

# Miniature Circuit Breakers



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## Introduction

## Technical specifications

			5SY4	5SY5	5SP4	5SJ4	5SJ6
<b>Standards</b>			EN 60898-1; EN 60947-2	EN 60898-2	EN 60898-1; EN 60947-2	EN 60898-1	EN 60898-1
<b>Approvals</b>							
<b>Rated voltage <math>U_n</math></b>	V AC V DC		230/400 ---	230/400 220/440/ 880 <sup>9)</sup>	230/400 --	230/400 --	230/400 --
<b>Operational voltage</b>							
Acc. to EN 60898-1/-2 and EN 60947-2	Min. V AC/DC/pole		24	24	24	24	24
	Max. V DC/pole		72 <sup>4)</sup>	250	72	60	60 <sup>2)</sup>
Acc. to UL 1077 and CSA C22.2 No.235	Max. V AC		250/440	250/440	250/440	250/440	250/440
	Max. V AC		480Y/277	--	480Y/277	--	--
<b>Breaking capacity<sup>1)</sup></b>							
• $I_{cn}$ acc. to UEC/EN 60898-1	kA AC		10	10	10	10	6
	kA AC		10	10	10	--	--
• $I_{cn}$ acc. to UEC/EN 60898-2	kA AC		35 ... 10 <sup>1)</sup>	35 ... 10 <sup>1)</sup>	10	--	--
	kA AC		15	15	15	--	--
• Acc. to UL1077 and CSA C22.2 No.235	kA AC		5	--	5	--	--
<b>Insulation coordination</b>							
• Rated insulation voltage	V AC		250/440				
	V DC/pole		--	250	--	250/440	250/440
<b>Pollution degree for overvoltage category</b>			3/III <sup>9)</sup>				2/III
<b>Touch protection</b>	Acc. to EN 50274		Yes				
<b>Main switch characteristics</b>	Acc. to EN 60204		Yes				--
<b>Handle end position, sealable</b>			Yes				
<b>Degree of protection</b>	Acc. yo EN 60529		IP20 with connected conductors, IP40 in the handle range with distribution cover			IP20	IP20
<b>CFC and silicone-free</b>			Yes				
<b>Mounting</b>							
• Snap-on fixing system			Yes		--		
	• Standard mounting rail and screw fixing		--		Yes		
<b>Terminals</b>			±screw (Pozidriv)	2			
• Tunnel terminals at both ends			--		Yes		--
	• Combined terminals at both ends		Yes		--		
• Terminal tightening torque	Nm		2.5 ... 3		2.5 ... 3.5		2.5 ... 3
	lb.in		22 ... 26		22 ... 31		--
<b>Conductor cross-sections</b>							
• Solid and stranded	mm <sup>2</sup>		0.75 ... 35		4 ... 50		0.75 ... 35
• Finely stranded, with end sleeve	mm <sup>2</sup>		0.75 ... 25		1.5 ... 35		0.75 ... 25
• AWG conductors	AWG		14 ... 4		14 ... 2		--
(Cu 60/75 °C $I_n \leq 40$ A; 60 °C $I_n > 40$ A)							
<b>Mains connection</b>							
• AC			Any				
• DC			Any				--
<b>Mounting position</b>			Any				
<b>Service life</b>							
• Actuations			20000				
• On average, with rated load	Actuations		10000 for 5SY5 at 40 A, 50 A and 63 A				--
<b>Ambient temperature</b>			°C				
			-25 ... +55, max. 95% humidity				
<b>Storage temperature</b>			°C				
			-40 ... +75				
<b>Resistance to climate</b>			6 cycles				
• Acc. to IEC 60068-2-30							
<b>Shock</b>			150 at 11 ms half-sine				--
• Acc. to IEC 60068-2-27	m/s <sup>2</sup>						--
<b>Resistance to vibrations</b>			50 at 25 ... 150 Hz and 60 at 35 Hz (4 sec)				60 at 10 Hz ... 150 Hz
• Acc. to IEC 60068-2-27	m/s <sup>2</sup>						

<sup>1)</sup> For further information see Configuration Manual 2014 "Miniature circuit breakers" at: [www.siemens.com/lowvoltage/manuals](http://www.siemens.com/lowvoltage/manuals)

<sup>2)</sup> The operational voltage 60 V DC/pole takes into account a battery charging voltage with a peak value of 72V

<sup>3)</sup> 5SY54.. 4-pole, degree of pollution 2 at overvoltage category III.

<sup>4)</sup> Exempt: C/D 0.3 A ... 0.5 A

<sup>9)</sup> 5SY54.. 4-pole 880 V is not a standardized voltage acc. to EN 60898-1, suitable for max. 1000 V DC, if the four poles are connected in series.

## Overview

Tripping Characteristic : C according to IEC/EN 60898-1  
 Rated Voltage : Un 230/400 VAC, Max. 250/440VAC, 60VDC Per Pole

## Selection and ordering data

Pole	Mounting Width MW <sup>1)</sup>	Rated Current I <sub>n</sub> A	Characteristic C Order No.	Basic price per PU (THB)
<b>1 Pole ; 230/400V</b>	1	1	5SJ6101-7SC	
		2	5SJ6102-7SC	
		3	5SJ6103-7SC	
		4	5SJ6104-7SC	
		6	5SJ6106-7SC	
		10	5SJ6110-7SC	
		16	5SJ6116-7SC	
		20	5SJ6120-7SC	
		25	5SJ6125-7SC	
		32	5SJ6132-7SC	
		40	5SJ6140-7SC	
		50	5SJ6150-7SC	
		63	5SJ6163-7SC	
<b>2 Pole ; 400V</b>	2	1	5SJ6201-7SC	
		2	5SJ6202-7SC	
		3	5SJ6203-7SC	
		4	5SJ6204-7SC	
		6	5SJ6206-7SC	
		10	5SJ6210-7SC	
		16	5SJ6216-7SC	
		20	5SJ6220-7SC	
		25	5SJ6225-7SC	
		32	5SJ6232-7SC	
		40	5SJ6240-7SC	
		50	5SJ6250-7SC	
		63	5SJ6263-7SC	
<b>3 Pole ; 400V</b>	3	1	5SJ6301-7SC	
		2	5SJ6302-7SC	
		3	5SJ6303-7SC	
		4	5SJ6304-7SC	
		6	5SJ6306-7SC	
		10	5SJ6310-7SC	
		16	5SJ6316-7SC	
		20	5SJ6320-7SC	
		25	5SJ6325-7SC	
		32	5SJ6332-7SC	
		40	5SJ6340-7SC	
		50	5SJ6350-7SC	
		63	5SJ6363-7SC	



<sup>1)</sup> 1MW (Modular Width =18 mm.)

# Miniature Circuit Breakers

5SJ Miniature Circuit Breaker

**5SJ4, 10 kA**

## Overview

Tripping Characteristic : C according to IEC/EN 60898-1

Rated Voltage : Un 230/400 VAC, Max. 250/440VAC, 60VDC Per Pole

*Non Accessories*




## Selection and ordering data

Pole	Mounting Width	Rated Current $I_n$	Characteristic C Order No.	Basic price per PU (THB)
	MW <sup>1)</sup>	A		
<b>1 Pole</b>	1	1	5SJ4101-7CC20	
		2	5SJ4102-7CC20	
		3	5SJ4103-7CC20	
		4	5SJ4104-7CC20	
		6	5SJ4106-7CC20	
		10	5SJ4110-7CC20	
		16	5SJ4114-7CC20	
		16	5SJ4116-7CC20	
		20	5SJ4120-7CC20	
		25	5SJ4125-7CC20	
		32	5SJ4132-7CC20	
		40	5SJ4140-7CC20	
		50	5SJ4150-7CC20	
		63	5SJ4143-7CC20	
63	5SJ4163-7CC20			
<b>2 Pole</b>	2	1	5SJ4201-7CC20	
		2	5SJ4202-7CC20	
		3	5SJ4203-7CC20	
		4	5SJ4204-7CC20	
		6	5SJ4206-7CC20	
		10	5SJ4210-7CC20	
		16	5SJ4214-7CC20	
		16	5SJ4216-7CC20	
		20	5SJ4220-7CC20	
		25	5SJ4225-7CC20	
		32	5SJ4232-7CC20	
		40	5SJ4240-7CC20	
		50	5SJ4250-7CC20	
		63	5SJ4263-7CC20	
<b>3 Pole</b>	3	1	5SJ4301-7CC20	
		2	5SJ4302-7CC20	
		3	5SJ4303-7CC20	
		4	5SJ4304-7CC20	
		6	5SJ4306-7CC20	
		10	5SJ4310-7CC20	
		16	5SJ4316-7CC20	
		20	5SJ4320-7CC20	
		25	5SJ4325-7CC20	
		32	5SJ4332-7CC20	
		40	5SJ4340-7CC20	
		50	5SJ4350-7CC20	
		63	5SJ4363-7CC20	

<sup>1)</sup> 1MW (Modular Width =18 mm.)

### 5SY4, 10 kA

#### Selection and ordering data

	Mounting Width	Rated Current $I_n$	Characteristic C	Basic price per PU (THB)
	MW <sup>1)</sup>	A	Order No.	
	1	0.3	5SY4114-7	
		2	5SY4102-7	
		4	5SY4104-7	
		6	5SY4111-7	
		8	5SY4106-7	
		10	5SY4108-7	
		16	5SY4110-7	
		20	5SY4116-7	
		25	5SY4120-7	
		30	5SY4125-7	
		32	5SY4132-7	
		40	5SY4140-7	
		50	5SY4150-7	
63	5SY4163-7			
80	5SY4180-7			
	2	0.3	5SY4214-7	
		2	5SY4202-7	
		4	5SY4204-7	
		6	5SY4206-7	
		8	5SY4208-7	
		10	5SY4210-7	
		16	5SY4216-7	
		20	5SY4220-7	
		25	5SY4225-7	
		30	5SY4230-7	
		32	5SY4232-7	
		40	5SY4240-7	
		50	5SY4250-7	
63	5SY4263-7			
80	5SY4280-7			
	3	0.3	5SY4314-7	
		2	5SY4302-7	
		4	5SY4304-7	
		6	5SY4306-7	
		8	5SY4308-7	
		10	5SY4310-7	
		16	5SY4316-7	
		20	5SY4320-7	
		25	5SY4325-7	
		30	5SY4330-7	
		32	5SY4332-7	
		40	5SY4340-7	
		50	5SY4350-7	
63	5SY4363-7			
80	5SY4380-7			



<sup>1)</sup> 1MW (Modular Width = 18 mm.)

# Miniature Circuit Breakers




5SY and 5SP Miniature Circuit Breaker

## 5SY5, DC Application, 10 kA

### Selection and ordering data

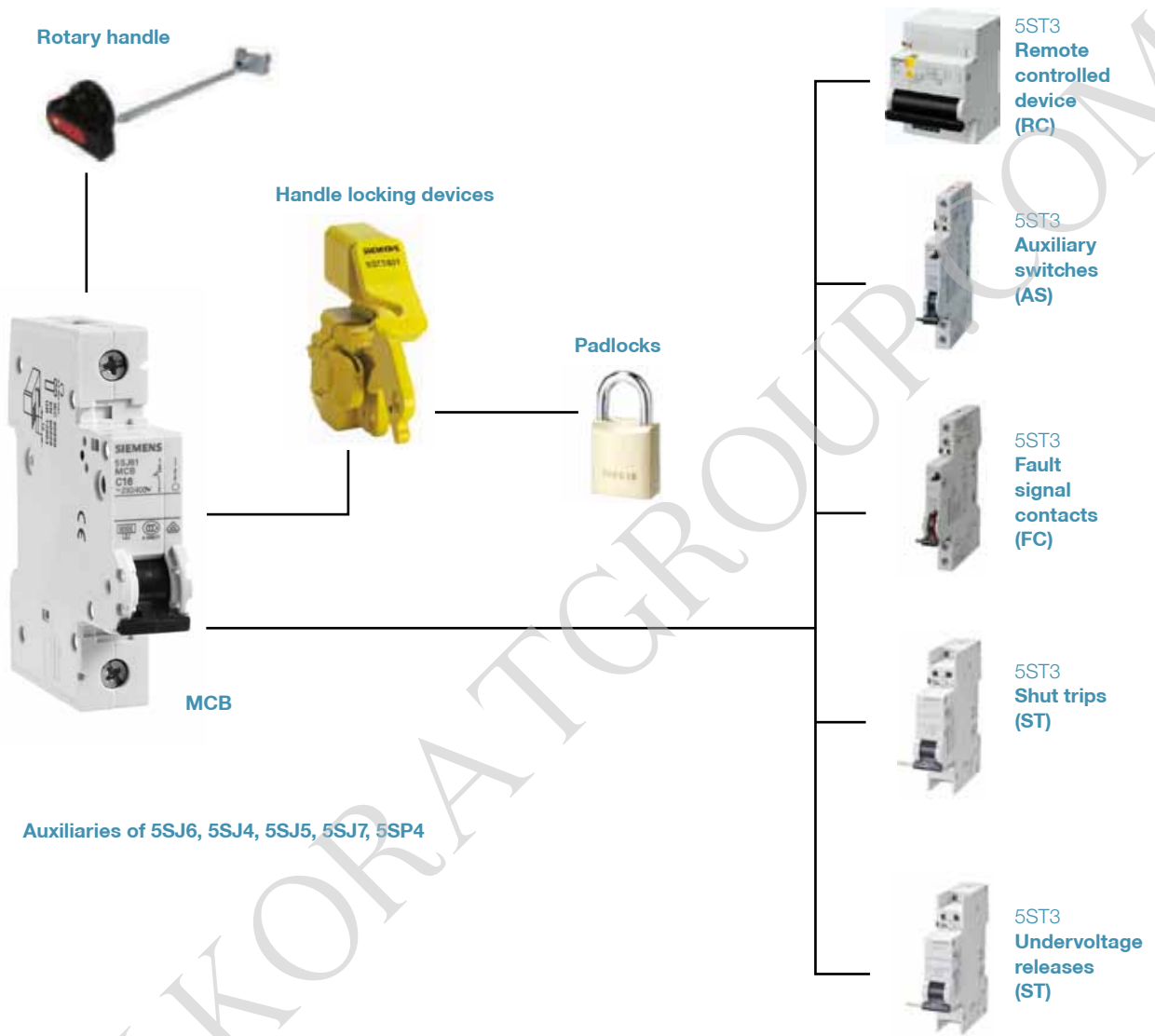
	Mounting Width	Rated Current $I_n$	Characteristic C Order No.	Basic price per PU (THB)
	MW <sup>1)</sup>	A		
 <b>MCBs 10000 A, UC</b> 1P, 230/400 V AC 220 V DC	1	0,3	5SY5114-7	
		2	5SY5102-7	
		4	5SY5104-7	
		6	5SY5106-7	
		8	5SY5108-7	
		10	5SY5110-7	
		16	5SY5116-7	
		20	5SY5120-7	
		25	5SY5125-7	
		32	5SY5132-7	
		40	5SY5140-7	
		50	5SY5150-7	
		63	5SY5163-7	
 2P, 400 V AC, 440 V DC 220 V DC	2	0,3	5SY5214-7	
		2	5SY5202-7	
		4	5SY5204-7	
		6	5SY5206-7	
		8	5SY5208-7	
		10	5SY5210-7	
		16	5SY5216-7	
		20	5SY5220-7	
		25	5SY5225-7	
		32	5SY5232-7	
		40	5SY5240-7	
		50	5SY5250-7	
		63	5SY5263-7	

## 5SP4, high-current, 10 kA

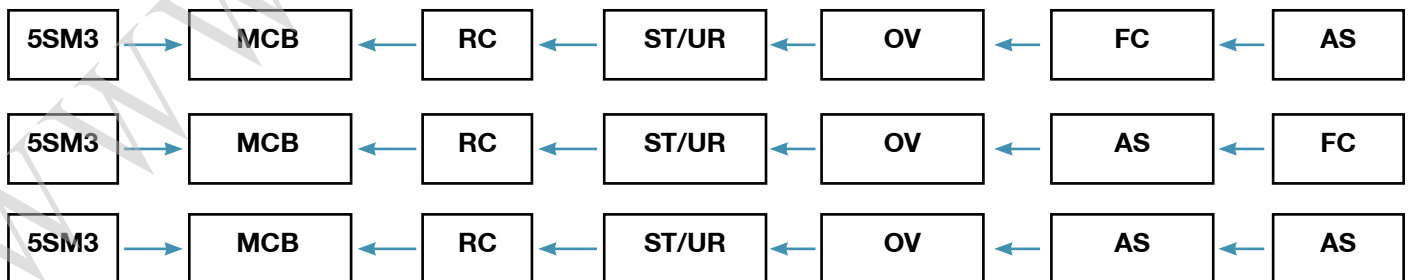
	Mounting Width	Rated Current $I_n$	Characteristic C Order No.	Basic price per PU (THB)
	MW <sup>1)</sup>	A		
 <b>MCBs 10000 A, high current</b> 1P, 230/400 V AC	1.5	80	5SP4180-7	
		100	5SP4191-7	
		125	5SP4192-7	
 2P, 400 V AC	3	80	5SP4280-7	
		100	5SP4291-7	
		125	5SP4292-7	
 3P, 400 V AC	4.5	80	5SP4380-7	
		100	5SP4391-7	
		125	5SP4392-7	

<sup>1)</sup> 1MW (Modular Width = 18 mm.)

### Additional components diagram for MCB



The chart shows which additional components can be mounted on either the right or the left



Remark: 5SP4 could not combine with RCD

### Electrical components

#### Selection and ordering data

	Rated Current $I_n$ V	Mounting Width MW <sup>1)</sup>	Order No.	Basic price per PU (THB)
	<b>Auxiliary switches (AS)*</b>			
	1 NO + 1 NC		5ST3010 - OCC	
	2 NO 2 NC		5ST3011 - OCC 5ST3012 - OCC	
	<b>Fault signal contacts (FC)*</b>			
	1 NO + 1 NC		5ST3020	
	2 NO 2 NC		5ST3021 5ST3022	
	<b>Undervoltage releases (UR)*</b>			
	With integrated auxiliary switch		5ST3040	
	230 AC 110 DC 24 DC	1	5ST3041 5ST3042	
	<b>Shunt trips (units)*</b>			
	110 ... 415 V AC	1	5ST3030	
	24 ... 60 V AC/DC	1	5ST3031	
	<b>Remote controlled mechanisms (RC)*</b>			
	230 AC	3.5	5ST3030	
	<b>Handle locking devices*</b>			
	Seatable to prevent undesired mechanical ON/OFF switching For padlock with max. 3 mm shackle		5ST3801	
	<b>Padlocks</b>			
	For 5ST3 801 handle locking devices		5ST3802	
	<b>Locking devices</b>			
	For 5SP and 5SY miniature circuit breakers comprising 5ST3 801 handle locking device and 5ST3 802 padlock		5ST3803	
	<b>Rotary handle</b>			
	length of operate level : 280 mm. installation depth : Max 400 mm. adjustable		5ST3814 - OCC	

1) 1MW (Modular Width = 18 mm.)

\* Not suitable use for 5SJ6 ... SC