

Overview

The Siemens mounting concept supports the combination of all 5ST3 additional components with Siemens 5SY and 5SP miniature circuit breakers and with 5SU1 RCBOs.

5SL and 5SY6 0. . miniature circuit breakers are suitable for mounting auxiliary switches and fault signal contacts. Auxiliary switches can also be mounted on 5TE8 flush-mounting circuit breakers and 5SG7 1 MINIZED switch disconnectors.

Auxiliary switches (AS)

The auxiliary switch (AS) always signals the contact position of the miniature circuit breaker, regardless of whether the miniature circuit breaker was tripped manually or as the result of a fault. An additional version is also available for the switching of small currents and voltages for the control of programmable control systems (PLCs) acc. to EN 61131-2. The auxiliary switch with test button enables the testing of control circuits without the need to switch the miniature circuit breaker.

Fault signal contacts (FC)

The fault signal contact (FC) signals the automatic tripping of the miniature circuit breaker in the event of a fault, such as an overload or a short circuit. If the fault signal contact is activated, the contact position does not change if the miniature circuit breaker is tripped manually. Fault signal contacts with TEST and RESET buttons enable the testing of control circuits without the need to trip the miniature circuit breaker. The red RESET button integrated in the handle also indicates the automatic tripping of the MCB. The signal can be acknowledged manually using the RESET button.

Shunt trips (ST)

Shunt trips are used for the remote tripping of miniature circuit breakers.

Undervoltage releases (UR)

Undervoltage releases are integrated (e.g. in EMERGENCY STOP loops), thus ensuring that the MCB trips in the event of an emergency, which, in turn, ensures disconnection of the control circuit according to EN 60204. In the event that the voltage is interrupted or too low, it also trips, i.e. prevents activation of the MCB.

Remote controlled mechanisms (RC)

Remote controlled mechanisms are used for the remote ON/OFF switching of miniature circuit breakers and the remote ON switching of RC units, as well as the local manual switching of these devices. A blocking function permits maintenance work. In the event that a miniature circuit breaker or RC unit is tripped, an acknowledgment must be carried out prior to switching back on. The remote controlled mechanism has an operating mode selector switch with the functions: "Locked", "Manual" and "Remote Switching". The mechanism can be mechanically latched and locked, which serves to protect personnel during maintenance work.

RC units

RC units can be combined with miniature circuit breakers of characteristic A, B, C and D. They then form a combination of RCCB and MCB for personnel, fire and line protection. The combinations can be tailored to meet individual requirements.

For information on RC units, please refer to the section "Residual current protective devices".

Benefits

Can be universally retrofitted with all additional components



- The 5SL, 5SY and 5SP miniature circuit breakers are ideal for the quick and easy mounting of auxiliary switches and fault signal contacts. Captive metal brackets on additional components ensure the quick and easy mounting of devices on the miniature circuit breakers without the need for tools.



- Fault signal contacts with TEST and RESET button enable the simple testing of auxiliary circuits and, in the event of a fault, acknowledgement of the fault over the RESET button, without the need to switch the miniature circuit breakers.

Miniature Circuit Breakers

Additional components

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The auxiliary switches with TEST button enable the simple manual testing of control circuits during operation of the entire plant without the need to switch the miniature circuit breakers.








Technical specifications

	Auxiliary switches (AS)		Fault signal contacts (FC)
	5ST3 010, 5ST3 010-2 5ST3 011, 5ST3 011-2 5ST3 012, 5ST3 012-2	5ST3 013 5ST3 014 5ST3 015	5ST3 020, 5ST3 020-2 5ST3 021, 5ST3 021-2 5ST3 022, 5ST3 022-2
Standards	EN 62019; IEC/EN 60947-5-1; UL 1077; CSA C22.2 No. 235		
Approvals	See annex, chapter 20		
Short-circuit protection	Miniature circuit breaker or gG 6 A fuse		
Contact load			
• Min.	50 mA, 24 V	1 mA/5 V DC	50 mA, 24 V
• Max.	--	50 mA/30 V DC	--
• 400 V AC, AC-14, NO	A 2	--	2
• 230 V AC, AC-14, NO	A 6	--	6
• 400 V AC, AC-13, NC	A 2	--	2
• 230 V AC, AC-13, NC	A 6	--	6
• 220 V DC, DC-13, NO+NC	A 1	--	1
• 110 V DC, DC-13, NO+NC	A 1	--	1
• 60 V DC, DC-13, NO+NC	A 3	--	3
• 24 V DC, DC-13, NO+NC	A 6	--	6
Service life, on average, with rated load	20000 actuations	20000 actuations	20000 actuations
Conductor cross-sections	mm ² 0.5 ... 2.5 AWG 22 ... 14	0.5 ... 2.5 22 ... 14	0.5 ... 2.5 22 ... 14
Terminals			
• Terminal tightening torque	Nm 0.5 lb/in 4.5	0.5 4.5	0.5 4.5

		Undervoltage releases (UR)	Shunt trips (ST)		Remote controlled mechanisms (RC)
		5ST3 04.	5ST3 030	5ST3 031	5ST3 050
Standards		EN 60947-1			
Rated voltages U_n	V AC	230	110 ... 415	24 ... 60	230
	V DC	24, 110	110	24 ... 60	--
• Rated frequency f_n	Hz	--	50 ... 60		50 ... 60
Response limits					
• Acc. to EN 60947-1, 7.2.1.3					
- Releases		< 0.35 ... 0.7 × U_n	--	--	--
- Permissible fluctuations of the power supply		0.85 ... 1.1 × U_n	--	--	--
• Acc. to EN 60947-1, 7.2.1.4		--	0.7 ... 1.1 × U_n	--	--
Short-circuit protection		Miniature circuit breaker or gG 6 A fuse			
Minimum contact load		50 mA, 24 V	50 mA, 24 V		--
Tripping operations		max. 2000	max. 2000		--
Service life, on average, with rated load		20000 actuations	20000 actuations		20000 actuations
Conductor cross-sections	mm ² 0.5 ... 2.5 AWG 22 ... 14	0.5 ... 2.5 22 ... 14	0.5 ... 2.5 22 ... 14		0.5 ... 2.5 22 ... 14
Terminals					
• Terminal tightening torque	Nm 0.8 lb/in 6.8	0.8 6.8	0.8 6.8		0.5 4.5

For technical data on the RC units, please refer to the chapter, "Residual current protective devices".

Selection and ordering data

	Rated voltage U_n V	Mounting width MW ¹⁾	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
	Auxiliary switches (AS) For 5SL, 5SY, 5SP miniature circuit breakers, 5SU1 RCBOs and 5TE8 switches								
	1 NO + 1 NC For small output	0.5	▶	5ST3 010		1	1 unit	027	0.066
			▶	5ST3 013		1	1 unit	027	0.055
	2 NO For small output		A	5ST3 011		1	1 unit	027	0.055
			B	5ST3 014		1	1 unit	027	0.054
	2 NC For small output		A	5ST3 012		1	1 unit	027	0.055
		B	5ST3 015		1	1 unit	027	0.060	
	Auxiliary switches (AS) with TEST button For 5SL, 5SY, 5SP miniature circuit breakers, 5SU1 RCBOs and 5TE8 switches								
	1 NO + 1 NC	0.5	A	5ST3 010-2		1	1 unit	027	0.045
	2 NO		A	5ST3 011-2		1	1 unit	027	0.045
	2 NC		A	5ST3 012-2		1	1 unit	027	0.045
	Fault signal contacts (FC) For 5SL, 5SY, 5SP miniature circuit breakers and 5SU1 RCBOs								
	1 NO + 1 NC	0.5	▶	5ST3 020		1	1 unit	027	0.056
	2 NO		B	5ST3 021		1	1 unit	027	0.056
	2 NC		A	5ST3 022		1	1 unit	027	0.057
	Fault signal contacts (FC) with TEST and ACKNOWLEDGE button For 5SL, 5SY, 5SP miniature circuit breakers and 5SU1 RCBOs								
	1 NO + 1 NC	0.5	A	5ST3 020-2		1	1 unit	027	0.050
	2 NO		A	5ST3 021-2		1	1 unit	027	0.050
	2 NC		A	5ST3 022-2		1	1 unit	027	0.050
	Undervoltage releases (UR) For 5SY, 5SP MCBs and 5SU1 RCBOs but not suitable for use with 5SY6 0.. and 5SL MCBs With integrated auxiliary switch								
	230 AC	1	▶	5ST3 040		1	1 unit	027	0.107
	110 DC		C	5ST3 041		1	1 unit	027	0.105
	24 DC		C	5ST3 042		1	1 unit	027	0.101
	Without integrated auxiliary switch								
	230 AC	1	▶	5ST3 043		1	1 unit	027	0.092
	110 DC		C	5ST3 044		1	1 unit	027	0.091
24 DC		▶	5ST3 045		1	1 unit	027	0.088	
	Shunt trips (ST) For 5SY, 5SP MCBs and 5SU1 RCBOs but not suitable for use with 5SY6 0.. and 5SL MCBs								
	2 NO	1	▶	5ST3 030		1	1 unit	027	0.090
	2 NC	1	▶	5ST3 031		1	1 unit	027	0.090
	Remote controlled mechanisms (RC) For 5SY, 5SP MCBs and 5SU1 RCBOs but not suitable for use with 5SL MCB								
	230 AC	3.5	D	5ST3 050		1	1 unit	027	0.461

1) 1 MW (modular width) = 18 mm.