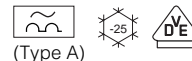


Residual Current Operated Circuit-Breakers (RCCBs) Standard Product Range



5SM1 N-type residual current operated circuit-breakers 16 A to 80 A

Features

- Rated voltages:
125 V AC to 230 V,
230 V AC to 400 V;
50 Hz to 60 Hz
230 V AC to 400 V;
50 Hz to 400 Hz
applicable in networks:
220/380 V AC,
230/400 V AC,
240/415 V AC
- 500 V AC
50 Hz to 60 Hz
applicable in networks:
500 V AC
- Terminals with wire protection can be used for busbar mounting at the bottom with modular-size terminals, e. g. with 5SX2 and 5SX4 miniature circuit-breakers.
- 55 mm mounting depth.
- Retrofitting of auxiliary switches at the right hand side of the enclosure.
- Lockable switch handle and test button.
- Surge-proof acc. to DIN VDE 0664 Part 1 (Type A).

Selection and ordering data

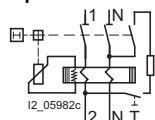
Version	Maximum short-circuit back-up fuse	MW	Rated fault current $I_{\Delta n}$ mA	Rated current I_n A	Order No.	Price	Weight 1 item	Pack. unit
						1 item	kg	Items

For AC and pulsating DC fault currents



125 V AC to 230 V; 50 Hz to 60 Hz

2-pole

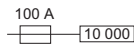
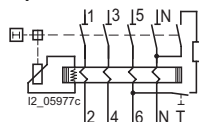


63 A	2	10	16	5SM1 111-6	0.220	1	
10 000		30	16	5SM1 311-6			
		30	25	5SM1 312-6			
		40	40	5SM1 314-6			
		100	25	5SM1 412-6			
		40	40	5SM1 414-6			
		300	25	5SM1 612-6			
		40	40	5SM1 614-6			
100 A	2.5	30	63	5SM1 316-6			0.300
10 000		80	80	5SM1 317-6			
		100	63	5SM1 416-6	0.280		
		80	80	5SM1 417-6			
		300	63	5SM1 616-6			
		80	80	5SM1 617-6			
for selective disconnection S	100 A	2.5	300	63	5SM1 616-8		



230 V AC to 400 V; 50 Hz to 60 Hz

4-pole



100 A	4	30	25	5SM1 342-6	0.473	1	
10 000		40	40	5SM1 344-6			
		63	63	5SM1 346-6			
		80	80	5SM1 347-6			
		100	40	5SM1 444-6			0.483
		63	63	5SM1 446-6			
		300	25	5SM1 642-6			0.470
		40	40	5SM1 644-6			
		63	63	5SM1 646-6			
		80	80	5SM1 647-6			
		500	25	5SM1 742-6			
		40	40	5SM1 744-6			
		63	63	5SM1 746-6			
for selective disconnection S	100 A	4	100	40	5SM1 444-8	0.473	
	10 000		300	40	5SM1 644-8		
			63	63	5SM1 646-8		
			1,000	63	5SM1 846-8		


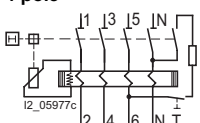

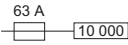
For additional components and accessories see page 3/12.
For dimension drawings and terminal designations see page 3/22.



Residual Current Operated Circuit-Breakers (RCCBs) Standard Product Range

5SM1 N-type residual current operated circuit-breakers 16 A to 80 A

Selection and ordering data

Version	Maximum short-circuit back-up fuse	MW	Rated fault-current $I_{\Delta n}$ mA	Rated current I_n A	Order No.	Price	Weight 1 item	Pack. unit	
						1 item	kg	Items	
For AC and pulsating DC fault currents									
	230 V AC to 400 V; 50 Hz to 400 Hz								
	4-pole		80 A	4	30	5SM1 342-6KK03 5SM1 344-6KK03		0.473	1
	short-time delayed K		100 A	4	30	5SM1 342-6KK01 5SM1 344-6KK01 5SM1 446-6KK01			
				100	63				
	500 V AC; 50 Hz to 60 Hz								
	4-pole		63 A	4	30	5SM1 352-6 5SM1 354-6 5SM1 356-6		0.515	
					40				
				300	25	5SM1 652-6 5SM1 654-6 5SM1 656-6		0.470	
					40				
					63				


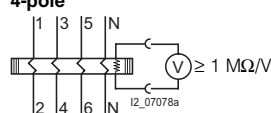
For additional components and accessories see page 3/12.
For dimension drawings and terminal designations see page 3/22.

5SM1 930 leakage current measurement unit

Features

- For measuring leakage currents up to 300 mA in electrical systems
 - Rated voltage: up to 500 V AC; 50 Hz to 60 Hz
 - With the help of the enclosed calibration curve a voltmeter with internal resistance of $> 1 \text{ M}\Omega/\text{V}$ can calculate the leakage current.
- Measurement range for AC voltage: $U_{\text{eff}} 1 \text{ mV} - 2 \text{ V}$

Selection and ordering data

	$I_{\Delta n}$ mA	I_n A	MW	Order No.	Price	Weight 1 item	Pack. unit
					1 item	kg	Items
5SM1 930 leakage current measurement unit							
	500 V AC; 50 Hz to 60 Hz						
	4-pole		0-300	63	4	5SM1 930-0	0.310

For dimension drawings and terminal designations see page 3/23.

Residual Current Operated Circuit-Breakers (RCCBs) Standard Product Range

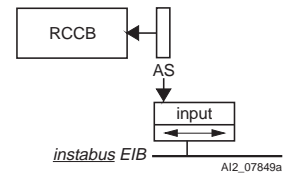
Additional components for 5SM1 N-type residual current operated circuit-breakers

Features

- Can be retrofitted in any way
- Mounting with factory-installed clips
- Max. contact load:
6 A/230 V AC
1 A/220 V DC
- Short-circuit protection with circuit-breakers with characteristic B or C with $I_n = 6$ A or fuse gL 6 A
- Via binary inputs linking to *instabus EIB* and AS-i-Bus or PROFIBUS possible

Application

Indication of the switching status of the RCCB
- AS: ON/OFF



Selection and ordering data



	MW	Order No.	Price	Weight 1 item	Pack. unit
			1 item	kg	Items
Auxiliary switches (AS)					
	1 NO + 1 NC	0.5	5SW3 000	0.042	1
	2 NC	0.5	5SW3 001		
	2 NO	0.5	5SW3 002		

Accessories for 5SM1 N-type residual current operated circuit-breakers

Accessories



	MW	Order No.	Price	Weight 1 item	Pack. unit
			1 item	kg	Items
Locking device					
sealable and lockable 4.5 mm lock hasp diameter			5SW3 003	0.008	1
Cu busbar 16 mm²					
for busbar mounting of 5SM1 RCCBs, of RCCBs with 5SX2 and 5SX4 miniature circuit-breakers or 5 MW switch disconnectors with I_g 40 A up to 100 A					
2-phase	210 mm long 1,000 mm long	5ST2 143 5ST2 152		0.150 0.700	10
3-phase	210 mm long 1,000 mm long	5ST2 144 5ST2 153		0.231 1.100	
3-phase + N	210 mm long 1,000 mm long	5ST2 145 5ST2 154		0.315 1.498	5
End caps					
required to insulate the ends of cut-to-length busbars					
1- and 2-phase		5ST2 155		0.013	10
3- and 4-phase		5ST2 156		0.017	
3-phase busbar					
for a 4-pole 5SM1 RCCB with 8 circuit-breakers 3/N + 8 connections			5ST2 424	0.091	10

For further busbar versions see chapter 2.



(Type B)

Residual Current Operated Circuit-Breakers (RCCBs) AC/DC sensitive

5SZ N-type residual current operated
circuit-breakers 25 A to 63 A

3

Features

- Rated voltage: 230/400 V AC; 50 Hz to 60 Hz applicable in networks: 220/380 V AC, 230/400 V AC, 240/415 V AC
- For AC fault currents, pulsating and smooth DC fault currents especially for devices with three-phase bridge connection such as frequency converters
- In the version of fixed mounting auxiliary switches contact 1 NO + 1 NC, 6 A/230 V AC, 1 A/220 V DC terminals for conductor cross sections up to 2.5 mm²
- 55 mm mounting depth
- Surge-proof acc. to DIN VDE 0664 Part 1

Maximum admissible short-circuit back-up fuse:


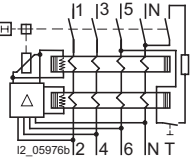
8MW 25/40/63 A



Application

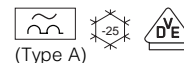
These devices are used in systems where, in addition to AC and pulsating DC fault currents, smooth or almost smooth DC fault currents occur (e. g. for B6 bridge connections used in devices such as frequency converters and medical equipment).

Selection and ordering data

	$I_{\Delta n}$ mA	I_n A	MW	Order No.	Price 1 item	Weight 1 item kg	Pack. unit Items
For AC fault currents, pulsating and smooth DC fault currents							
	230 V AC/400 V; 50 Hz to 60 Hz; 4-pole						
		30	25 40 63	8	5SZ3 426-0KG00 5SZ3 446-0KG00 5SZ3 466-0KG00		0.746
	300	25 40 63		5SZ6 426-0KG00 5SZ6 446-0KG00 5SZ6 466-0KG00		0.706	
• with auxiliary switches, fixed mounting	30	63	8	5SZ3 466-0KG30		0.750	
	300	63		5SZ6 466-0KG30			
for selective disconnection S	300	63	8	5SZ6 468-0KG00		0.706	
• with auxiliary switch, fixed mounting	300	63	8	5SZ6 468-0KG30		0.765	
for medical facilities (e. g. X-ray generators)	30	63	8	5SZ3 466-0KG05		0.746	
	300	63	8	5SZ6 466-0KG05		0.706	
• with auxiliary switches, fixed mounting	30	63	8	5SZ3 466-0KG35		0.750	
	300	63	8	5SZ6 466-0KG35			

For dimension drawings and terminal designations see page 3/22.

Residual Current Operated Circuit-Breakers (RCCBs) Industry Guard Product Range


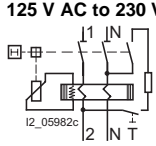
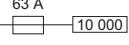

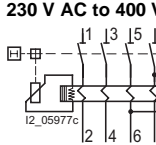
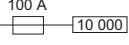


5SM3 residual current operated circuit-breakers 16 A to 80 A

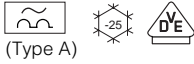
Features

- Rated voltages:
125 V AC to 230 V,
230 V AC to 400 V;
50 Hz to 60 Hz
230 V AC to 400 V;
50 Hz to 400 Hz
applicable in networks:
220/380 V AC,
230/400 V AC,
240/415 V AC
- 500 V AC
50 Hz to 60 Hz
applicable in networks:
500 V AC
- Terminals with wire protection
can be used for busbar
mounting at the bottom with
modular size terminals, e. g.
with 5SY4, 5SY7 MCB series.
- 70 mm mounting depth
- Retrofitting of auxiliary switch-
es at the right hand side of the
enclosure
- Surge-proof acc. to
DIN VDE 0664 Part 1

Selection and ordering data

	Maximum short-circuit back-up fuse	$I_{\Delta n}$ mA	I_n A	MW	Order No.	Price	Weight 1 item kg	Pack. unit Items	
For AC and pulsating DC fault currents									
	125 V AC to 230 V; 50 Hz to 60 Hz; 2-pole 		10	16	2	5SM3 111-6		0.230	1
			30	16		5SM3 311-6			
			30	25		5SM3 312-6			
				40		5SM3 314-6			
			100	25		5SM3 412-6			
				40		5SM3 414-6			
			300	25		5SM3 612-6			
				40		5SM3 614-6			
			30	63	2.5	5SM3 316-6			
				80		5SM3 317-6			
	230 V AC to 400 V; 50 Hz to 60 Hz; 4-pole 		30	25	4	5SM3 342-6		0.515	1
				40		5SM3 344-6			
				63		5SM3 346-6			
				80		5SM3 347-6			
			100	40		5SM3 444-6			
				63		5SM3 446-6			
			300	25		5SM3 642-6			
				40		5SM3 644-6			
				63		5SM3 646-6			
				80		5SM3 647-6			
for selective disconnection S			300	63	2.5	5SM3 616-6			
			100	40	4	5SM3 444-8			
			300	40		5SM3 644-8			
				63		5SM3 646-8			
			1,000	63		5SM3 846-8			

For additional components see page 3/16.
For dimension drawings and terminal designations see page 3/22.



Residual Current Operated Circuit-Breakers (RCCBs) Industry Guard Product Range

5SM3 residual current operated circuit-breakers 16 A to 80 A

Selection and ordering data

Maximum short-circuit back-up fuse	$I_{\Delta n}$	I_n	MW	Order No.	Price	Weight 1 item	Pack. unit
	mA	A			1 item	kg	Items

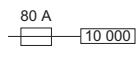
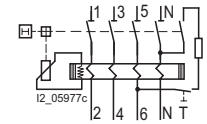
3

For AC and pulsating DC fault currents



230 V AC to 400 V; 50 Hz to 400 Hz;

4-pole



30	25	4
40		

5SM3 342-6KK03
5SM3 344-6KK03

0.515 1

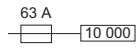
short-time delayed **K**

30	25	4
40		
100	63	

5SM3 342-6KK01
5SM3 344-6KK01
5SM3 446-6KK01

500 V AC; 50 Hz to 60 Hz

4-pole



30	25	4
40		
63		
300	25	
40		
63		

5SM3 352-6
5SM3 354-6
5SM3 356-6
5SM3 652-6
5SM3 654-6
5SM3 656-6

0.515

5SM3 residual current operated circuit-breakers 125 A

Features

- Rated voltage: 230 V AC to 400 V; 50 Hz to 60 Hz
- Applicable in networks: 220/380 V AC, 230/400 V AC, 240/415 V AC
- 70 mm mounting depth
- Surge-proof acc. to DIN VDE 0664 Part 3

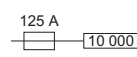
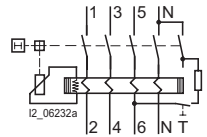
Selection and ordering data

Maximum short-circuit back-up fuse	$I_{\Delta n}$	I_n	MW	Order No.	Price	Weight 1 item	Pack. unit
	mA	A			1 item	kg	Items

For AC and pulsating DC fault currents



230 V AC to 400 V; 50 Hz to 60 Hz; 4-pole



30	125	4
100	125	
300	125	
500	125	

5SM3 345-6
5SM3 445-6
5SM3 645-6
5SM3 745-6

0.500 1
0.533
0.536
0.500

for selective disconnection **S**

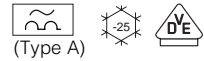
300	125	4
500	125	

5SM3 645-8
5SM3 745-8

0.542
0.527

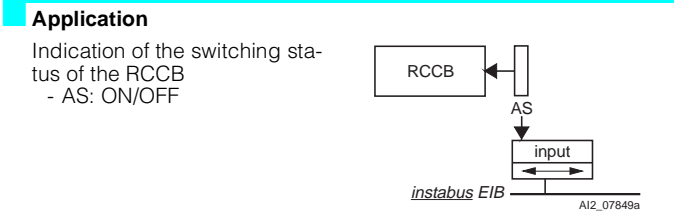
For additional components see page 3/16.
For dimension drawings and terminal designations see page 3/22.

Residual Current Operated Circuit-Breakers (RCCBs) Industry Guard Product Range



Additional components for 5SM3 residual current operated circuit-breakers

- Features**
- Can be retrofitted in any way
 - Mounting with factory-installed clips
 - Max. contact load:
 - for 5SW3 30, 6 A/230 V AC, 1 A/220 V DC
 - for 5SW3 330, 5 A/230 V AC, 0.5 A/220 V DC
 - Short-circuit protection with circuit-breakers with characteristic B or C with $I_n = 6 A$ or fuse gL 6 A
 - Via binary inputs linking to *instabus EIB* and AS-i-Bus or PROFIBUS possible



Selection and ordering data

			MW	Order No.	Price	Weight 1 item	Pack. unit
					1 item	kg	Items
Auxiliary switches for residual current operated circuit-breakers up to 80A							
	Auxiliary switch (AS)						
		1 NO + 1 NC	0.5	5SW3 300		0.042	10
		2 NC	0.5	5SW3 301			
		2 NO	0.5	5SW3 302			
Auxiliary switches for residual current operated circuit-breakers 125 A							
	Auxiliary switch (AS)						
		1 NO + 1 NC	0.5	5SW3 330		0.040	1

For dimension drawings see page 3/22.