	C	5SY4 415-8	3	0.660					
2	A	5SY4 402-7	3	0.660	C	5SY4 402-8	3	0.660					
3	C	5SY4 403-7	3	0.660	C	5SY4 403-8	3	0.660					
4	C	5SY4 404-7	3	0.660	C	5SY4 404-8	3	0.660					
6	A	5SY4 406-7	3	0.660	C	5SY4 406-8	3	0.660					
8	C	5SY4 408-7	3	0.660	C	5SY4 408-8	3	0.660					
10	A	5SY4 410-7	3	0.660	A	5SY4 410-8	3	0.660					
13	C	5SY4 413-7	3	0.660	C	5SY4 413-8	3	0.660					
16	A	5SY4 416-7	3	0.660	A	5SY4 416-8	3	0.660					
20	A	5SY4 420-7	3	0.660	A	5SY4 420-8	3	0.660					
25	A	5SY4 425-7	3	0.660	A	5SY4 425-8	3	0.660					
32	A	5SY4 432-7	3	0.660	A	5SY4 432-8	3	0.660					
40	A	5SY4 440-7	3	0.660	C	5SY4 440-8	3	0.660					
50	A	5SY4 450-7	3	0.660	A	5SY4 450-8	3	0.660					
63	A	5SY4 463-7	3	0.660	A	5SY4 463-8	3	0.660					

You can order this amount or a multiple of this amount.

- 1) Only applicable for 5SY4 332-7 and 5SY7 132-6:
Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

Please note for pages 2/47 and 2/48:

All 5SY4 and 5SY7 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

The following cross-references and footnotes apply for pages 2/47 and 2/48:

For supplementary components, please see pages 2/55, 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range



15 000
3

15 kA
70 mm mounting depth

2












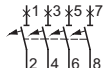
Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted.

Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.

Selection and ordering data

	I_n	MW	DC	Characteristic B Order No.	Pack. unit*	Weight per unit approx. kg
 <p>1-pole</p> 	6	1	B	5SY7 106-6	12	0.165
	10		A	5SY7 110-6	12	0.165
	13		C	5SY7 113-6	12	0.165
	16		A	5SY7 116-6	12	0.165
	20		C	5SY7 120-6	12	0.165
	25		C	5SY7 125-6	12	0.165
	32 ¹⁾		C	5SY7 132-6	12	0.165
	40		C	5SY7 140-6	12	0.165
	50		C	5SY7 150-6	12	0.165
	63		C	5SY7 163-6	12	0.165
 <p>1-pole + N</p> 	6	2	C	5SY7 506-6	6	0.330
	10		C	5SY7 510-6	6	0.330
	13		C	5SY7 513-6	6	0.330
	16		C	5SY7 516-6	6	0.330
	20		C	5SY7 520-6	6	0.330
	25		C	5SY7 525-6	6	0.330
	32		C	5SY7 532-6	6	0.330
	40		C	5SY7 540-6	6	0.330
	50		C	5SY7 550-6	6	0.330
	63		C	5SY7 563-6	6	0.330
 <p>2-pole</p> 	6	2	A	5SY7 206-6	6	0.330
	10		B	5SY7 210-6	6	0.330
	13		C	5SY7 213-6	6	0.330
	16		C	5SY7 216-6	6	0.330
	20		C	5SY7 220-6	6	0.330
	25		A	5SY7 225-6	6	0.330
	32		C	5SY7 232-6	6	0.330
	40		C	5SY7 240-6	6	0.330
	50		C	5SY7 250-6	6	0.330
	63		C	5SY7 263-6	6	0.330
 <p>3-pole</p> 	6	3	C	5SY7 306-6	4	0.495
	10		A	5SY7 310-6	4	0.495
	13		C	5SY7 313-6	4	0.495
	16		B	5SY7 316-6	4	0.495
	20		C	5SY7 320-6	4	0.495
	25		A	5SY7 325-6	4	0.495
	32		C	5SY7 332-6	4	0.495
	40		C	5SY7 340-6	4	0.495
	50		C	5SY7 350-6	4	0.495
	63		C	5SY7 363-6	4	0.495
 <p>3-pole + N</p> 	6	4	C	5SY7 606-6	3	0.660
	10		C	5SY7 610-6	3	0.660
	13		C	5SY7 613-6	3	0.660
	16		B	5SY7 616-6	3	0.660
	20		B	5SY7 620-6	3	0.660
	25		C	5SY7 625-6	3	0.660
	32		C	5SY7 632-6	3	0.660
	40		C	5SY7 640-6	3	0.660
	50		C	5SY7 650-6	3	0.660
	63		C	5SY7 663-6	3	0.660
 <p>4-pole</p> 	6	4	C	5SY7 406-6	3	0.660
	10		A	5SY7 410-6	3	0.660
	13		C	5SY7 413-6	3	0.660
	16		C	5SY7 416-6	3	0.660
	20		A	5SY7 420-6	3	0.660
	25		C	5SY7 425-6	3	0.660
	32		C	5SY7 432-6	3	0.660
	40		C	5SY7 440-6	3	0.660
	50		C	5SY7 450-6	3	0.660
	63		C	5SY7 463-6	3	0.660

Please see the footnote on page 2/49.

15 000
3

BETA Miniature Circuit-Breakers Industry Product Range

15 kA
70 mm mounting depth**2**

Area of application




Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Characteristic D

Tripping range adapted to operating equipment involving significant pulse generation (transformers, solenoid valves).

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg			
	1-pole												
		1-pole + N											
			2-pole										
			0.3	1	C	5SY7 114-7	12	0.165	C	5SY7 114-8	12	0.165	
			0.5		C	5SY7 105-7	12	0.165	C	5SY7 105-8	12	0.165	
			1		A	5SY7 101-7	12	0.165	C	5SY7 101-8	12	0.165	
			1.6		A	5SY7 115-7	12	0.165	C	5SY7 115-8	12	0.165	
			2		A	5SY7 102-7	12	0.165	C	5SY7 102-8	12	0.165	
			3		C	5SY7 103-7	12	0.165	C	5SY7 103-8	12	0.165	
			4		A	5SY7 104-7	12	0.165	C	5SY7 104-8	12	0.165	
			6		A	5SY7 106-7	12	0.165	C	5SY7 106-8	12	0.165	
			8		A	5SY7 108-7	12	0.165	C	5SY7 108-8	12	0.165	
			10		A	5SY7 110-7	12	0.165	A	5SY7 110-8	12	0.165	
			13		C	5SY7 113-7	12	0.165	C	5SY7 113-8	12	0.165	
			16		A	5SY7 116-7	12	0.165	C	5SY7 116-8	12	0.165	
			20		A	5SY7 120-7	12	0.165	C	5SY7 120-8	12	0.165	
25				A	5SY7 125-7	12	0.165	C	5SY7 125-8	12	0.165		
32 ¹⁾			C	5SY7 132-7	12	0.165	C	5SY7 132-8	12	0.165			
40		C	5SY7 140-7	12	0.165	C	5SY7 140-8	12	0.165				
50		C	5SY7 150-7	12	0.165	C	5SY7 150-8	12	0.165				
63		C	5SY7 163-7	12	0.165	C	5SY7 163-8	12	0.165				
0.3	2	C	5SY7 514-7	6	0.330	C	5SY7 514-8	6	0.330				
0.5		C	5SY7 505-7	6	0.330	C	5SY7 505-8	6	0.330				
1		C	5SY7 501-7	6	0.330	C	5SY7 501-8	6	0.330				
1.6		C	5SY7 515-7	6	0.330	C	5SY7 515-8	6	0.330				
2		A	5SY7 502-7	6	0.330	C	5SY7 502-8	6	0.330				
3		C	5SY7 503-7	6	0.330	C	5SY7 503-8	6	0.330				
4		A	5SY7 504-7	6	0.330	C	5SY7 504-8	6	0.330				
6		A	5SY7 506-7	6	0.330	C	5SY7 506-8	6	0.330				
8		C	5SY7 508-7	6	0.330	C	5SY7 508-8	6	0.330				
10		A	5SY7 510-7	6	0.330	C	5SY7 510-8	6	0.330				
13		C	5SY7 513-7	6	0.330	C	5SY7 513-8	6	0.330				
16		A	5SY7 516-7	6	0.330	C	5SY7 516-8	6	0.330				
20		A	5SY7 520-7	6	0.330	C	5SY7 520-8	6	0.330				
25		A	5SY7 525-7	6	0.330	C	5SY7 525-8	6	0.330				
32		A	5SY7 532-7	6	0.330	C	5SY7 532-8	6	0.330				
40		C	5SY7 540-7	6	0.330	C	5SY7 540-8	6	0.330				
50		C	5SY7 550-7	6	0.330	C	5SY7 550-8	6	0.330				
63		C	5SY7 563-7	6	0.330	C	5SY7 563-8	6	0.330				
0.3	2	C	5SY7 214-7	6	0.330	C	5SY7 214-8	6	0.330				
0.5		A	5SY7 205-7	6	0.330	C	5SY7 205-8	6	0.330				
1		A	5SY7 201-7	6	0.330	C	5SY7 201-8	6	0.330				
1.6		C	5SY7 215-7	6	0.330	C	5SY7 215-8	6	0.330				
2		A	5SY7 202-7	6	0.330	A	5SY7 202-8	6	0.330				
3		A	5SY7 203-7	6	0.330	C	5SY7 203-8	6	0.330				
4		A	5SY7 204-7	6	0.330	C	5SY7 204-8	6	0.330				
6		A	5SY7 206-7	6	0.330	B	5SY7 206-8	6	0.330				
8		C	5SY7 208-7	6	0.330	C	5SY7 208-8	6	0.330				
10		A	5SY7 210-7	6	0.330	C	5SY7 210-8	6	0.330				
13		C	5SY7 213-7	6	0.330	C	5SY7 213-8	6	0.330				
16		A	5SY7 216-7	6	0.330	B	5SY7 216-8	6	0.330				
20		A	5SY7 220-7	6	0.330	C	5SY7 220-8	6	0.330				
25		A	5SY7 225-7	6	0.330	C	5SY7 225-8	6	0.330				
32		A	5SY7 232-7	6	0.330	C	5SY7 232-8	6	0.330				
40		A	5SY7 240-7	6	0.330	C	5SY7 240-8	6	0.330				
50		C	5SY7 250-7	6	0.330	C	5SY7 250-8	6	0.330				
63		C	5SY7 263-7	6	0.330	C	5SY7 263-8	6	0.330				

The following footnotes apply to pages 2/48 and 2/49:

- 1) Only applicable for 5SY7 132-6 and 5SY7 132-7:
Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY7 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see pages 2/55, 2/57 and 2/59.
For accessories, please see pages 2/60 and 2/61.

* This quantity or a multiple thereof can be ordered.

BETA Miniature Circuit-Breakers

Industry Product Range









15 000
3

15 kA
70 mm mounting depth

2

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg
 <p>3-pole</p> 	0.3	3	C	5SY7 314-7	4	0.495	C	5SY7 314-8	4	0.495
	0.5		C	5SY7 305-7	4	0.495	C	5SY7 305-8	4	0.495
	1		C	5SY7 301-7	4	0.495	C	5SY7 301-8	4	0.495
	1.6		C	5SY7 315-7	4	0.495	C	5SY7 315-8	4	0.495
	2		C	5SY7 302-7	4	0.495	C	5SY7 302-8	4	0.495
	3		C	5SY7 303-7	4	0.495	C	5SY7 303-8	4	0.495
	4		A	5SY7 304-7	4	0.495	C	5SY7 304-8	4	0.495
	6		B	5SY7 306-7	4	0.495	C	5SY7 306-8	4	0.495
	8		C	5SY7 308-7	4	0.495	C	5SY7 308-8	4	0.495
	10		A	5SY7 310-7	4	0.495	C	5SY7 310-8	4	0.495
	13		A	5SY7 313-7	4	0.495	C	5SY7 313-8	4	0.495
	16		A	5SY7 316-7	4	0.495	C	5SY7 316-8	4	0.495
	20		A	5SY7 320-7	4	0.495	A	5SY7 320-8	4	0.495
	25		A	5SY7 325-7	4	0.495	C	5SY7 325-8	4	0.495
	32 ¹⁾		A	5SY7 332-7	4	0.495	C	5SY7 332-8	4	0.495
	40		A	5SY7 340-7	4	0.495	C	5SY7 340-8	4	0.495
50	A	5SY7 350-7	4	0.495	C	5SY7 350-8	4	0.495		
63	A	5SY7 363-7	4	0.495	C	5SY7 363-8	4	0.495		
 <p>3-pole + N</p> 	0.3	4	C	5SY7 614-7	3	0.660	C	5SY7 614-8	3	0.660
	0.5		C	5SY7 605-7	3	0.660	C	5SY7 605-8	3	0.660
	1		C	5SY7 601-7	3	0.660	C	5SY7 601-8	3	0.660
	1.6		C	5SY7 615-7	3	0.660	C	5SY7 615-8	3	0.660
	2		C	5SY7 602-7	3	0.660	C	5SY7 602-8	3	0.660
	3		C	5SY7 603-7	3	0.660	C	5SY7 603-8	3	0.660
	4		C	5SY7 604-7	3	0.660	C	5SY7 604-8	3	0.660
	6		C	5SY7 606-7	3	0.660	C	5SY7 606-8	3	0.660
	8		C	5SY7 608-7	3	0.660	C	5SY7 608-8	3	0.660
	10		A	5SY7 610-7	3	0.660	C	5SY7 610-8	3	0.660
	13		C	5SY7 613-7	3	0.660	C	5SY7 613-8	3	0.660
	16		A	5SY7 616-7	3	0.660	C	5SY7 616-8	3	0.660
	20		C	5SY7 620-7	3	0.660	C	5SY7 620-8	3	0.660
	25		B	5SY7 625-7	3	0.660	C	5SY7 625-8	3	0.660
	32		C	5SY7 632-7	3	0.660	C	5SY7 632-8	3	0.660
	40		B	5SY7 640-7	3	0.660	C	5SY7 640-8	3	0.660
50	B	5SY7 650-7	3	0.660	C	5SY7 650-8	3	0.660		
63	A	5SY7 663-7	3	0.660	C	5SY7 663-8	3	0.660		
 <p>4-pole</p> 	0.3	4	C	5SY7 414-7	3	0.660	C	5SY7 414-8	3	0.660
	0.5		C	5SY7 405-7	3	0.660	C	5SY7 405-8	3	0.660
	1		C	5SY7 401-7	3	0.660	C	5SY7 401-8	3	0.660
	1.6		C	5SY7 415-7	3	0.660	C	5SY7 415-8	3	0.660
	2		C	5SY7 402-7	3	0.660	C	5SY7 402-8	3	0.660
	3		C	5SY7 403-7	3	0.660	C	5SY7 403-8	3	0.660
	4		C	5SY7 404-7	3	0.660	C	5SY7 404-8	3	0.660
	6		A	5SY7 406-7	3	0.660	C	5SY7 406-8	3	0.660
	8		C	5SY7 408-7	3	0.660	C	5SY7 408-8	3	0.660
	10		A	5SY7 410-7	3	0.660	C	5SY7 410-8	3	0.660
	13		C	5SY7 413-7	3	0.660	C	5SY7 413-8	3	0.660
	16		A	5SY7 416-7	3	0.660	C	5SY7 416-8	3	0.660
	20		A	5SY7 420-7	3	0.660	C	5SY7 420-8	3	0.660
	25		A	5SY7 425-7	3	0.660	C	5SY7 425-8	3	0.660
	32		A	5SY7 432-7	3	0.660	A	5SY7 432-8	3	0.660
	40		A	5SY7 440-7	3	0.660	C	5SY7 440-8	3	0.660
50	A	5SY7 450-7	3	0.660	C	5SY7 450-8	3	0.660		
63	A	5SY7 463-7	3	0.660	B	5SY7 463-8	3	0.660		

1) Only applicable for 5SY7 332-7:

Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic B or C and $I_n = 40$ A is recommended.

All 5SY7 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole and 1-pole + N design) and AC 480 V (2-pole, 3-pole, 3-pole + N and 4-pole design).

For supplementary components, please see pages 2/55, 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range

25 kA
70 mm mounting depth

2

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60 947-2, IEC 60 947-2
- Supplementary components can be retrofitted.




Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Characteristic D

Tripping range adapted to operating equipment involving significant pulse generation (transformers, solenoid valves).

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg
 <p>1-pole</p> <p>1 2</p>	0.3	1	C	5SY8 114-7	12	0.165	C	5SY8 114-8	12	0.165
	0.5		C	5SY8 105-7	12	0.165	C	5SY8 105-8	12	0.165
	1		A	5SY8 101-7	12	0.165	C	5SY8 101-8	12	0.165
	1.6		C	5SY8 115-7	12	0.165	C	5SY8 115-8	12	0.165
	2		A	5SY8 102-7	12	0.165	C	5SY8 102-8	12	0.165
	3		C	5SY8 103-7	12	0.165	C	5SY8 103-8	12	0.165
	4		C	5SY8 104-7	12	0.165	C	5SY8 104-8	12	0.165
	6		A	5SY8 106-7	12	0.165	C	5SY8 106-8	12	0.165
	8		C	5SY8 108-7	12	0.165	C	5SY8 108-8	12	0.165
	10		C	5SY8 110-7	12	0.165	C	5SY8 110-8	12	0.165
	13		C	5SY8 113-7	12	0.165	C	5SY8 113-8	12	0.165
	16		A	5SY8 116-7	12	0.165	C	5SY8 116-8	12	0.165
	20		B	5SY8 120-7	12	0.165	C	5SY8 120-8	12	0.165
	25		C	5SY8 125-7	12	0.165	C	5SY8 125-8	12	0.165
	32 ¹⁾		C	5SY8 132-7	12	0.165	C	5SY8 132-8	12	0.165
	40		C	5SY8 140-7	12	0.165	C	5SY8 140-8	12	0.165
50		C	5SY8 150-7	12	0.165	C	5SY8 150-8	12	0.165	
63		C	5SY8 163-7	12	0.165	C	5SY8 163-8	12	0.165	
 <p>1-pole + N</p> <p>1 2 N</p>	0.3	2	C	5SY8 514-7	6	0.330	C	5SY8 514-8	6	0.330
	0.5		C	5SY8 505-7	6	0.330	C	5SY8 505-8	6	0.330
	1		C	5SY8 501-7	6	0.330	C	5SY8 501-8	6	0.330
	1.6		C	5SY8 515-7	6	0.330	C	5SY8 515-8	6	0.330
	2		C	5SY8 502-7	6	0.330	C	5SY8 502-8	6	0.330
	3		C	5SY8 503-7	6	0.330	C	5SY8 503-8	6	0.330
	4		C	5SY8 504-7	6	0.330	C	5SY8 504-8	6	0.330
	6		C	5SY8 506-7	6	0.330	C	5SY8 506-8	6	0.330
	8		C	5SY8 508-7	6	0.330	C	5SY8 508-8	6	0.330
	10		A	5SY8 510-7	6	0.330	C	5SY8 510-8	6	0.330
	13		C	5SY8 513-7	6	0.330	C	5SY8 513-8	6	0.330
	16		C	5SY8 516-7	6	0.330	C	5SY8 516-8	6	0.330
	20		C	5SY8 520-7	6	0.330	C	5SY8 520-8	6	0.330
	25		C	5SY8 525-7	6	0.330	C	5SY8 525-8	6	0.330
	32		C	5SY8 532-7	6	0.330	C	5SY8 532-8	6	0.330
	40		C	5SY8 540-7	6	0.330	C	5SY8 540-8	6	0.330
50		C	5SY8 550-7	6	0.330	C	5SY8 550-8	6	0.330	
63		C	5SY8 563-7	6	0.330	C	5SY8 563-8	6	0.330	
 <p>2-pole</p> <p>1 2 3 4</p>	0.3	2	C	5SY8 214-7	6	0.330	C	5SY8 214-8	6	0.330
	0.5		C	5SY8 205-7	6	0.330	C	5SY8 205-8	6	0.330
	1		C	5SY8 201-7	6	0.330	C	5SY8 201-8	6	0.330
	1.6		C	5SY8 215-7	6	0.330	C	5SY8 215-8	6	0.330
	2		C	5SY8 202-7	6	0.330	C	5SY8 202-8	6	0.330
	3		C	5SY8 203-7	6	0.330	C	5SY8 203-8	6	0.330
	4		C	5SY8 204-7	6	0.330	C	5SY8 204-8	6	0.330
	6		A	5SY8 206-7	6	0.330	C	5SY8 206-8	6	0.330
	8		C	5SY8 208-7	6	0.330	C	5SY8 208-8	6	0.330
	10		A	5SY8 210-7	6	0.330	C	5SY8 210-8	6	0.330
	13		C	5SY8 213-7	6	0.330	C	5SY8 213-8	6	0.330
	16		A	5SY8 216-7	6	0.330	C	5SY8 216-8	6	0.330
	20		A	5SY8 220-7	6	0.330	C	5SY8 220-8	6	0.330
	25		A	5SY8 225-7	6	0.330	C	5SY8 225-8	6	0.330
	32		C	5SY8 232-7	6	0.330	C	5SY8 232-8	6	0.330
	40		C	5SY8 240-7	6	0.330	C	5SY8 240-8	6	0.330
50		C	5SY8 250-7	6	0.330	C	5SY8 250-8	6	0.330	
63		C	5SY8 263-7	6	0.330	C	5SY8 263-8	6	0.330	

1) Only applicable for 5SY8 132-7:
Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic C and $I_n = 40$ A is recommended.







For supplementary components, please see pages 2/55, 2/57 and 2/59.
For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

Industry Product Range

25 kA
70 mm mounting depth

Selection and ordering data

	I_n	MW	DC	Characteristic C Order No.	Pack. unit*	Weight per unit approx. kg	DC	Characteristic D Order No.	Pack. unit*	Weight per unit approx. kg
 <p>3-pole</p> 	0.3	3	C	5SY8 314-7	4	0.495	C	5SY8 314-8	4	0.495
	0.5		C	5SY8 305-7	4	0.495	C	5SY8 305-8	4	0.495
	1		C	5SY8 301-7	4	0.495	C	5SY8 301-8	4	0.495
	1.6		C	5SY8 315-7	4	0.495	C	5SY8 315-8	4	0.495
	2		C	5SY8 302-7	4	0.495	C	5SY8 302-8	4	0.495
	3		C	5SY8 303-7	4	0.495	C	5SY8 303-8	4	0.495
	4		C	5SY8 304-7	4	0.495	C	5SY8 304-8	4	0.495
	6		C	5SY8 306-7	4	0.495	C	5SY8 306-8	4	0.495
	8		C	5SY8 308-7	4	0.495	C	5SY8 308-8	4	0.495
	10		A	5SY8 310-7	4	0.495	C	5SY8 310-8	4	0.495
	13		C	5SY8 313-7	4	0.495	C	5SY8 313-8	4	0.495
	16		C	5SY8 316-7	4	0.495	C	5SY8 316-8	4	0.495
	20		C	5SY8 320-7	4	0.495	C	5SY8 320-8	4	0.495
	25		C	5SY8 325-7	4	0.495	C	5SY8 325-8	4	0.495
	32 ¹⁾		C	5SY8 332-7	4	0.495	C	5SY8 332-8	4	0.495
	40		C	5SY8 340-7	4	0.495	C	5SY8 340-8	4	0.495
50	C	5SY8 350-7	4	0.495	C	5SY8 350-8	4	0.495		
63	C	5SY8 363-7	4	0.495	C	5SY8 363-8	4	0.495		
 <p>3-pole + N</p> 	0.3	4	C	5SY8 614-7	3	0.660	C	5SY8 614-8	3	0.660
	0.5		C	5SY8 605-7	3	0.660	C	5SY8 605-8	3	0.660
	1		C	5SY8 601-7	3	0.660	C	5SY8 601-8	3	0.660
	1.6		C	5SY8 615-7	3	0.660	C	5SY8 615-8	3	0.660
	2		C	5SY8 602-7	3	0.660	C	5SY8 602-8	3	0.660
	3		C	5SY8 603-7	3	0.660	C	5SY8 603-8	3	0.660
	4		C	5SY8 604-7	3	0.660	C	5SY8 604-8	3	0.660
	6		C	5SY8 606-7	3	0.660	C	5SY8 606-8	3	0.660
	8		C	5SY8 608-7	3	0.660	C	5SY8 608-8	3	0.660
	10		C	5SY8 610-7	3	0.660	C	5SY8 610-8	3	0.660
	13		C	5SY8 613-7	3	0.660	C	5SY8 613-8	3	0.660
	16		C	5SY8 616-7	3	0.660	C	5SY8 616-8	3	0.660
	20		C	5SY8 620-7	3	0.660	C	5SY8 620-8	3	0.660
	25		C	5SY8 625-7	3	0.660	C	5SY8 625-8	3	0.660
	32		C	5SY8 632-7	3	0.660	C	5SY8 632-8	3	0.660
	40		C	5SY8 640-7	3	0.660	C	5SY8 640-8	3	0.660
50	A	5SY8 650-7	3	0.660	C	5SY8 650-8	3	0.660		
63	C	5SY8 663-7	3	0.660	C	5SY8 663-8	3	0.660		
 <p>4-pole</p> 	0.3	4	C	5SY8 414-7	3	0.660	C	5SY8 414-8	3	0.660
	0.5		C	5SY8 405-7	3	0.660	C	5SY8 405-8	3	0.660
	1		C	5SY8 401-7	3	0.660	C	5SY8 401-8	3	0.660
	1.6		C	5SY8 415-7	3	0.660	C	5SY8 415-8	3	0.660
	2		C	5SY8 402-7	3	0.660	C	5SY8 402-8	3	0.660
	3		C	5SY8 403-7	3	0.660	C	5SY8 403-8	3	0.660
	4		C	5SY8 404-7	3	0.660	C	5SY8 404-8	3	0.660
	6		C	5SY8 406-7	3	0.660	C	5SY8 406-8	3	0.660
	8		C	5SY8 408-7	3	0.660	C	5SY8 408-8	3	0.660
	10		A	5SY8 410-7	3	0.660	C	5SY8 410-8	3	0.660
	13		C	5SY8 413-7	3	0.660	C	5SY8 413-8	3	0.660
	16		C	5SY8 416-7	3	0.660	C	5SY8 416-8	3	0.660
	20		A	5SY8 420-7	3	0.660	C	5SY8 420-8	3	0.660
	25		A	5SY8 425-7	3	0.660	C	5SY8 425-8	3	0.660
	32		A	5SY8 432-7	3	0.660	C	5SY8 432-8	3	0.660
	40		A	5SY8 440-7	3	0.660	C	5SY8 440-8	3	0.660
50	A	5SY8 450-7	3	0.660	C	5SY8 450-8	3	0.660		
63	A	5SY8 463-7	3	0.660	C	5SY8 463-8	3	0.660		

1) Only applicable for 5SY8 332-7:

Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of miniature circuit-breakers of characteristic C and $I_n = 40$ A is recommended.

Area of application

- U_n : 230/400 V, 50-60 Hz, 220 V DC per pole, applicable in networks up to: AC 250/440 V
 - 220 V DC: 1-pole
 - 440 V DC: 2-pole
- Standards EN 60898, DIN VDE 0641 Part 11, IEC 60898
- Supplementary components can be retrofitted.


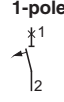

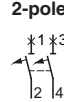
Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.

Characteristic C

General line protection, especially advantageous with higher in-rush currents (lamps, motors, etc.).

Selection and ordering data

	I_n	MW	DC	Characteristic B			Characteristic C			
				Order No.	Pack. unit*	Weight per unit approx.	Order No.	Pack. unit*	Weight per unit approx.	
	A					kg			kg	
 <p>1-pole</p> 	0.3	1	-				C	5SY5 114-7	12	0.165
	0.5		-				C	5SY5 105-7	12	0.165
	1		-				A	5SY5 101-7	12	0.147
	1.6		-				C	5SY5 115-7	12	0.165
	2		-				A	5SY5 102-7	12	0.165
	3		-				C	5SY5 103-7	12	0.165
	4		-				A	5SY5 104-7	12	0.165
	6	A	5SY5 106-6	12	0.165	A	5SY5 106-7	12	0.165	
	8		-				C	5SY5 108-7	12	0.165
	10	C	5SY5 110-6	12	0.165	A	5SY5 110-7	12	0.165	
	13	C	5SY5 113-6	12	0.165	C	5SY5 113-7	12	0.165	
	16	A	5SY5 116-6	12	0.165	A	5SY5 116-7	12	0.165	
	20	C	5SY5 120-6	12	0.165	C	5SY5 120-7	12	0.165	
	25	C	5SY5 125-6	12	0.165	C	5SY5 125-7	12	0.165	
	32 ¹⁾	C	5SY5 132-6	12	0.165	C	5SY5 132-7	12	0.165	
	40	C	5SY5 140-6	12	0.165	C	5SY5 140-7	12	0.165	
50	C	5SY5 150-6	12	0.165	C	5SY5 150-7	12	0.165		
63	C	5SY5 163-6	12	0.165	C	5SY5 163-7	12	0.165		
 <p>2-pole</p> 	0.3	2	-				C	5SY5 214-7	6	0.330
	0.5		-				A	5SY5 205-7	6	0.330
	1		-				A	5SY5 201-7	6	0.330
	1.6		-				C	5SY5 215-7	6	0.330
	2		-				A	5SY5 202-7	6	0.330
	3		-				A	5SY5 203-7	6	0.330
	4		-				A	5SY5 204-7	6	0.330
	6	A	5SY5 206-6	6	0.330	A	5SY5 206-7	6	0.330	
	8		-				C	5SY5 208-7	6	0.330
	10	A	5SY5 210-6	6	0.330	A	5SY5 210-7	6	0.330	
	13	C	5SY5 213-6	6	0.330	C	5SY5 213-7	6	0.330	
	16	A	5SY5 216-6	6	0.330	A	5SY5 216-7	6	0.330	
	20	C	5SY5 220-6	6	0.330	A	5SY5 220-7	6	0.330	
	25	C	5SY5 225-6	6	0.330	C	5SY5 225-7	6	0.330	
	32	C	5SY5 232-6	6	0.330	C	5SY5 232-7	6	0.330	
	40	C	5SY5 240-6	6	0.330	C	5SY5 240-7	6	0.330	
50	C	5SY5 250-6	6	0.330	C	5SY5 250-7	6	0.330		
63	C	5SY5 263-6	6	0.330	C	5SY5 263-7	6	0.330		

¹⁾ Also suitable for 21 kW active power at DC 400 V (e.g. continuous-flow water heater with short-time operation) and 7 kW active power at AC 230 V (e.g. hot water storage tank in non-continuous operation). For continuous load applications, the use of 5SY ...-6/7 miniature circuit-breakers with $I_n = 40$ A is recommended.

The terminal section indicates the DC polarity value which must essentially be observed during connection.

For supplementary components, please see pages 2/57 and 2/59.

For accessories, please see pages 2/60 and 2/61.

BETA Miniature Circuit-Breakers

High-Current Product Range



10 000
3

10 kA
70 mm mounting depth

2

Area of application

- U_n : 230/400 V, 50-60 Hz, applicable in networks up to AC 250/440 V, DC 60 V per pole
- Standards EN 60898, IEC 60898, DIN VDE 0641 Part 11, EN 60204
- Supplementary components can be retrofitted individually
- Main control switch characteristics acc. to EN 60204
- Can be snapped onto standard mounting rail acc. to EN 60175
- Can be screwed onto bases
- As main control and miniature circuit-breaker in non-residential and industrial buildings.

Characteristic B

Line protection, mainly used for outlet circuits; no proof required regarding personal safety.





Characteristic C

General line protection, especially advantageous with higher inrush currents (lamps, motors, etc.).

Characteristic D

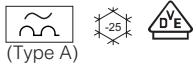
Tripping range adapted to operating equipment involving significant pulse generation (transformers, solenoid valves).

Selection and ordering data

	I_n	MW	DC	Character- istic B	Pack. unit*	Weight per unit approx. kg	DC	Character- istic C	Pack. unit*	Weight per unit approx. kg	DC	Character- istic D	Pack. unit*	Weight per unit approx. kg
				Order No.				Order No.				Order No.		
 <p>1-pole</p> <p>\uparrow 1 \downarrow 2</p>	80	1.5	X	5SP4 180-6	6	0.258	A	5SP4 180-7	6	0.258	A	5SP4 180-8	6	0.258
	100		X	5SP4 191-6	6	0.258	A	5SP4 191-7	6	0.258	A	5SP4 191-8	6	0.258
	125		X	5SP4 192-6	6	0.258	A	5SP4 192-7	6	0.258	A	-		
 <p>2-pole</p> <p>\uparrow 1 3 \downarrow 2 4</p>	80	3	A	5SP4 280-6	3	0.516	A	5SP4 280-7	3	0.516	A	5SP4 280-8	3	0.516
	100		A	5SP4 291-6	3	0.516	A	5SP4 291-7	3	0.516	A	5SP4 291-8	3	0.516
	125		X	5SP4 292-6	3	0.516	A	5SP4 292-7	3	0.516	A	-		
 <p>3-pole</p> <p>\uparrow 1 3 5 \downarrow 2 4 6</p>	80	4.5	A	5SP4 380-6	2	0.762	A	5SP4 380-7	2	0.762	A	5SP4 380-8	2	0.762
	100		A	5SP4 391-6	2	0.762	A	5SP4 391-7	2	0.762	A	5SP4 391-8	2	0.762
	125		A	5SP4 392-6	2	0.762	A	5SP4 392-7	2	0.762	A	-		
 <p>4-pole</p> <p>\uparrow 1 3 5 7 \downarrow 2 4 6 8</p>	80	6	A	5SP4 480-6	1	1.032	A	5SP4 480-7	1	1.032	A	5SP4 480-8	1	1.032
	100		A	5SP4 491-6	1	1.032	A	5SP4 491-7	1	1.032	A	5SP4 491-8	1	1.032
	125		A	5SP4 492-6	1	1.032	A	5SP4 492-7	1	1.032	A	-		

All 5SY6 designs have been approved acc. to UL 1077 and CSA 22.2 No. 235-M 89 and can therefore be used as "supplementary protectors" up to AC 277 V (1-pole) and AC 480 V (2-pole, 3-pole, 4-pole).

For supplementary components, please see pages 2/56 to 2/59.
For accessories, please see page 2/61.



BETA Miniature Circuit-Breakers

Supplementary components

RCCB modules
70 mm mounting depth


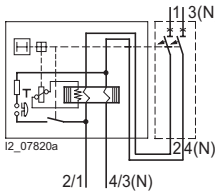

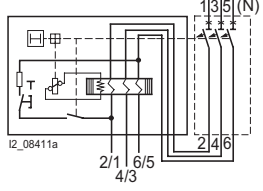

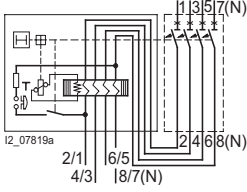
2

Area of application

- 2-, 3- and 4-pole, U_n : 230/400 V, 50-60 Hz, applicable in networks: AC 250/440 V
- Standards IEC/EN 61009-1 (VDE 0664, Part 20), IEC/EN 61009-2-1 (VDE 0664, Part 21)

- Design **[S]** for selective disconnection
- Can be individually retrofitted¹⁾ in combination with miniature circuit-breakers of characteristic A, B, C and D.

Selection and ordering data

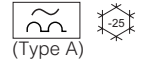
	Rated current I_n A	Rated fault current $I_{\Delta n}$ mA	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx. kg
RCCB module for 55SY4, 55Y6²⁾, 55Y7, and 55Y8 miniature circuit-breakers for AC and pulsating DC fault currents (Type A)								
2-pole								
		0.3 ... 16	10	2	A	5SM2 121-6	1	0.245
		0.3 ... 40	30			5SM2 322-6	1	0.245
			300			5SM2 622-6	1	0.350
		0.3 ... 63	30			5SM2 325-6	1	0.350
			300			5SM2 625-6	1	0.350
		0.3 ... 40	300			5SM2 622-8	1	0.350
0.3 ... 63	300	5SM2 625-8	1	0.350				
3-pole								
		0.3 ... 40	30	3	A	5SM2 332-6	1	0.365
			300			5SM2 632-6	1	0.365
		0.3 ... 63	30			5SM2 335-6	1	0.365
			300			5SM2 635-6	1	0.365
			300			5SM2 635-8	1	0.365
			1 000			5SM2 835-8	1	0.365
4-pole								
		0.3 ... 40	30	3	A	5SM2 342-6	1	0.365
			300			5SM2 642-6	1	0.400
		0.3 ... 63	30			5SM2 345-6	1	0.400
			300			5SM2 645-6	1	0.400
			300			5SM2 645-8	1	0.400
			1 000			5SM2 845-8	1	0.400

1) For the retrofitting concept, please see page 2/58.

2) Not for 55Y6...-KV

BETA Miniature Circuit-Breakers

Supplementary components




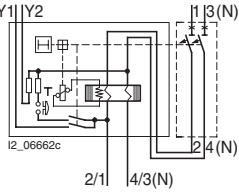

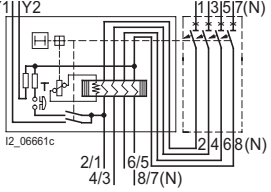
RCCB modules 70 mm mounting depth

2

Area of application

- 2-pole U_n : 125/230 V, 50-60 Hz; 3- and 4-pole U_n : 230/400 V, 50-60 Hz; applicable in networks: 2-pole: AC 125/240 V, 3- and 4-pole: AC 240/415 V
- Standards IEC/EN 61009-1 (VDE 0664, Part 20), IEC/EN 61009-2-1 (VDE 0664, Part 21)
- Design **[S]** for selective disconnection
- Can be individually retrofitted¹⁾ in combination with miniature circuit-breakers of characteristic B and C.

Selection and ordering data

	Rated current I_n A	Rated fault current $I_{\Delta n}$ mA	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx. kg
RCCB modules for 5SP4 miniature circuit-breakers for AC and pulsating DC fault currents								
2-pole								
 	80 ... 100	30	3.5	[S]	A	5SM2 327-6	1	0.550
						5SM2 627-6	1	0.550
						5SM2 627-8	1	0.550
4-pole								
 	80 ... 100	30	5	[S]	A	5SM2 347-6	1	0.944
						5SM2 647-6	1	0.950
						5SM2 647-8	1	0.950
						5SM2 847-8	1	0.950

1) For the retrofitting concept, please see page 2/58.

BETA Miniature Circuit-Breakers

Supplementary components

Auxiliary switches, fault signal contacts
70 mm mounting depth

2

Benefits

- Can be individually retrofitted¹⁾
- Mounting with factory-installed clips
- Short-circuit protection via miniature circuit-breakers of characteristic B or C and $I_n = 6$ A or gL 6 A fuses.
- Broad range of applications thanks to the additional version for controlling programmable controllers (PLC) acc. to EN 61131-2
- Connectable to *instabus EIB* and AS-Interface bus via binary inputs.

Auxiliary switches (AS) and fault signal contacts (FC)

5ST3 0.0

5ST3 0.1

5ST3 0.2

- Max. contact load:

NO contacts:

2 A, AC 400 V, AC-14

6 A, AC 230 V, AC-14

1 A, DC 220 V, DC-13

1 A, DC 110 V, DC-13

3 A, DC 60 V, DC-13

6 A, DC 24 V, DC-13

NC contacts:

2 A, AC 400 V, AC-13

6 A, AC 230 V, AC-13

1 A, DC 220 V, DC-13

1 A, DC 110 V, DC-13

3 A, DC 60 V, DC-13

6 A, DC 24 V, DC-13

Auxiliary switches (AS)

5ST3 013

5ST3 014









5ST3 015

- Range of application 1 mA/DC 5 V up to 50 mA/DC 30 V.

Functions

- Indication of the miniature circuit-breaker's switching state:
- AS: ON/OFF
FC: tripped.

Selection and ordering data

			MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg
	Auxiliary switches (AS) for 5SY.²⁾, 5SP4 miniature circuit-breakers						
		for low output	1 NO + 1 NC 0.5	A	5ST3 010	1	0.050
				A	5ST3 013	1	0.050
		for low output	2 NO	A	5ST3 011	1	0.050
				A	5ST3 014	1	0.050
		for low output	2 NC	A	5ST3 012	1	0.050
			A	5ST3 015	1	0.050	
	Auxiliary switches (AS) for 5SY.²⁾, 5SP4 miniature circuit-breakers						
			1 NO + 1 NC 0.5	A	5ST3 020	1	0.050
			2 NO	A	5ST3 021	1	0.050
			2 NC	A	5ST3 022	1	0.050

1) For the retrofitting concept, please see page 2/58.

2) Not for 5SY6...-KV

BETA Miniature Circuit-Breakers

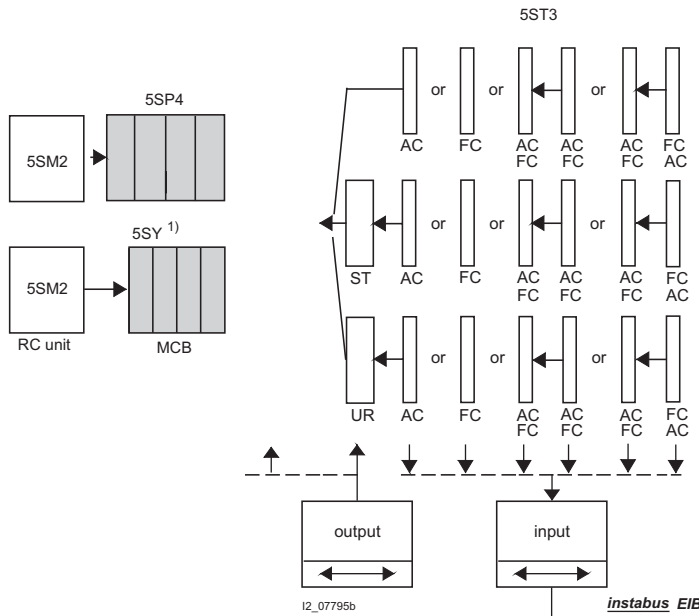
Supplementary components

Auxiliary switches, fault signal contacts
70 mm mounting depth

Design

Retrofitting concept

According to the retrofitting concept, all 5ST3 supplementary components can be combined with miniature circuit-breakers from the 5SY¹⁾ and 5SP4 series:



Benefits

Remote-controlled operating mechanism

- Can be retrofitted individually²⁾
- Mounting with factory-installed clips
- Can be mechanically locked
- Supplementary components can be retrofitted
- Function selector switch on the front
- Connectable to *instabus EIB* and AS-Interface bus via binary inputs and outputs
- $U_n = 230 \text{ V}$, 50 to 60 Hz

Functions

- Remote switching ON/OFF of the miniature circuit-breaker and ON of the RCCB module
- In the case of fault conditions, remote on-switching is possible after acknowledgement
- Manual switching on site is possible
- Remote display of the switching status of the remote-controlled operating mechanism and the miniature circuit-breaker

Selection and ordering data

Rated voltage U_n AC V	MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg
230	3.5	X	5ST3 050	1	0.390

Remote-controlled operating mechanism (RC) for 5SY¹⁾ and 5SP4 miniature circuit-breakers

1) Not for 5SY6...-KV

2) For the retrofitting concept, see above

BETA Miniature Circuit-Breakers

Supplementary components

Shunt trips, undervoltage releases 70 mm mounting depth

2

Area of application


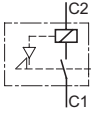
Shunt trip¹⁾

- Response limits acc. to DIN VDE 0660 Part 100, 7.2.1.4
- Suitable for voltages: Connectable to the *instabus EIB* and the AS-Interface Bus via binary outputs AC 110 to 415 V, DC 110 V, AC/DC 24 to 48 V.

Functions

Remote tripping of the miniature circuit-breaker.

Selection and ordering data

	MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg	
Shunt trip (ST) for 5SY²⁾, 5SP4 miniature circuit-breakers						
						
		AC 110-415 V	1	A	5ST3 030	1 0.098
		AC/DC 24-48 V	1	A	5ST3 031	1 0.098

Area of application


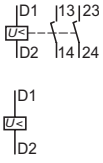
Undervoltage release¹⁾

- Response limits acc. to DIN VDE 0660 Part 100, 7.2.1.3
- Suitable for voltages:
AC 230 V
DC 110 V
DC 24 V
- Connectable to *instabus EIB* and AS-Interface bus via binary inputs.

Functions

- Applicable as remote trip in an EMERGENCY-OFF loop
- Assures disconnection of the control circuit acc. to EN 60204
- In cases of interrupted or insufficient voltage, the undervoltage release trips the miniature circuit-breaker or prevents it from switching on.

Selection and ordering data

	MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg	
Undervoltage release (UR) for 5SY²⁾, 5SP4 miniature circuit-breakers						
						
		AC 230 V	1	A	5ST3 040	1 0.115
		DC 110 V		A	5ST3 041	1 0.115
		DC 24 V		A	5ST3 042	1 0.115
		AC 230 V	1	A	5ST3 043	1 0.115
		DC 110 V		A	5ST3 044	1 0.115
DC 24 V		A	5ST3 045	1 0.115		

1) For the retrofitting concept, please see page 2/58.

2) Not for 5SY6...-KV

BETA Miniature Circuit-Breakers

Accessories



Busbar system

Area of application

Busbar system

- Acc. to DIN 57606 and DIN 57659
- Load for one-side/central infeed: 65 A/120 A for 16 mm²
- Pin-type connections
- Single and multi-phase
- Cu: 16 mm² and fully insulated
- 18 mm lug spacing
- No additional connection terminal required for stranded connections up to 35 mm²
- Excellent accessibility of the feeder cables.

Selection and ordering data




	Length mm	DC	Order No.	Pack. unit*	Weight per unit approx. kg	
Accessories for 5SY6, 5SY4, 5SY7, 5SY8, 5SY5 miniature circuit-breakers						
	Busbar					
	Fully insulated:					
	1-phase	214	A	5ST3 700	50	0.040
	1-phase + AS		A	5ST3 702	50	0.040
	2-phase		A	5ST3 704	25	0.060
	2-phase + AS		A	5ST3 706	25	0.060
	3-phase		A	5ST3 708	25	0.100
	3-phase + AS		A	5ST3 711	25	0.100
	3 × (1-phase + AS)		A	5ST3 713	25	0.100
	4-phase		A	5ST3 715	20	0.150
	3-phase, for a 5SM3 4-pole RCCB module with 8 miniature circuit-breakers:					
	3/N + 8 connections		A	5ST3 717	25	0.150
	Without end caps					
	1-phase	1016	A	5ST3 701	50	0.190
	1-phase + AS		A	5ST3 703	50	0.190
2-phase		A	5ST3 705	20	0.290	
2-phase + AS		A	5ST3 707	20	0.290	
3-phase		A	5ST3 710	20	0.430	
3-phase + AS		A	5ST3 712	20	0.430	
3 × (1-phase + AS)		A	5ST3 714	20	0.430	
4-phase		A	5ST3 716	15	0.700	
	End caps					
	for lateral insulation of cut-to-length busbars					
	2- and 3-phase		A	5SH5 514	10	0.001
4-phase		A	5ST3 718	10	0.001	

BETA Miniature Circuit-Breakers Accessories

for 70 mm mounting depth

2

Selection and ordering data

	DC	Order No.	Pack. unit*	Weight per unit approx. kg
Accessories for 5SY6¹⁾, 5SY4, 5SY7, 5SY8, 5SY5, 5SP4 miniature circuit-breakers				
	A	5ST3 801	1	0.008
Handle locking device applicable with all types of poles; sealable against unintended on- and off-switching; padlock with a shackle of max. 3 mm				
	A	5ST3 800	10	0.001
Terminal cover applicable with all types of poles; as an additional cover for screw openings; prevents removal of the device from the standard mounting rail; sealable				
	A	5ST3 802	1	0.027
Padlock for 5ST3 801 handle locking device				
	A	5ST3 803	1 set	0.035
Locking device consisting of 5ST3 801 handle locking device and 5ST3 802 padlock				

1) Not for 5SY6...-KV

for 55 mm and 70 mm mounting depth

Functions

Inscription labels


- Self-adhesive
- Inscription options:
 - manually, with smear-resistant and water-proof markers
 - via computer-controlled labeling system.

Benefits

- Saves time and costs
- Uniform and legible inscriptions
- Supports all types of inscription possibilities, including special characters
- Easy data entry and program operation via interactive dialog.

For further information, please contact:
Murrplastik-Systemtechnik GmbH
Fabrikstrasse 10
D-71570 Oppenweiler Germany

Selection and ordering data



	DC	Order No.	Pack. unit*	Weight per unit approx. kg
	A	5ST2 173	1 set	0.038
Inscription labels (white) for miniature circuit-breakers 15 x 9 mm, 3 frames containing 44 labels each, attachable to the lower casing collar				

* This quantity or a multiple thereof can be ordered.

BETA Residual-Current Operated Circuit-Breakers

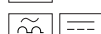
Introduction

Overview

	Number of poles	Rated current I_n A	Rated fault current $I_{\Delta n}$ mA	MW	Mountable auxiliary switch	 (Type A)	 (Type B)
5SM1 RCCB standard product range, 5SM3 RCCB industry product range, N-connection on the right							
	2	16 25 40	10, 30 30, 100, 300	2	• • •	• • •	– – –
	2	63 80	30, 100, 300	2.5	• •	• •	– –
	4	25 40 63 80 125	30, 300, 500 30, 100, 300, 500 30, 300 30, 100, 300, 500	4	• • • • •	• • • • •	– – – – –
[K] short-time delayed	4	25 40	30	4	• •	• •	– –
[S] selective	2	63	100, 300	2.5	•	•	–
	4	40 63 125	100, 300 100, 300, 1,000 300, 500	4	• • •	• • •	– – –
[i] SIGRES, for special ambient conditions	2	25 40	30	2	• •	• •	– –
	2	63 80	30	2.5	• •	• •	– –
	4	25 40 63	30 30, 300	4	• • •	• • •	– – –
for 50 Hz to 400 Hz	4	25 40	30	4	• •	• •	– –
for AC 500 V	4	25 40 63	30, 300	4	• • •	• • •	– – –
5SM3 RCCB industry product range, N-connection on the left							
	4	25 40 63 80	30, 300	4	• • • •	• • • •	– – – –
[S] selective	4	63	300	4	•	•	–
5SZ3 and 5SZ6 RCCB AC/DC sensitive							
	4	25 40 63	30, 300	8	– – –/fixed mounted	– – –	• • •
[S] selective for medical facilities	4	63	300	8	–/fixed mounted	–	•
	4	63	30, 300	8	–/fixed mounted	–	•
RCCB modules for 5SY4, 5SY7, 5SY8 MCBs (also refer to the section miniature circuit-breakers)							
Please see page 2/55	2	0.3 ... 16	10	2	on the MCB part	•	–
	2	0.3 ... 40 0.3 ... 63	30, 300	2	on the MCB part on the MCB part	• •	– –
	3	0.3 ... 40 0.3 ... 63	30, 300	3	on the MCB part on the MCB part	• •	– –
	4	0.3 ... 40 0.3 ... 63	30, 300	3	on the MCB part on the MCB part	• •	– –
[S] selective	2	0.3 ... 40 0.3 ... 63	300	2	on the MCB part on the MCB part	• •	– –
	3	0.3 ... 40 0.3 ... 63	300 1 000	3	on the MCB part on the MCB part	• •	– –
	4	0.3 ... 40 0.3 ... 63	300 1 000	3	on the MCB part on the MCB part	• •	– –
RCCB modules for 5SP4 MCBs (also refer to the section miniature circuit-breakers)							
Please see page 2/56	2	80 ... 100	30, 300	3.5	on the MCB part	•	–
	4	80 ... 100	30, 300	5	on the MCB part	•	–
[S] selective	2	80 ... 100	300	3.5	on the MCB part	•	–
	4	80 ... 100	300, 1,000	5	on the MCB part	•	–



= Type A for AC and pulsating DC fault currents




= Type B for AC fault currents, pulsating and smooth DC fault currents

BETA Residual-Current Operated Circuit-Breakers

Introduction

2

Technical specifications

Standards		IEC/EN 61008, VDE 0664 Part 10, IEC/EN 61543, VDE 0664 Part 30, VDE 0664 Part 100 IEC/EN 61009, VDE 0664 Part 20		
Designs		2-pole, 3-pole and 4-pole		
Rated voltages U_n	AC V	125 - 230 230 - 400 500	50 - 60 Hz 50 - 60 Hz, 50 - 400 Hz 50 - 60 Hz	
Rated currents I_n	A	16, 25, 40, 63, 80, 125		
Rated fault currents $I_{\Delta n}$	mA	10, 30, 100, 300, 500, 1 000		
Enclosure		Gray molded plastic (RAL 7035)		
Terminals		Tunnel terminals at both ends with wire protection, lower combined terminal for simultaneous connection of busbars and conductors	Conductor cross-section mm ²	Recommended terminal tightening torque Nm
		for 2 MW at $I_n = 16$ A, 25 A, 40 A	1.0 ... 16	2.5 ... 3.0
		for 2.5 MW at $I_n = 63$ A, 80 A	1.5 ... 25	2.5 ... 3.0
		for 4 MW at $I_n = 25$ A, 40 A, 63 A, 80 A	1.5 ... 25	2.5 ... 3.0
		at $I_n = 125$ A	2.5 ... 50	3.0 ... 3.5
		Tunnel terminals with wire protection with RCCB modules (see pages 2/55, 2/56)	up to $I_n = 63$ A up to $I_n = 80/100$ A	1.0 ... 25 6.0 ... 35
		Screw-head terminals for auxiliary switches	0.75 ... 2.5	0.6 ... 0.8
Supply connection		Either top or bottom		
Mounting position		As required		
Degree of protection		IP20 acc. to DIN VDE 0470 Part 1 IP40 when mounted in distribution boards IP54 when mounted in plastic casing		
Touch protection		Protection against contact with fingers or the back of the hand acc. to DIN VDE 0106 Part 100		
Minimum operating voltage for test function operation	AC V	For RCCB with RCCB modules (see pages 2/55, 2/56)	16 A - 80 A 125 A up to $I_n = 63$ A, 4-pole up to $I_n = 63$ A, 2- and 3-pole up to $I_n = 80/100$ A	100 195 100 195 100
Device service life		> 10 000 operations (electrical and mechanical test cycle according to regulations)		
Storage temperature	°C	-40 ... +75		
Ambient temperature	°C	-5 ... +45, for designs with the symbol  : -25 ... +45		
Resistance to climate		28 cycles (55 °C; 95 % rel. humidity) acc. to IEC 60068-2-30		
Free of CFC and silicon		yes		

Definitions

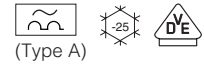
1 MW = modular width of 18 mm

N-type = device mounting depth of 55 mm

Depth 70 mm = device mounting depth of 70 mm

BETA Residual-Current Operated Circuit-Breakers

RCCB Standard Product Range




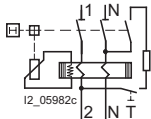




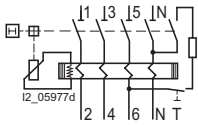

N-type, 16 A to 80 A
55 mm mounting range

2

Area of application

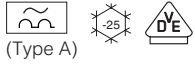
- Device standards: IEC/EN 61008-1 (VDE 0664, Part 10), IEC/EN 61008-2-1 (VDE 0664, Part 11)
- U_n 230/400 V; 50 to 60 Hz; U_n 230/400 V; 50 to 400 Hz; applicable in networks of up to AC 240/415 V
- U_n 500V; 50 to 60 Hz applicable in AC 500 V networks
- Terminals with wire protection can be used for direct busbar mounting at the bottom with devices with modular-size terminals, e.g. with 5SX2 and 5SX4 MCBs
- Retrofitting of auxiliary switches on the right hand side of the casing
- Switch handle and test button can be locked
- Designs
 - S** for selective disconnection
 - K** for short-time delayed disconnection
- Type of surge current 8/20 acc. to DIN VDE 0432 Part 2 surge strength instantaneous > 1 kA,
 - K** > 3 kA,
 - S** > 5 kA

Selection and ordering data

	Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.					
		I_n A	$I_{\Delta n}$ mA						kg					
For AC and pulsating DC fault currents (Type A)														
AC 125 V to 230 V; 50 Hz to 60 Hz														
 		16	10	2	A		5SM1 111-6	1	0.218					
		16	30						5SM1 311-6	0.218				
		25	30						5SM1 312-6	0.218				
		40							5SM1 314-6	0.218				
		25	100						5SM1 412-6	0.218				
		40							5SM1 414-6	0.218				
		25	300						5SM1 612-6	0.218				
		40							5SM1 614-6	0.218				
		100 A	30						2.5	A	5SM1 316-6	1	0.300	
			80							A	5SM1 317-6	1	0.300	
			63						100	A	5SM1 416-6	1	0.280	
			80							A	5SM1 417-6	1	0.280	
			63						300	A	5SM1 616-6	1	0.280	
			80							A	5SM1 617-6	1	0.280	
			100 A						300	2.5	S	A	5SM1 616-8	1
	AC 230 V to 400 V; 50 Hz to 60 Hz													
	 		25	30	4	A		5SM1 342-6	1	0.473				
			40							5SM1 344-6	0.473			
			63							5SM1 346-6	0.473			
			80							5SM1 347-6	0.473			
			40	100						A	5SM1 444-6	1	0.483	
			63							A	5SM1 446-6	1	0.509	
			25	300						A	5SM1 642-6	1	0.473	
			40							A	5SM1 644-6	1	0.473	
			63							A	5SM1 646-6	1	0.473	
			80							A	5SM1 647-6	1	0.473	
			25	500						A	5SM1 742-6	1	0.473	
			40							A	5SM1 744-6	1	0.473	
			63							A	5SM1 746-6	1	0.473	
			40	100						4	S	A	5SM1 444-8	1
40			300	S						A	5SM1 644-8	1	0.473	
63		S	A	5SM1 646-8	1	0.473								
63	1 000	S	A	5SM1 846-8	1	0.473								

For supplementary components and accessories, please see page 2/66.

Device designs with terminals located at the left hand side for the neutral conductor are available on request.


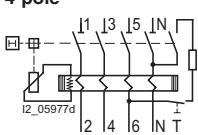



BETA Residual-Current Operated Circuit-Breakers

RCCB Standard Product Range

N-type, 16 A to 80 A
55 mm mounting range

Selection and ordering data

	Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.					
		I_n A	$I_{\Delta n}$ mA						kg					
For AC and pulsating DC fault currents (Type A)														
	AC 230 V to 400 V; 50 Hz to 400 Hz													
		80 A	25	30	4	A	A	5SM1 342-6KK03	1	0.473				
			40							0.473				
		100 A	25	30	4	A	A	5SM1 342-6KK01	1	0.473				
			40							0.473				
			63							100	A	5SM1 446-6KK01	1	0.473
			63											
	AC 500 V¹⁾; 50 Hz to 60 Hz													
	4-pole		63 A	25	30	4	A	A	5SM1 352-6	1	0.515			
				40							0.515			
63				0.515										
25			300	A	A	5SM1 652-6	1	0.515						
									40	0.515				
									63	0.515				

1) Approval acc. to IEC/EN 61008 (VDE 0664) is only possible up to 440 V.

For supplementary components and accessories, please see page 2/66.

Benefits


Thanks to the leakage current measurement unit, the rated fault current for the RCCB can be selected systematically and unintended trippings will be avoided. The measured leakage current should not be higher than a maximum of 1/3 of the rated fault current of the RCCB. If this condition is not given due to the rated current required for the protective measures for the RCCB, corrective measures must be taken at the respective operating equipment which generates the leakage current.

The detection of causes for the unintended tripping of the RCCB is considerably simplified, especially with regard to large systems.

- Rated voltage: up to AC 500 V; 50 Hz to 60 Hz
- For measuring leakage currents of up to 300 mA in electrical systems

- Using the enclosed calibration curve, a voltmeter with an internal resistance of $> 1 \text{ M}\Omega/\text{V}$ can determine the leakage current. Measuring range for AC voltage: U_{eff} : 1 mV - 2 V
- **Leakage currents** are currents, which, during uninterrupted operation, leak off the PE conductor or other ground connections. As a result, the difference of the currents flowing to and from the device will be higher than zero thanks to the RCCB. If the tripping current of the residual-current operated circuit-breaker is then reached, it will trip since leakage currents are similarly recorded and evaluated as fault currents.
- The leakage current measurement unit detects the static leakage currents flowing. The device records and evaluates the currents like the RCCB and thus provides a direct statement on the extent to which the RCCB has already been pre-loaded.

Selection and ordering data

	Rated current	Rated fault current	MW	DC	Order No.	Pack. unit*	Weight per unit approx.
							kg
5SM1 930 leakage current measurement unit							
	AC 500 V; 50 Hz to 60 Hz, 4-pole						
	63	0-300	4	A	5SM1 930-0	1	0.310

Gossen-Metrawatt offers suitable test devices for RCCB function tests and for testing protective measures.

Information is available at:
Gossen-Metrawatt GmbH www.gmc-instruments.com
Thomas-Mann-Str. 16-20 email: info@gmc-instruments.com
D-90471 Nuremberg, Germany
Tel. +49 (0)911/8602 111
Fax +49 (0)911/8602 777

* This quantity or a multiple thereof can be ordered.

BETA Residual-Current Operated Circuit-Breakers

RCCB Standard Product Range

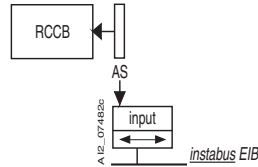
Supplementary components 55 mm mounting depth

2

Area of application

- 1 auxiliary contact can be retrofitted individually
- Mounting with factory-installed clips
- Max. contact load:
AC 6 A/230 V
DC 1 A/220 V
- Short-circuit protection ensured by circuit-breakers with characteristic B or C with $I_n = 6 A$ or fuse gL 6 A

- Indication of the RCCB switching state
- AS: ON/OFF
- Can be connected to the *instabus EIB* and the AS interface-Bus or the PROFIBUS via binary inputs



Selection and ordering data

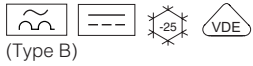
		MW	DC	Order No.	Pack. unit*	Weight per unit approx. kg	
	Auxiliary switches (AS)						
		1 NO + 1 NC	0.5	A	5SW3 000	1	0.042
		2 NC	0.5	A	5SW3 001	1	0.042
		2 NO	0.5	A	5SW3 002	1	0.042

Accessories for 55 mm mounting depth

Selection and ordering data

	Length mm	DC	Order No.	Pack. unit*	Weight per unit approx. kg
		A	5SW3 003	10	0.008
Locking device sealable and lockable 4.5 mm lock hasp diameter					
		A	5ST3 802	1	0.027
Padlock for 5SW3 003 locking device					
		A	5SW3 012	1 set	0.035
Locking device with padlock consisting of 5ST3 003 locking device and 5ST3 802 padlock					
Cu busbar 16 mm² for busbar mounting of 5SM1 RCCBs, of RCCBs with 5SX2 and 5SX4 miniature circuit-breakers or 5TE7 switch disconnectors with I_n 40 A to 100 A					
2-phase	210 1 000	A A	5ST2 143 5ST2 152	10 5	0.154 0.692
3-phase	210 1 000	A A	5ST2 144 5ST2 153	10 10	0.231 1.100
3-phase + N	210 1 000	A A	5ST2 145 5ST2 154	10 5	0.315 1.498
End caps required to insulate the ends of cut-to-length busbars					
1- and 2-phase		A	5ST2 155	10	0.013
3- and 4-phase		A	5ST2 156	10	0.017
3-phase busbar for a 4-pole 5SM1 RCCB with 8 miniature circuit-breakers					
3/N + 8 connections		A	5ST2 424	5	0.091

For further busbars, please see page 2/37.



BETA Residual-Current Operated Circuit-Breakers


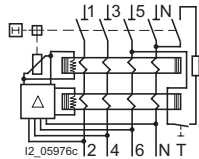
AC/DC Sensitive

N-type, 25 A to 63 A
55 mm mounting depth

Area of application

- Device standards: IEC/EN 61008-1 (VDE 0664, Part 10), IEC 60755, VDE 0664 Part 100
- U_n 230/400 V; 50 to 60 Hz; applicable in networks: AC 240/415 V
- For AC fault currents, pulsating and smooth DC fault currents
- For designs with fixed mounted auxiliary switches contact 1 NO + 1 NC, AC 6 A/230 V, DC 1 A/220 V terminals for conductor cross sections of up to 2.5 mm²
- Design **[S]** for selective disconnection
- Type of surge current 8/20 acc. to DIN VDE 0432 surge strength: instantaneous > 1 kA **[S]** > 5 kA
- These devices are used in systems where, in addition to AC and pulsating DC fault currents, smooth or almost smooth DC fault currents may also occur (e.g. with B6 bridge connection in devices such as frequency converters and medical devices).

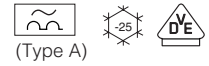
Selection and ordering data

	Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.
		I_n A	$I_{\Delta n}$ mA						kg
For AC fault currents, pulsating and smooth DC (type B)									
AC 230 V/400 V; 50 Hz to 60 Hz; 4-pole									
  <ul style="list-style-type: none"> • with auxiliary switch, fixed mounted 	25	30	8		A	5SZ3 426-0KG00	1	0.746	
	40				A	5SZ3 446-0KG00	1	0.746	
	63				A	5SZ3 466-0KG00	1	0.746	
	25	300	8		A	5SZ6 426-0KG00	1	0.706	
	40				A	5SZ6 446-0KG00	1	0.706	
	63				A	5SZ6 466-0KG00	1	0.706	
	63	300	8	[S]	A	5SZ6 468-0KG00	1	0.706	
	63	30	8.5		A	5SZ3 466-0KG30	1	0.750	
	63	300	8.5		A	5SZ6 466-0KG30	1	0.750	
	63	300	8.5		[S]	A	5SZ6 468-0KG30	1	0.765
AC 230 V/400 V; 50 Hz to 60 Hz; 4-pole									
for medical facilities (e.g. x-ray generators)									
	63	30	8		A	5SZ3 466-0KG05	1	0.710	
	63	300			A	5SZ6 466-0KG05	1	0.710	
• with auxiliary switch, fixed mounted	63	30	8.5		A	5SZ3 466-0KG35	1	0.750	
	63	300			A	5SZ6 466-0KG35	1	0.750	

* This quantity or a multiple thereof can be ordered.

BETA Residual-Current Operated Circuit-Breakers

RCCB Industry Product Range



16 A to 80 A
70 mm mounting depth





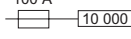
2

Area of application

- Device standards: IEC/EN 61008-1 (VDE 0664, Part 10), IEC/EN 61008-2-1 (VDE 0664, Part 11)
- U_n 230/400 V; 50 to 60 Hz; U_n 230/400 V; 50 to 400 Hz; applicable in networks of up to: AC 240/415 V U_n AC 500 V; 50 to 60 Hz applicable in networks: AC 500 V
- Terminals with wire protection can be used for direct busbar mounting at the bottom with modular-size terminals, e.g. with 5SY4, 5SY7 miniature-circuit breaker ranges.
- Retrofitting of auxiliary switches on the right hand side of the enclosure

- Designs:
 - I** SIGRES, for special ambient conditions (e.g. indoor swimming pools, agriculture)
 - S** for selective disconnection
 - K** for short-time delayed disconnection
- Type of surge current 8/20 acc. to DIN VDE 0432 Part 2 surge strength instantaneous > 1 kA
 - I** > 1 kA
 - K** > 3 kA
 - S** > 5 kA

Selection and ordering data


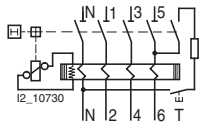
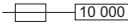

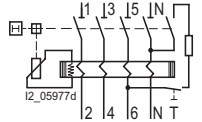


	Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.	
		I_n A	$I_{\Delta n}$ mA						kg	
For AC and pulsating DC fault currents, N-connection on the right										
	AC 125 V to 230 V; 50 Hz to 60 Hz; 2-pole									
		63 A	16	10	2		A	5SM3 111-6	1	0.230
				16	30		A	5SM3 311-6	1	0.230
			25			A	5SM3 312-6	1	0.230	
			40			A	5SM3 314-6	1	0.230	
			25	100		A	5SM3 412-6	1	0.230	
			40			A	5SM3 414-6	1	0.230	
			25	300		A	5SM3 612-6	1	0.230	
			40			A	5SM3 614-6	1	0.230	
			25	30		I	X	5SM3 312-6KK12	1	0.230
			40			I	X	5SM3 314-6KK12	1	0.230
		100 A	63	30	2.5		A	5SM3 316-6	1	0.320
			80			A	5SM3 317-6	1	0.320	
			63	100		A	5SM3 416-6	1	0.320	
		80			A	5SM3 417-6	1	0.320		
		63	300		A	5SM3 616-6	1	0.320		
		80			A	5SM3 617-6	1	0.320		
		63	30		I	X	5SM3 316-6KK12	1	0.320	
		80			I	X	5SM3 317-6KK12	1	0.320	
		63	100		S	A	5SM3 416-8	1	0.320	
		63	300		S	A	5SM3 616-8	1	0.320	
	AC 230 V to 400 V; 50 Hz to 60 Hz; 4-pole									
		100 A	25	30	4		A	5SM3 342-6	1	0.515
			40			A	5SM3 344-6	1	0.515	
			63			A	5SM3 346-6	1	0.515	
			80			A	5SM3 347-6	1	0.515	
			40	100		A	5SM3 444-6	1	0.515	
			63			A	5SM3 446-6	1	0.515	
			25	300		A	5SM3 642-6	1	0.515	
			40			A	5SM3 644-6	1	0.515	
			63			A	5SM3 646-6	1	0.515	
			80			A	5SM3 647-6	1	0.515	
		25	500		A	5SM3 742-6	1	0.515		
		40			A	5SM3 744-6	1	0.515		
		63			A	5SM3 746-6	1	0.515		
		25	30		I	X	5SM3 342-6KK12	1	0.515	
		40			I	X	5SM3 344-6KK12	1	0.515	
		63			I	D	5SM3 346-6KK12	1	0.522	
		63	300		I	X	5SM3 646-6KK12	1	0.515	
		40	100		S	A	5SM3 444-8	1	0.515	
		63			S	A	5SM3 446-8	1	0.522	
		40	300		S	A	5SM3 644-8	1	0.515	
		63			S	A	5SM3 646-8	1	0.515	
	63	1 000		S	A	5SM3 846-8	1	0.515		

BETA Residual-Current Operated Circuit-Breakers RCCB Industry Product Range

16 A to 80 A
70 mm mounting depth

2

Selection and ordering data

	Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.	
		I_n A	$I_{\Delta n}$ mA							
For AC and pulsating DC fault currents, N-connection on the left										
	AC 230 V to 400 V; 50 Hz to 60 Hz									
	4-pole									
		100 A	25	30	4		C	5SM3 342-6KL	1	0.515
			40				C	5SM3 344-6KL	1	0.515
			63				C	5SM3 346-6KL	1	0.515
			80				C	5SM3 347-6KL	1	0.515
			25	300	4		C	5SM3 642-6KL	1	0.515
			40				C	5SM3 644-6KL	1	0.515
			63				C	5SM3 646-6KL	1	0.515
			80				C	5SM3 647-6KL	1	0.515
		63	300	4	S	C	5SM3 646-8KL	1	0.515	
For AC and pulsating DC fault currents, N-connection on the right										
	AC 230 V to 400 V; 50 Hz to 400 Hz									
	4-pole									
		80 A	25	30	4		A	5SM3 342-6KK03	1	0.515
			40				A	5SM3 344-6KK03	1	0.515
			25	30	4		K A	5SM3 342-6KK01	1	0.515
			40				K A	5SM3 344-6KK01	1	0.515
			63	30			K A	5SM3 346-6KK01	1	0.515
			63	100			K A	5SM3 446-6KK01	1	0.515
	AC 500 V¹⁾; 50 Hz to 60 Hz;									
	4-pole									
	63 A	25	30	4		A	5SM3 352-6	1	0.515	
		40				A	5SM3 354-6	1	0.515	
		63				A	5SM3 356-6	1	0.515	
		25	300			A	5SM3 652-6	1	0.515	
		40				A	5SM3 654-6	1	0.515	
		63				A	5SM3 656-6	1	0.515	

1) Approval acc. to IEC/EN 61008 (VDE 0664) is only possible up to 440 V.

BETA Residual-Current Operated Circuit-Breakers

RCCB Industry Product Range


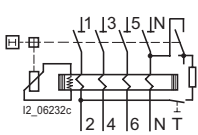

125 A
70 mm mounting depth

2

Area of application

- Device standards: IEC/EN 61008-1 (VDE 0664, Part 10), IEC/EN 61008-2-1 (VDE 0664, Part 11)
- U_n 230/400 V; 50 to 60 Hz; applicable in networks of up to: AC 240/415 V
- Retrofitting of auxiliary switches at the right hand side of the casing
- Switch handle and test button can be locked
- 4-pole (three phases with active neutral conductor)
- Design: **S** for selective disconnection

Selection and ordering data

Maximum permissible short-circuit back-up fuse	Rated current	Rated fault current	MW	Design	DC	Order No.	Pack. unit*	Weight per unit approx.		
	I_n A	$I_{\Delta n}$ mA						kg		
For AC and pulsating DC fault currents, N-connection on the right										
AC 230 V to 400 V; 50 Hz to 60 Hz; 4-pole										
			125	30	4	A	5SM3 345-6	1	0.300	
			125	100		A	5SM3 445-6	1	0.533	
			125	300		A	5SM3 645-6	1	0.536	
			125	500		A	5SM3 745-6	1	0.300	
			125	300	4	S	A	5SM3 645-8	1	0.542
			125	500		S	A	5SM3 745-8	1	0.527

5SM2 RCCB module for miniature circuit-breaker

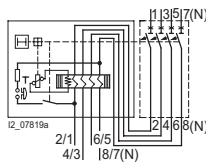
Supplementary components for 5SY and 5SP4 miniature circuit-breakers for the following rated currents:

- 0.3 ... 16
- 0.3 ... 40
- 0.3 ... 63
- 80 ... 100

Please see pages 2/55 and 2/56



Example for 4-pole 5SM2 8... RCCB module



BETA Residual-Current Operated Circuit-Breakers RCCB Industry Product Range

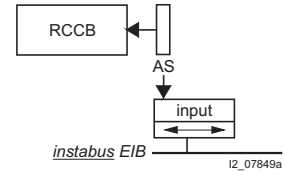
Supplementary components
70 mm mounting depth

2

Area of application

- 1 auxiliary contact can be retrofitted individually
- Mounting with factory-installed clips
- Max. contact load:
 - for 5SW3 30., 6 A/AC 230 V, 1 A/DC 220 V
 - for 5SW3 330, 5 A/AC 230 V, 0.5 A/DC 220 V
- Short-circuit protection ensured by circuit-breakers with characteristic B or C with $I_n = 6$ A or fuse gL 6 A
- Indication of the RCCB switching state:
AS: ON/OFF

- Can be connected to the *instabus* EIB and the AS interface-Bus or the PROFIBUS via binary inputs



Selection and ordering data

			MW	DC	Order No.	Pack. unit*	Weight per unit approx.
							kg
Auxiliary switches for residual-current operated circuit-breakers of up to 80 A							
	Auxiliary switches (AS)						
		1 NO + 1 NC	0.5	A	5SW3 300	1	0.042
		2 NC	0.5	A	5SW3 301	1	0.042
		2 NO	0.5	A	5SW3 302	1	0.042
Auxiliary switch for residual-current operated circuit-breakers 125 A							
	Auxiliary switch (AS)						
		1 NO + 1 NC	0.5	A	5SW3 330	1	0.040

* This quantity or a multiple thereof can be ordered.





BETA Residual-Current Operated Circuit-Breakers

RCCB Industry Product Range

Accessories 70 mm mounting depth

2

Selection and ordering data

Design	DC	Order No.	Pack. unit*	Weight per unit approx. kg		
 <p>Locking device for RCCBs up to 80 A sealable and lockable 4.5 mm lock hasp diameter</p>	A	5SW3 303	1	0.008		
	 <p>Padlock for 5SW3 303 locking device</p>	A	5ST3 802	1	0.027	
		A	5SW3 312	1 set	0.035	
 <p>Cu busbars 16 mm² for busbar mounting of 5SM3 RCCBs with each other using 5SY7 miniature circuit-breakers</p> <p>Fully insulated: Length 214 mm</p>	2-phase	A	5ST3 704	25	0.060	
	2-phase + AS	A	5ST3 706	25	0.060	
	3-phase	A	5ST3 708	25	0.100	
	3-phase for a 4-pole 5SM3 RCCB (N-connection on the right) with 8 miniature circuit-breakers					
	3/N + 8 connections	A	5ST3 717	25	0.150	
	Without end caps Length 1016 mm	2-phase	A	5ST3 705	20	0.290
		2-phase + AS	A	5ST3 707	20	0.290
3-phase		A	5ST3 710	20	0.430	
 <p>End caps for lateral insulation of cut-to-length busbars</p>	2- and 3-phase	A	5SH5 514	10	0.001	

For further busbars, please see page 2/60.