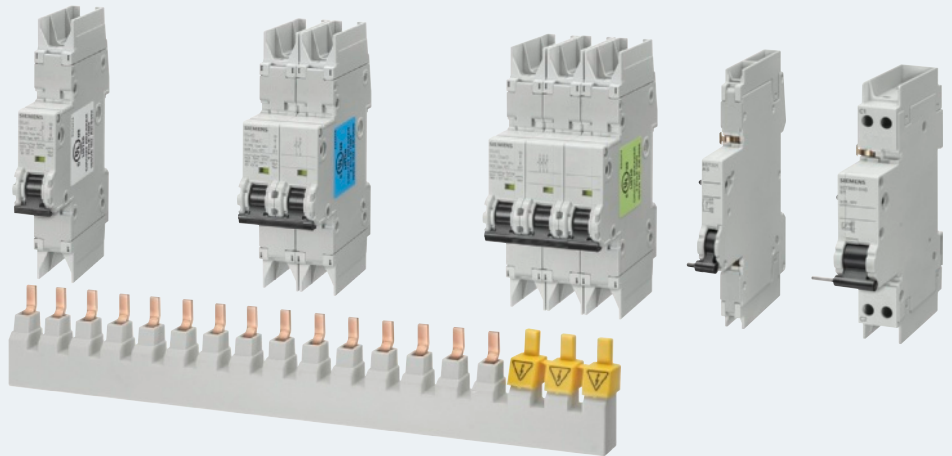




5SJ4 ...-HG Circuit Breakers to IEC and UL 489

BETA Low-Voltage Circuit Protection



Compliance with industry standards is a must in today's manufacturing environment. Worldwide acceptance is an ever increasing global demand.

- **5SJ4 circuit breakers meet both Industry standard designs and global acceptance.**

5SJ4 ...-HG circuit breakers comply with UL 489, CSA 22.2 No. 5-02, IEC/EN 60898 and IEC/EN 60947-2 standards. They are certified by UL, CSA and CE making the 5SJ4 series suitable for worldwide application and acceptance. They can be used in branch circuit protection applications for branch protection in distribution boards, industrial control panels and controls in accordance with UL 508A. They are also HACR rated for use in heating, air conditioning and ventilation systems in compliance with NFPA 70 (NEC National Electrical Code).

Highlights

- 480Y/277 V range up to 40 A, 240/120 V and 240 V up to 63 A
- Can be used for AC as well as for DC up to 125 V
- Breaking capacity up to 14 kA to UL 489 and 15 kA to IEC 60947-2
- Busbars for 115 A and infeed terminals up to 50 mm² (1 AWG) for quick installation
- Accessories: auxiliary switches, fault signal contacts and shunt trips available up to 480 V and can be mounted easily to the circuit breaker

Circuit Breakers

5SJ4 ...-HG circuit breakers to IEC and UL 489

Overview

Circuit breakers certified to UL 489 are also certified for the protection of electrical circuits in heating, air conditioning and ventilating systems (HACR), as well as for DC applications up to 60 V/125 V.

This covers a wide range of protection tasks, in residential and non-residential buildings, as well as in industry. The tripping characteristics B, C and D to EN/IEC 60898 have been adapted so that they fall in the permissible tripping range acc. UL 489, as well as for applications at 25 °C and 40 °C. This means that the devices are certified for use to both standards. The enclosure dimensions of the devices correspond to DIN format. This means that all three device series are suitable for universal use worldwide to IEC or UL standards.

The key difference between the three device series is their application in different power supply systems.

- 5SJ4 ...-HG40: 240/120 V AC, 1-pole, "same polarity only",
- 5SJ4 ...-HG41: 240 V AC, 1, 2 and 3-pole,
- 5SJ4 ...-HG42: 480Y/277 V AC, 1, 2 and 3-pole.

Benefits



- Bus-mounting with direct centered infeed on busbars with a conductor cross-section of up to 50 mm² (1 AWG)

The terminals are suitable for "field wiring". This means that the devices can be installed not only in factory-finished distribution boards and control enclosures, but also on-site in a customer system.

When using this mounting concept, all accessories can be combined with the 5SJ4 ...-HG series. The auxiliary switch (AS) signals the contact position. In the event of a fault, the fault signal contact (FC) signals the automatic tripping of the circuit breaker and the contact position. Shunt trips (ST) are used for the remote tripping of circuit breakers. Captive metal brackets on the accessories ensure fast mounting on the devices.

1, 2 and 3-phase busbars in 3 lengths with 6, 12 or 18 pins are available as accessories for all 5SJ4 devices. The infeed is over connection terminals, which are available in two versions, for direct infeed at either the busbar or the circuit breakers. Pins that are not required can be covered with touch protection covers.



- Infeed direct at circuit breaker for conductor cross-sections up to 35 mm² (4 AWG)



- A maximum of one shunt trip + two auxiliary switches or fault signal contacts can be mounted on these circuit breakers.

Technical specifications

Circuit breakers			5SJ4 ...-HG40	5SJ4 ...-HG41	5SJ4 ...-HG42
Standards			IEC/EN 60898; IEC/EN 60947-2; UL 489; CSA C22.2 No. 5-02		
Certifications			UL 489; CSA C22.2 No. 5-02, UL File No. E243414		
Tripping characteristic			B, C, D		C, D
Operational voltage	min.	V AC/DC	24		
	max.	V DC/pole	60		
	max.	V AC	440		
	max.	V AC V DC/1P V DC/2P	240/120 60 --	240 60 125	480Y/277 60 125
Rated breaking capacity					
• I_{cn} to IEC 60898-1		kA AC	10		
• I_{cu} to IEC 60947-2		kA AC	15		
• UL 489 and CSA C22.2 No. 5-02 ¹⁾		kA AC	14/10 ²⁾		10 ²⁾
Insulation coordination					
• Rated insulation voltage		V AC	250		250/440
• Degree of pollution for overvoltage category			3/III		
Touch protection to EN 50274			Yes		
Handle end position, sealable			Yes		
Degree of protection to EN 60529			IP20, with connected conductors		
CFC and silicone-free			Yes		
Mounting			On standard mounting rail		
Terminals					
• Combined terminals at both ends			Yes		
• Terminal tightening torque, only for Cu, 60/75 °C		Nm lb/in	3.5 31		
Conductor cross-sections					
• Solid and stranded to UL 489 and CSA C22.2 No. 5-02		AWG	14 ... 4		
• Solid and stranded to IEC 60898-1		mm ²	0.75 ... 35		
Mains connection			Any		
Mounting position			Any		
Average service life, with rated load			20000 actuations		
Ambient temperature			°C	-25 ... +45, occasionally +55, max. 95 % humidity, storage temperature: -40 ... +75	
Resistance to climate to IEC 60068-2-30			6 cycles		
Resistance to vibrations to IEC 60068-2-6			m/s ²	60 at 10 ... 150 Hz	

¹⁾ Type HSJ: 14 kA/type NSJ: 10 kA (additional type designation in the USA).

²⁾ For detailed information on rated switching capacity, see page 15.

Additional components		Auxiliary switches (AS)		Fault signal contacts (FC)		Shunt trips (ST)	
		5ST3 010-0HG 5ST3 011-0HG 5ST3 012-0HG		5ST3 020-0HG 5ST3 021-0HG 5ST3 022-0HG		5ST3 030-0HG	5ST3 031-0HG
Standards		UL 489, CSA 22.2 No. 5-02				IEC/EN 60947-1	
Certifications		UL 489; CSA, UL File Nr. E321559					
Operational voltage/operational load (current) • IEC		V AC A AC	400 2	230 6 (NC: AC13, NO: AC14)		110 ... 415 --	24 ... 60 --
• UL		V DC A DC	220 1	110 1 3	60 6 (DC13)	--	24 ... 60 --
		V AC A AC	480 1.5	277 3 4	240 6	110 ... 480 --	24 ... 60 --
		V DC A DC	125 1	60 3		--	24 ... 60 --
Short-circuit protection		Circuit breaker or fuse 6 A					
Contact load		min. 50 mA, 24 V					
Response limit		x U_n	--				
Conductor cross-sections		AWG mm ²	22 ... 14 0.5 ... 2.5			22 ... 14 0.5 ... 2.5	
Terminals – terminal tightening torque		Nm lb/in.	0.5 max. 4.5			0.8 max. 6.8	

Busbars		5ST3 663-.HG 5ST3 664-.HG 5ST3 665-.HG	5ST3 666-0HG	5ST3 666-2HG
Standards		UL 489		
Certifications		UL 489; UL File Nr. E321559		
Operational voltage				
• IEC	V AC	690		
• UL 489	V AC	480Y/277 and 240		
Rated conditional short-circuit current		kA	15 kA	
Dielectric strength	kV/mm	30		
Surge strength	kV	>9.5		
Rated current at 40 °C ambient temperature		A	115	
Insulation coordination				
• Degree of pollution		2		
• Overvoltage category		III		
Busbar cross-section		mm² Cu	16	
Infeed		Any		
Conductor cross-sections		AWG	14 ... 2	14 ... 1
	mm²	--	1.5 ... 35	1.5 ... 50
Terminals – terminal tightening torque		Nm	3.5	3.5
	lb/in	--	30	30
Temperature resistance		°C	200 – UL94-V0/0.4 mm	

Selection and ordering data

	Rated current	MW ¹⁾	DT	Characteristic B		PU	PS ^{2)/} P. unit	PG	Weight per PU approx
	I_n A			Order No.	Price per PU				
						Unit(s)	Unit(s)		kg
	Circuit breakers								
	"same polarity only"								
	1P, 240 V AC								
	6	1	B	5SJ4 106-6HG40		1	1	012	0,120
	10		B	5SJ4 110-6HG40		1	1	012	0,120
	13		C	5SJ4 113-6HG40		1	1	012	0,120
	15		C	5SJ4 118-6HG40		1	1	012	0,120
	16		C	5SJ4 116-6HG40		1	1	012	0,120
	20		C	5SJ4 120-6HG40		1	1	012	0,120
	25		C	5SJ4 125-6HG40		1	1	012	0,120
	30		C	5SJ4 130-6HG40		1	1	012	0,120
	32		C	5SJ4 132-6HG40		1	1	012	0,120
	35		C	5SJ4 135-6HG40		1	1	012	0,120
	40		C	5SJ4 140-6HG40		1	1	012	0,120
	45		C	5SJ4 145-6HG40		1	1	012	0,120
	50		C	5SJ4 150-6HG40		1	1	012	0,120
	60		C	5SJ4 160-6HG40		1	1	012	0,120
	63		C	5SJ4 163-6HG40		1	1	012	0,120

¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

	Rated current	MW ¹⁾	DT	Characteristic C			PG	DT	Characteristic D			PU	PS ^{2)/} P. unit	PG	Weight per PU approx
	<i>I_n</i>			Order No.	Price per PU			Order No.	Price per PU						
	A														
	Circuit breakers "same polarity only" 1P, 240 V AC														
	0.3	1	C	5SJ4 114-7HG40		012	C	5SJ4 114-8HG40		1	1	012	0,120		
	0.5		C	5SJ4 105-7HG40		012	C	5SJ4 105-8HG40		1	1	012	0,120		
	1		B	5SJ4 101-7HG40		012	C	5SJ4 101-8HG40		1	1	012	0,120		
	1.6		C	5SJ4 115-7HG40		012	C	5SJ4 115-8HG40		1	1	012	0,120		
	2		B	5SJ4 102-7HG40		012	C	5SJ4 102-8HG40		1	1	012	0,120		
	3		B	5SJ4 103-7HG40		012	C	5SJ4 103-8HG40		1	1	012	0,120		
	4		B	5SJ4 104-7HG40		012	C	5SJ4 104-8HG40		1	1	012	0,120		
	5		C	5SJ4 111-7HG40		012	C	5SJ4 111-8HG40		1	1	012	0,120		
	6		B	5SJ4 106-7HG40		012	C	5SJ4 106-8HG40		1	1	012	0,120		
	8		B	5SJ4 108-7HG40		012	C	5SJ4 108-8HG40		1	1	012	0,120		
	10		B	5SJ4 110-7HG40		012	C	5SJ4 110-8HG40		1	1	012	0,120		
	13		C	5SJ4 113-7HG40		012	C	5SJ4 113-8HG40		1	1	012	0,120		
	15		C	5SJ4 118-7HG40		012	C	5SJ4 118-8HG40		1	1	012	0,120		
	16		B	5SJ4 116-7HG40		012	C	5SJ4 116-8HG40		1	1	012	0,120		
	20		B	5SJ4 120-7HG40		012	C	5SJ4 120-8HG40		1	1	012	0,120		
	25		B	5SJ4 125-7HG40		012	C	5SJ4 125-8HG40		1	1	012	0,120		
	30		C	5SJ4 130-7HG40		012	C	5SJ4 130-8HG40		1	1	012	0,120		
	32		C	5SJ4 132-7HG40		012	C	5SJ4 132-8HG40		1	1	012	0,120		
	35		C	5SJ4 135-7HG40		012	C	5SJ4 135-8HG40		1	1	012	0,120		
	40		C	5SJ4 140-7HG40		012	C	5SJ4 140-8HG40		1	1	012	0,120		
	45		C	5SJ4 145-7HG40		012	C	5SJ4 145-8HG40		1	1	012	0,120		
	50		C	5SJ4 150-7HG40		012	C	5SJ4 150-8HG40		1	1	012	0,120		
	60		C	5SJ4 160-7HG40		012	C	5SJ4 160-8HG40		1	1	012	0,120		
63		C	5SJ4 163-7HG40		012	C	5SJ4 163-8HG40		1	1	012	0,120			
	Circuit breakers 1P, 240 V AC														
	0.3	1	C	5SJ4 114-7HG41		012	C	5SJ4 114-8HG41		1	1	012	0,155		
	0.5		C	5SJ4 105-7HG41		012	C	5SJ4 105-8HG41		1	1	012	0,155		
	1		C	5SJ4 101-7HG41		012	C	5SJ4 101-8HG41		1	1	012	0,155		
	1.6		C	5SJ4 115-7HG41		012	C	5SJ4 115-8HG41		1	1	012	0,155		
	2		C	5SJ4 102-7HG41		012	C	5SJ4 102-8HG41		1	1	012	0,155		
	3		C	5SJ4 103-7HG41		012	C	5SJ4 103-8HG41		1	1	012	0,155		
	4		C	5SJ4 104-7HG41		012	C	5SJ4 104-8HG41		1	1	012	0,155		
	5		C	5SJ4 111-7HG41		012	C	5SJ4 111-8HG41		1	1	012	0,155		
	6		C	5SJ4 106-7HG41		012	C	5SJ4 106-8HG41		1	1	012	0,155		
	8		C	5SJ4 108-7HG41		012	C	5SJ4 108-8HG41		1	1	012	0,155		
	10		C	5SJ4 110-7HG41		012	C	5SJ4 110-8HG41		1	1	012	0,155		
	13		C	5SJ4 113-7HG41		012	C	5SJ4 113-8HG41		1	1	012	0,155		
	15		C	5SJ4 118-7HG41		012	C	5SJ4 118-8HG41		1	1	012	0,155		
	16		C	5SJ4 116-7HG41		012	C	5SJ4 116-8HG41		1	1	012	0,155		
	20		C	5SJ4 120-7HG41		012	C	5SJ4 120-8HG41		1	1	012	0,155		
	25		C	5SJ4 125-7HG41		012	C	5SJ4 125-8HG41		1	1	012	0,155		
	30		C	5SJ4 130-7HG41		012	C	5SJ4 130-8HG41		1	1	012	0,155		
	32		C	5SJ4 132-7HG41		012	C	5SJ4 132-8HG41		1	1	012	0,155		
	35		C	5SJ4 135-7HG41		012	C	5SJ4 135-8HG41		1	1	012	0,155		
	40		C	5SJ4 140-7HG41		012	C	5SJ4 140-8HG41		1	1	012	0,155		
	45		C	5SJ4 145-7HG41		012	C	5SJ4 145-8HG41		1	1	012	0,155		
	50		C	5SJ4 150-7HG41		012	C	5SJ4 150-8HG41		1	1	012	0,155		
	60		C	5SJ4 160-7HG41		012	C	5SJ4 160-8HG41		1	1	012	0,155		
63		C	5SJ4 163-7HG41		012	C	5SJ4 163-8HG41		1	1	012	0,155			

¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

	Rated current	MW ¹⁾	DT	Characteristic C			PG	DT	Characteristic D			PU	PS ^{2)/} P. unit	PG	Weight per PU approx
	<i>I_n</i>			Order No.	Price per PU			Order No.	Price per PU						
	A														
	Circuit breakers											Unit(s)	Unit(s)		kg
	2P, 240 V AC														
	0.3	2	C	5SJ4 214-7HG41		012	C	5SJ4 214-8HG41		1	1	012	0,310		
	0.5		C	5SJ4 205-7HG41		012	C	5SJ4 205-8HG41		1	1	012	0,310		
	1		C	5SJ4 201-7HG41		012	C	5SJ4 201-8HG41		1	1	012	0,310		
	1.6		C	5SJ4 215-7HG41		012	C	5SJ4 215-8HG41		1	1	012	0,310		
	2		C	5SJ4 202-7HG41		012	C	5SJ4 202-8HG41		1	1	012	0,310		
	3		C	5SJ4 203-7HG41		012	C	5SJ4 203-8HG41		1	1	012	0,310		
	4		C	5SJ4 204-7HG41		012	C	5SJ4 204-8HG41		1	1	012	0,310		
	5		C	5SJ4 211-7HG41		012	C	5SJ4 211-8HG41		1	1	012	0,310		
	6		C	5SJ4 206-7HG41		012	C	5SJ4 206-8HG41		1	1	012	0,310		
	8		C	5SJ4 208-7HG41		012	C	5SJ4 208-8HG41		1	1	012	0,310		
	10		C	5SJ4 210-7HG41		012	C	5SJ4 210-8HG41		1	1	012	0,310		
	13		C	5SJ4 213-7HG41		012	C	5SJ4 213-8HG41		1	1	012	0,310		
	15		C	5SJ4 218-7HG41		012	C	5SJ4 218-8HG41		1	1	012	0,310		
	16		C	5SJ4 216-7HG41		012	C	5SJ4 216-8HG41		1	1	012	0,310		
	20		C	5SJ4 220-7HG41		012	C	5SJ4 220-8HG41		1	1	012	0,310		
	25		C	5SJ4 225-7HG41		012	C	5SJ4 225-8HG41		1	1	012	0,310		
	30		C	5SJ4 230-7HG41		012	C	5SJ4 230-8HG41		1	1	012	0,310		
	32		C	5SJ4 232-7HG41		012	C	5SJ4 232-8HG41		1	1	012	0,310		
	35		C	5SJ4 235-7HG41		012	C	5SJ4 235-8HG41		1	1	012	0,310		
	40		C	5SJ4 240-7HG41		012	C	5SJ4 240-8HG41		1	1	012	0,310		
	45		C	5SJ4 245-7HG41		012	C	5SJ4 245-8HG41		1	1	012	0,310		
	50		C	5SJ4 250-7HG41		012	C	5SJ4 250-8HG41		1	1	012	0,310		
60		C	5SJ4 260-7HG41		012	C	5SJ4 260-8HG41		1	1	012	0,310			
63		C	5SJ4 263-7HG41		012	C	5SJ4 263-8HG41		1	1	012	0,310			
	Circuit breakers														
	3P, 240 V AC														
	0.3	3	C	5SJ4 314-7HG41		012	C	5SJ4 314-8HG41		1	1	012	0,465		
	0.5		C	5SJ4 305-7HG41		012	C	5SJ4 305-8HG41		1	1	012	0,465		
	1		C	5SJ4 301-7HG41		012	C	5SJ4 301-8HG41		1	1	012	0,465		
	1.6		C	5SJ4 315-7HG41		012	C	5SJ4 315-8HG41		1	1	012	0,465		
	2		C	5SJ4 302-7HG41		012	C	5SJ4 302-8HG41		1	1	012	0,465		
	3		C	5SJ4 303-7HG41		012	C	5SJ4 303-8HG41		1	1	012	0,465		
	4		C	5SJ4 304-7HG41		012	C	5SJ4 304-8HG41		1	1	012	0,465		
	5		C	5SJ4 311-7HG41		012	C	5SJ4 311-8HG41		1	1	012	0,465		
	6		C	5SJ4 306-7HG41		012	C	5SJ4 306-8HG41		1	1	012	0,465		
	8		C	5SJ4 308-7HG41		012	C	5SJ4 308-8HG41		1	1	012	0,465		
	10		C	5SJ4 310-7HG41		012	C	5SJ4 310-8HG41		1	1	012	0,465		
	13		C	5SJ4 313-7HG41		012	C	5SJ4 313-8HG41		1	1	012	0,465		
	15		C	5SJ4 318-7HG41		012	C	5SJ4 318-8HG41		1	1	012	0,465		
	16		C	5SJ4 316-7HG41		012	C	5SJ4 316-8HG41		1	1	012	0,465		
	20		C	5SJ4 320-7HG41		012	C	5SJ4 320-8HG41		1	1	012	0,465		
	25		C	5SJ4 325-7HG41		012	C	5SJ4 325-8HG41		1	1	012	0,465		
	30		C	5SJ4 330-7HG41		012	C	5SJ4 330-8HG41		1	1	012	0,465		
	32		C	5SJ4 332-7HG41		012	C	5SJ4 332-8HG41		1	1	012	0,465		
	35		C	5SJ4 335-7HG41		012	C	5SJ4 335-8HG41		1	1	012	0,465		
	40		C	5SJ4 340-7HG41		012	C	5SJ4 340-8HG41		1	1	012	0,465		
	45		C	5SJ4 345-7HG41		012	C	5SJ4 345-8HG41		1	1	012	0,465		
	50		C	5SJ4 350-7HG41		012	C	5SJ4 350-8HG41		1	1	012	0,465		
60		C	5SJ4 360-7HG41		012	C	5SJ4 360-8HG41		1	1	012	0,465			
63		C	5SJ4 363-7HG41		012	C	5SJ4 363-8HG41		1	1	012	0,465			

¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

	Rated current	MW ¹⁾	DT	Characteristic C			PG	DT	Characteristic D			PU	PS ^{2)/} P. unit	PG	Weight per PU approx
	<i>I_n</i>			Order No.	Price per PU			Order No.	Price per PU						
	A														
	Circuit breakers 1P, 480Y/277 V AC										Unit(s)	Unit(s)		kg	
	0.3	1	C	5SJ4 114-7HG42		012	C	5SJ4 114-8HG42		1	1	012	0,155		
	0.5		C	5SJ4 105-7HG42		012	C	5SJ4 105-8HG42		1	1	012	0,155		
	1		C	5SJ4 101-7HG42		012	C	5SJ4 101-8HG42		1	1	012	0,155		
	1.6		C	5SJ4 115-7HG42		012	C	5SJ4 115-8HG42		1	1	012	0,155		
	2		C	5SJ4 102-7HG42		012	C	5SJ4 102-8HG42		1	1	012	0,155		
	3		C	5SJ4 103-7HG42		012	C	5SJ4 103-8HG42		1	1	012	0,155		
	4		C	5SJ4 104-7HG42		012	C	5SJ4 104-8HG42		1	1	012	0,155		
	5		C	5SJ4 111-7HG42		012	C	5SJ4 111-8HG42		1	1	012	0,155		
	6		C	5SJ4 106-7HG42		012	C	5SJ4 106-8HG42		1	1	012	0,155		
	8		C	5SJ4 108-7HG42		012	C	5SJ4 108-8HG42		1	1	012	0,155		
	10		C	5SJ4 110-7HG42		012	C	5SJ4 110-8HG42		1	1	012	0,155		
	13		C	5SJ4 113-7HG42		012	C	5SJ4 113-8HG42		1	1	012	0,155		
	15		C	5SJ4 118-7HG42		012	C	5SJ4 118-8HG42		1	1	012	0,155		
	16		C	5SJ4 116-7HG42		012	C	5SJ4 116-8HG42		1	1	012	0,155		
	20		C	5SJ4 120-7HG42		012	C	5SJ4 120-8HG42		1	1	012	0,155		
	25		C	5SJ4 125-7HG42		012	C	5SJ4 125-8HG42		1	1	012	0,155		
	30		C	5SJ4 130-7HG42		012	C	5SJ4 130-8HG42		1	1	012	0,155		
	32		C	5SJ4 132-7HG42		012	C	5SJ4 132-8HG42		1	1	012	0,155		
	35		C	5SJ4 135-7HG42		012	--	--		1	1		0,155		
40		C	5SJ4 140-7HG42		012	--	--		1	1		0,155			
	Circuit breakers 2P, 480Y/277 V AC														
	0.3	2	C	5SJ4 214-7HG42		012	C	5SJ4 214-8HG42		1	1	012	0,310		
	0.5		C	5SJ4 205-7HG42		012	C	5SJ4 205-8HG42		1	1	012	0,310		
	1		C	5SJ4 201-7HG42		012	C	5SJ4 201-8HG42		1	1	012	0,310		
	1.6		C	5SJ4 215-7HG42		012	C	5SJ4 215-8HG42		1	1	012	0,310		
	2		C	5SJ4 202-7HG42		012	C	5SJ4 202-8HG42		1	1	012	0,310		
	3		C	5SJ4 203-7HG42		012	C	5SJ4 203-8HG42		1	1	012	0,310		
	4		C	5SJ4 204-7HG42		012	C	5SJ4 204-8HG42		1	1	012	0,310		
	5		C	5SJ4 211-7HG42		012	C	5SJ4 211-8HG42		1	1	012	0,310		
	6		C	5SJ4 206-7HG42		012	C	5SJ4 206-8HG42		1	1	012	0,310		
	8		C	5SJ4 208-7HG42		012	C	5SJ4 208-8HG42		1	1	012	0,310		
	10		C	5SJ4 210-7HG42		012	C	5SJ4 210-8HG42		1	1	012	0,310		
	13		C	5SJ4 213-7HG42		012	C	5SJ4 213-8HG42		1	1	012	0,310		
	15		C	5SJ4 218-7HG42		012	C	5SJ4 218-8HG42		1	1	012	0,310		
	16		C	5SJ4 216-7HG42		012	C	5SJ4 216-8HG42		1	1	012	0,310		
	20		C	5SJ4 220-7HG42		012	C	5SJ4 220-8HG42		1	1	012	0,310		
	25		C	5SJ4 225-7HG42		012	C	5SJ4 225-8HG42		1	1	012	0,310		
	30		C	5SJ4 230-7HG42		012	C	5SJ4 230-8HG42		1	1	012	0,310		
	32		C	5SJ4 232-7HG42		012	C	5SJ4 232-8HG42		1	1	012	0,310		
	35		C	5SJ4 235-7HG42		012	--	--		1	1		0,310		
40		C	5SJ4 240-7HG42		012	--	--		1	1		0,310			

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

2) You can order this quantity or a multiple thereof.

	Rated current	MW ¹⁾	DT	Characteristic C		PG	DT	Characteristic D		PU	PS ^{2)/} P. unit	PG	Weight per PU approx
	<i>I_n</i>			Order No.	Price per PU			Order No.	Price per PU				
	A												
Circuit breakers 3P, 480Y/277 V AC													
	0.3	3	C	5SJ4 314-7HG42		012	C	5SJ4 314-8HG42		1	1	012	0,465
	0.5		C	5SJ4 305-7HG42		012	C	5SJ4 305-8HG42		1	1	012	0,465
	1		C	5SJ4 301-7HG42		012	C	5SJ4 301-8HG42		1	1	012	0,465
	1.6		C	5SJ4 315-7HG42		012	C	5SJ4 315-8HG42		1	1	012	0,465
	2		C	5SJ4 302-7HG42		012	C	5SJ4 302-8HG42		1	1	012	0,465
	3		C	5SJ4 303-7HG42		012	C	5SJ4 303-8HG42		1	1	012	0,465
	4		C	5SJ4 304-7HG42		012	C	5SJ4 304-8HG42		1	1	012	0,465
	5		C	5SJ4 311-7HG42		012	C	5SJ4 311-8HG42		1	1	012	0,465
	6		C	5SJ4 306-7HG42		012	C	5SJ4 306-8HG42		1	1	012	0,465
	8		C	5SJ4 308-7HG42		012	C	5SJ4 308-8HG42		1	1	012	0,465
	10		C	5SJ4 310-7HG42		012	C	5SJ4 310-8HG42		1	1	012	0,465
	13		C	5SJ4 313-7HG42		012	C	5SJ4 313-8HG42		1	1	012	0,465
	15		C	5SJ4 318-7HG42		012	C	5SJ4 318-8HG42		1	1	012	0,465
	16		C	5SJ4 316-7HG42		012	C	5SJ4 316-8HG42		1	1	012	0,465
	20		C	5SJ4 320-7HG42		012	C	5SJ4 320-8HG42		1	1	012	0,465
	25		C	5SJ4 325-7HG42		012	C	5SJ4 325-8HG42		1	1	012	0,465
	30		C	5SJ4 330-7HG42		012	C	5SJ4 330-8HG42		1	1	012	0,465
	32		C	5SJ4 332-7HG42		012	C	5SJ4 332-8HG42		1	1	012	0,465
	35		C	5SJ4 335-7HG42		012	--	--		1	1		0,465
	40		C	5SJ4 340-7HG42		012	--	--		1	1		0,465

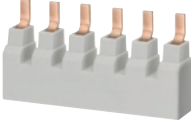
¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

			Length	DT	Order No.	Price per PU	PU	PS ²⁾ / P. unit	PG	Weight per PU approx
	MW ¹⁾		mm				Unit(s)	Unit(s)		kg
	Auxiliary switches (AS) to UL 489									
	1 NO + 1 NC	0.5		▶	5ST3 010-0HG		1	1	1	0,071
	2 NO			▶	5ST3 011-0HG		1	1	1	0,050
	2 NC			▶	5ST3 012-0HG		1	1	1	0,050
	Fault signal contacts (FC) to UL 489									
	1 NO + 1 NC	0.5		▶	5ST3 020-0HG		1	1	1	0,050
	2 NO			▶	5ST3 021-0HG		1	1	1	0,050
	2 NC			▶	5ST3 022-0HG		1	1	1	0,050
	Shunt trips (ST) to UL 489									
	110 ... 480 V AC	1		▶	5ST3 030-0HG		1	1	1	0,098
	24 ... 60 V AC/DC			▶	5ST3 031-0HG		1	1	1	0,098

¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

	Pin spacing	Length	DT	Order No.	Price per PU	PU	PS ²⁾ / P. unit	PG	Weight per PU approx
	MW ¹⁾	mm				Unit(s)	Unit(s)		kg
Busbars to UL 489 for use with 5SJ4 ...-HG.. fixed lengths, cannot be cut³⁾									
	Single-phase								
	For 6 MCB 1P	1	100	A	5ST3 663-0HG	1	10	012	0,056
	For 12 MCB 1P	1	205	A	5ST3 663-1HG	1	10	012	0,112
	For 18 MCB 1P	1	310	A	5ST3 663-2HG	1	10	012	0,170
	Two-phase								
	For 3 MCB 2P	1	100	A	5ST3 664-0HG	1	10	012	0,065
	For 6 MCB 2P	1	205	A	5ST3 664-1HG	1	10	012	0,137
	For 9 MCB 2P	1	310	A	5ST3 664-2HG	1	10	012	0,211
	Three-phase								
	For 2 MCBs 3P	1	100	A	5ST3 665-0HG	1	10	012	0,067
	For 4 MCBs 3P	1	205	A	5ST3 665-1HG	1	10	012	0,155
	For 6 MCBs 3P	1	310	A	5ST3 665-2HG	1	10	012	0,243
Connection terminals to UL 489 for use only with 5SJ4 ...-HG..									
	Infeed - MCBs								
	35 mm ² (4 AWG)			A	5ST3 666-0HG	1	10	012	0,033
	Infeed - busbars								
	50 mm ² (1 AWG)			A	5ST3 666-2HG	1	10	012	0,034
Touch protection covers for busbars to UL 489³⁾									
	3 x 1 pin			A	5ST3 666-1HG	1	10	012	0,003

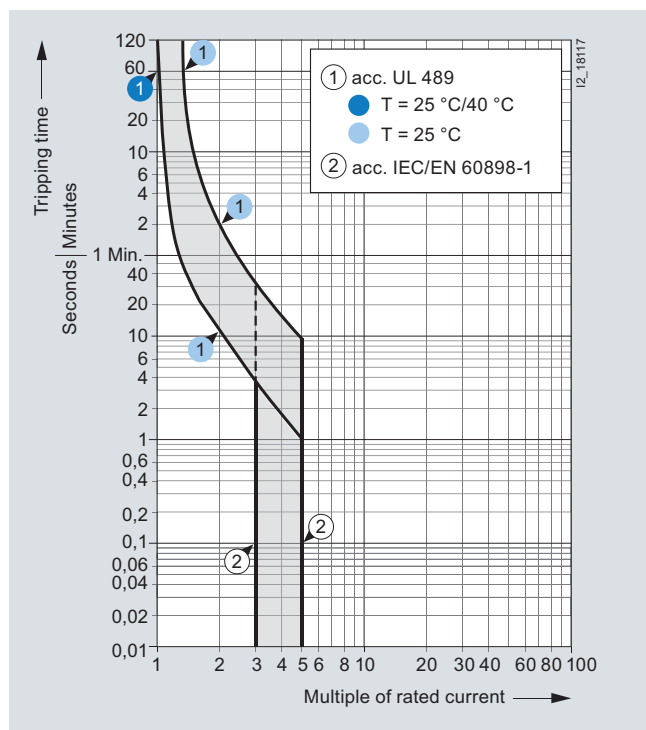
¹⁾ 1 MW (module width) = 18 mm.

²⁾ You can order this quantity or a multiple thereof.

³⁾ All unused busbar pins must be covered with touch protection cover 5ST3 666-1HG.

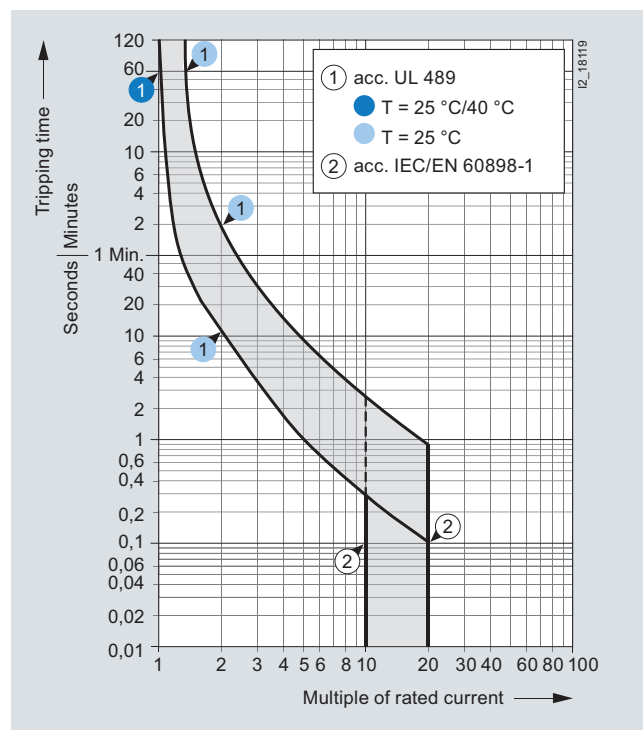
Characteristic curves

Tripping characteristics according to IEC/EN 60898 and UL 489/CSA 22.2 No. 5-02



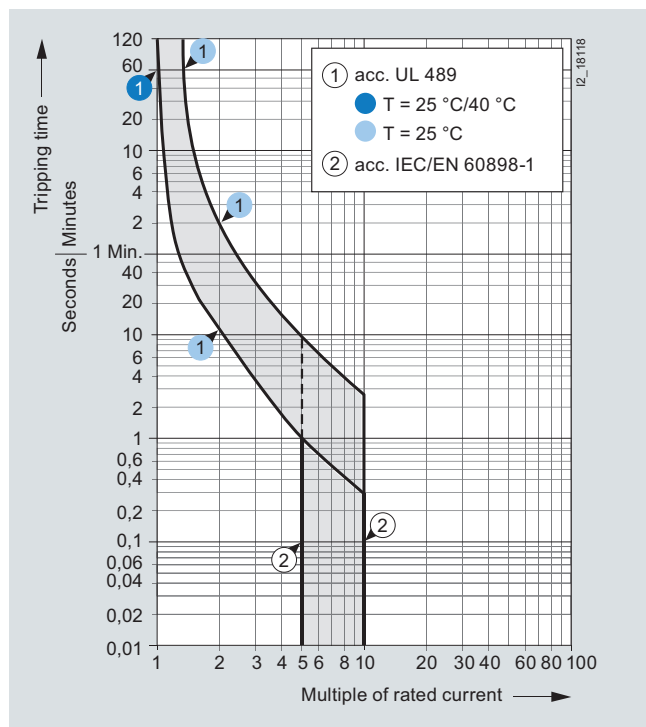
Tripping characteristic B

For universal use in socket outlet and lighting circuits.



Tripping characteristic D

For electrical circuits with strong pulse-generating equipment, such as transformers or solenoid valves.

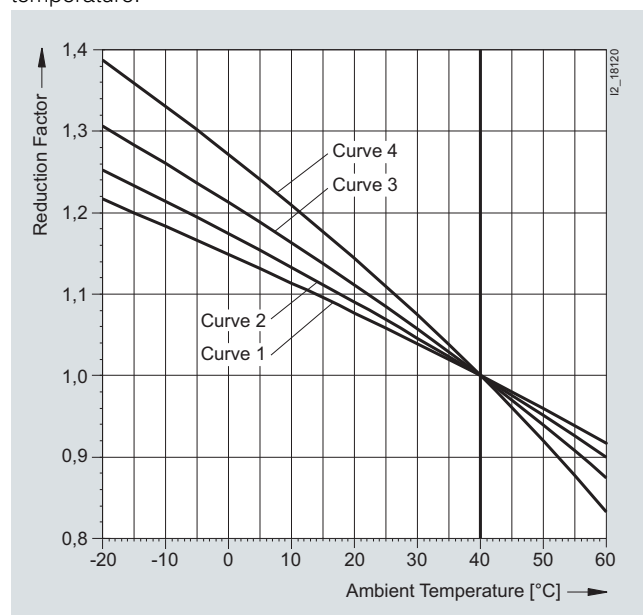


Tripping characteristic C

Particularly advantageous in lamp and motor circuits with higher starting currents.

Correction factors for rated current at different ambient temperatures

Dependence of permissible continuous load current on ambient temperature.



Curve for correction factor (for curves, see the diagram on page 10)

Rated current (A)	0.3	0.5	1	1.6	2	3	4	5	6	8	10	13	15	16	20	25	30	32	35	40	45	50	60	63
No. of poles	valid curve for correction factor																							
1	4	4	4	4	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	3	2
2	4	4	3	3	3	3	2	2	2	2	3	3	3	2	2	2	2	2	2	2	1	2	2	1
3	4	4	3	3	3	3	2	2	2	2	3	3	3	2	2	2	2	2	2	2	1	1	1	1

Current Ratings at Ambient Temperatures Other than 40°C

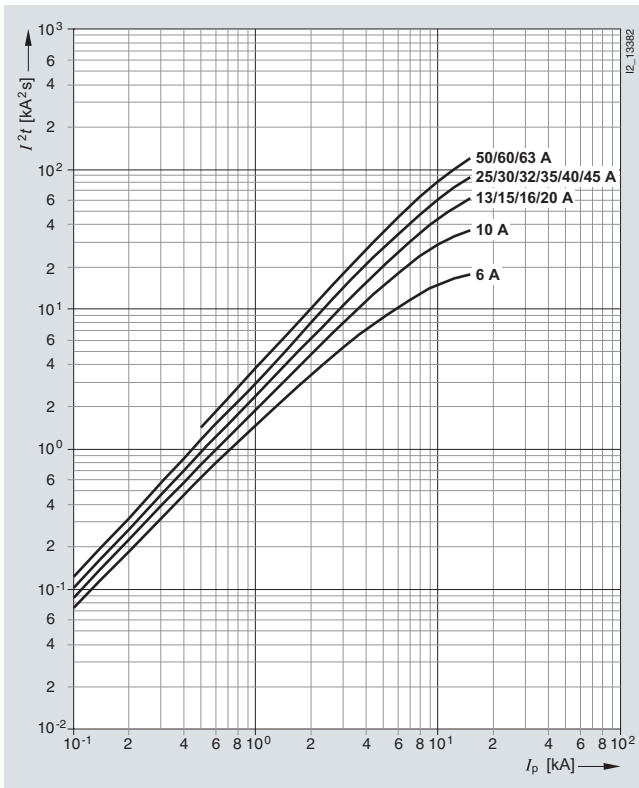
Use the following table to determine the CBs I_n current rating for ambient temperatures other than 40 °C.

Device marked current rating at 40 °C		I_n (A) at different ambient temperatures						
Current rating (A)	No. of poles	15 °C	20 °C	25 °C	30 °C	40 °C	50 °C	55 °C
0.3	1/2/3	0.35	0.34	0.33	0.32	0.30	0.28	0.26
0.5	1/2/3	0.59	0.57	0.55	0.54	0.50	0.46	0.44
1	1	1.2	1.1	1.1	1.1	1.0	0.9	0.9
	2/3	1.1	1.1	1.1	1.1	1.0	0.9	0.9
1.6	1	1.9	1.8	1.8	1.7	1.6	1.5	1.4
	2/3	1.8	1.8	1.7	1.7	1.6	1.5	1.5
2	1/2/3	2.3	2.2	2.2	2.1	2.0	1.9	1.8
3	1/2/3	3.4	3.3	3.3	3.2	3.0	2.8	2.7
4	1/2/3	4.5	4.4	4.3	4.2	4.0	3.8	3.7
5	1/2/3	5.6	5.5	5.3	5.2	5.0	4.8	4.6
6	1/2/3	6.7	6.5	6.4	6.3	6.0	5.7	5.6
8	1/2/3	8.9	8.7	8.6	8.4	8.0	7.6	7.4
10	1/2/3	11.4	11.1	10.8	10.6	10.0	9.4	9.1
13	1/2/3	14.8	14.4	14.1	13.7	13.0	12.2	11.8
15	1/2/3	17.1	16.7	16.3	15.9	15.0	14.1	13.6
16	1	18.2	17.8	17.4	16.9	16.0	15.0	14.5
	2/3	17.8	17.5	17.1	16.7	16.0	15.2	14.8
20	1	22.8	22.2	21.7	21.1	20.0	18.8	18.1
	2/3	22.3	21.8	21.4	20.9	20.0	19.0	18.5
25	1	28.4	27.8	27.1	26.4	25.0	23.5	22.7
	2/3	27.8	27.3	26.7	26.2	25.0	23.8	23.1
30	1	34.1	33.3	32.5	31.7	30.0	28.2	27.2
	2/3	33.4	32.7	32.1	31.4	30.0	28.5	27.8
32	1	36.4	35.6	34.7	33.8	32.0	30.1	29.0
	2/3	35.6	34.9	34.2	33.5	32.0	30.4	29.6
35	1	39.8	38.9	38.0	37.0	35.0	32.9	31.8
	2/3	38.9	38.2	37.4	36.6	35.0	33.3	32.4
40	1	45.5	44.5	43.4	42.3	40.0	37.6	36.3
	2/3	44.5	43.6	42.8	41.9	40.0	38.0	37.0
45	1	50.1	49.1	48.1	47.1	45.0	42.8	41.7
	2/3	49.3	48.5	47.6	46.8	45.0	43.2	42.2
50	1/2	55.6	54.6	53.5	52.3	50.0	47.6	46.3
	3	54.8	53.9	52.9	52.0	50.0	48.0	46.9
60	1	68.3	66.7	65.1	63.4	60.0	56.4	54.4
	2	66.8	65.5	64.1	62.8	60.0	57.1	55.5
	3	65.7	64.6	63.5	62.4	60.0	57.5	56.3
63	1	70.1	68.7	67.3	65.9	63.0	59.9	58.3
	2/3	69.0	67.9	66.7	65.5	63.0	60.4	59.1

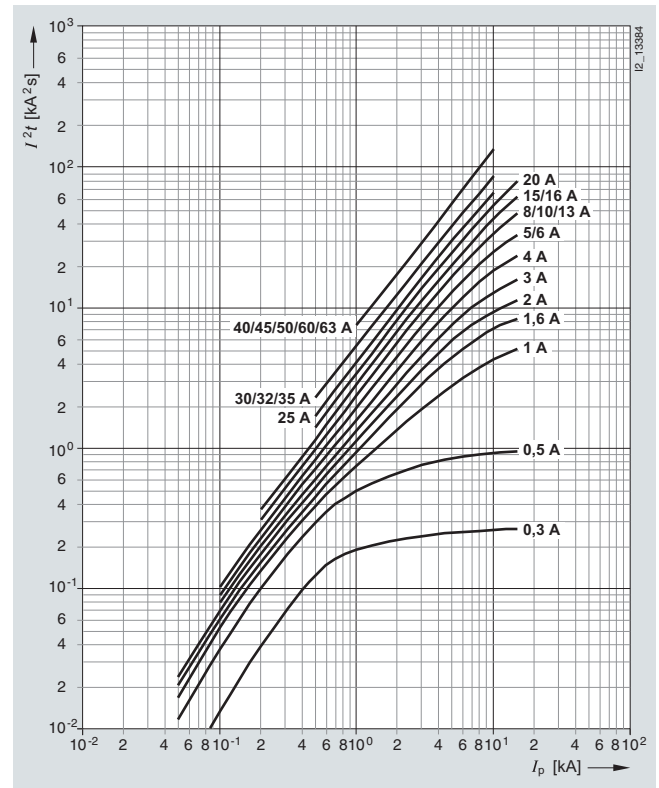
Characteristic curves 5SJ4 . . . - HG40, 5SJ4 . . . - HG41, 5SJ4 . . . - HG42

Let-through I^2t values

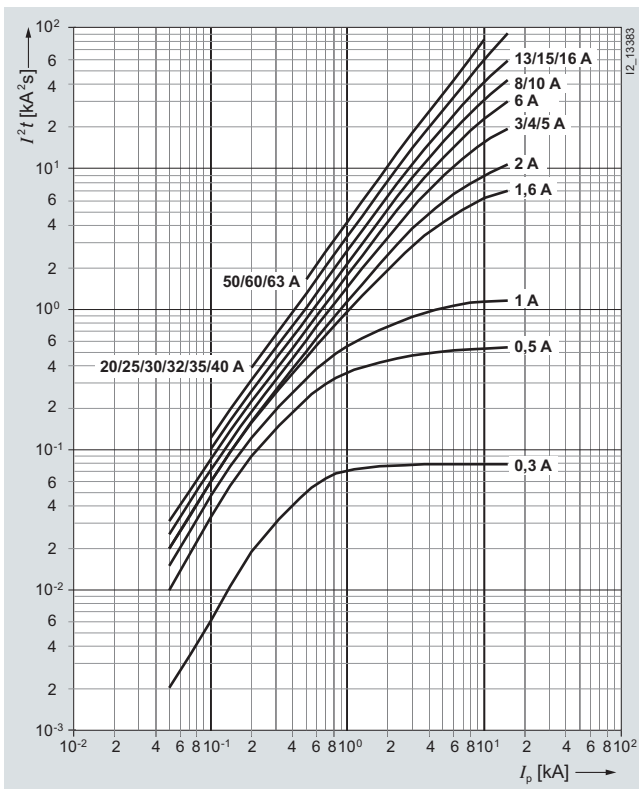
Characteristic B



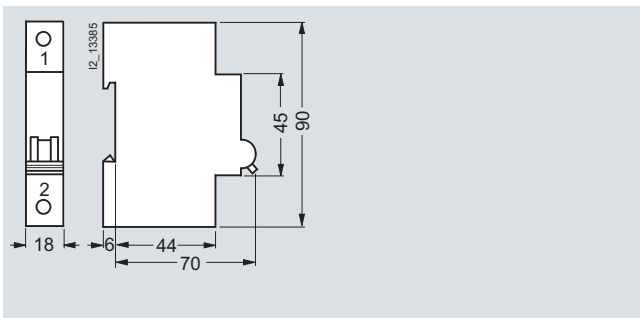
Characteristic D



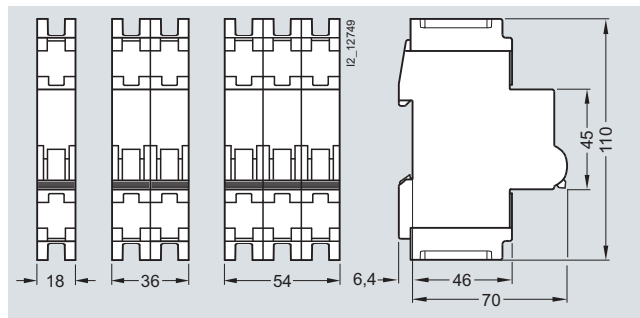
Characteristic C



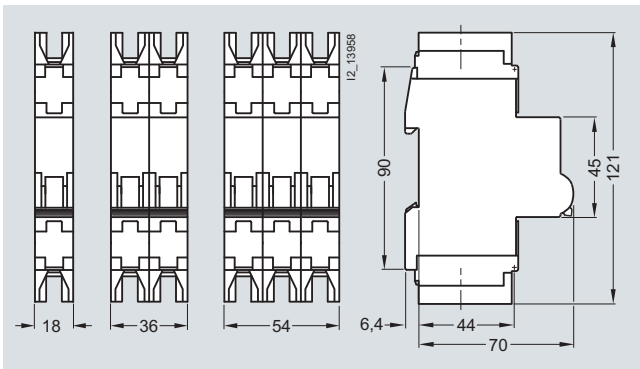
Dimensional drawings



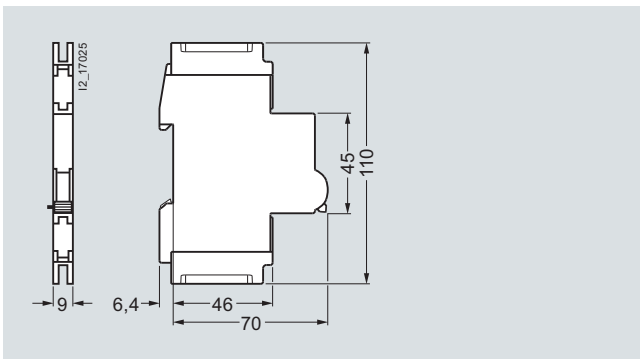
5SJ4 ...-HG40



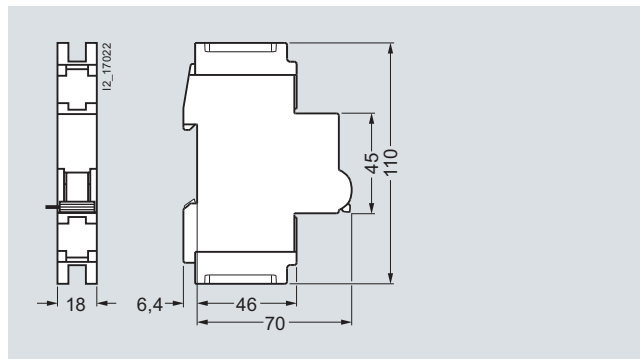
5SJ4 ...-HG41



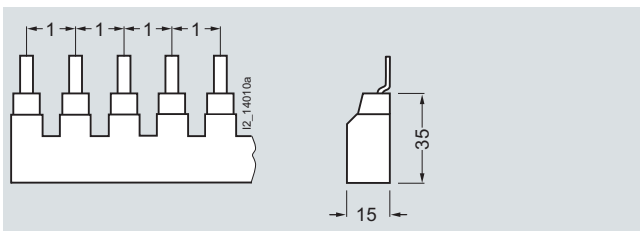
5SJ4 ...-HG42



5ST3 010-0HG 5ST3 011-0HG 5ST3 012-0HG
5ST3 020-0HG 5ST3 021-0HG 5ST3 022-0HG

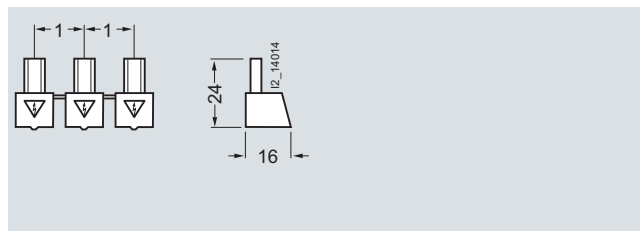


5ST3 030-0HG
5ST3 031-0HG



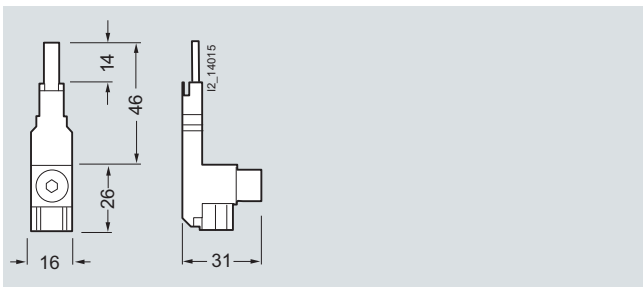
5ST3 663-0HG 5ST3 664-0HG 5ST3 665-0HG
5ST3 663-1HG 5ST3 664-1HG 5ST3 665-1HG
5ST3 663-2HG 5ST3 664-2HG 5ST3 665-2HG

Pin spacing in MW (module width; 1 MW = 18 mm).
Dimensions of side view in mm (approx.).

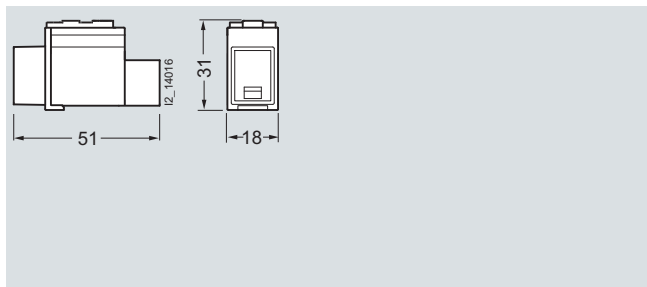


5ST3 666-1HG

Pin spacing in MW (module width; 1 MW = 18 mm).
Dimensions of side view in mm (approx.).



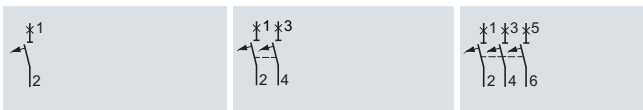
5ST3 666-0HG



5ST3 666-2HG

Schematics

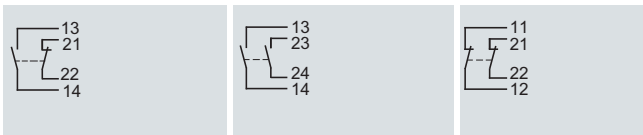
Circuit breakers



5SJ4 ...-HG
1P

2P

3P

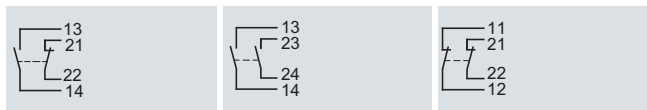


Fault signal contacts (FC)
5ST3 020-0HG

5ST3 021-0HG

5ST3 022-0HG

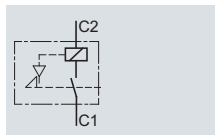
Additional components



Auxiliary switches (AS)
5ST3 010-0HG

5ST3 011-0HG

5ST3 012-0HG



Shunt trips (ST)
5ST3 030-0HG
5ST3 031-0HG

Configuration

Rated breaking capacity according to UL 489

Designation	Characteristic	Current A	Rated breaking capacity (operational voltage 240 V AC) kA AC ¹⁾	Rated breaking capacity (operational voltage 480Y/277 V AC) kA AC ¹⁾
5SJ4 ...-HG40	B	6 ... 63	14	--
	C	0.3 ... 40	14	--
	C	45 ... 63	10	--
	D	0.3 ... 20	14	--
	D	25 ... 63	10	--
5SJ4 ...-HG41	C	0.3 ... 40	14	--
	C	45 ... 63	10	--
	D	0.3 ... 20	14	--
	D	25 ... 63	10	--
5SJ4 ...-HG42	C	0.3 ... 40	14	10
	D	0.3 ... 20	14	10
	D	25 ... 32	10	10

¹⁾ Type HSJ: 14 kA/type NSJ: 10 kA (additional type designation in the USA).

Internal resistances and power losses per pole, loads with I_n

Rated current I_n A	Characteristic B		Characteristic C		Characteristic D	
	R_l mΩ	P_v W	R_l mΩ	P_v W	R_l mΩ	P_v W
0.3	--	--	12900	1.2	12600	1.1
0.5	--	--	4900	1.2	4600	1.2
1	--	--	1650	1.7	1480	1.5
1.6	--	--	620	1.6	570	1.5
2	--	--	440	1.8	435	1.8
3	--	--	197	1.8	190	1.7
4	--	--	115	1.8	100	1.6
5	--	--	115	2.9	100	2.5
6	85	3.1	74	2.7	73	2.6
8	--	--	40	2.6	39	2.5
10	16.5	1.7	13.5	1.4	11.9	1.2
13	11.7	2.0	10.2	1.7	10.2	1.7
15	8.5	1.9	7.8	1.8	7.7	1.7
16	8.5	2.2	7.8	2.0	7.7	2.0
20	6.7	2.7	5.5	2.2	5.5	2.2
25	4.3	2.7	4.2	2.6	4.2	2.6
30	3.4	3.1	3.5	3.2	3.0	2.7
32	3.4	3.5	3.5	3.6	3.0	3.1
35	2.8	3.4	2.8	3.4	2.7	3.3
40	2.8	4.5	2.8	4.5	2.5	4.0
45	2.8	5.7	2.7	5.5	2.5	5.1
50	2.1	5.3	2.1	5.0	2.0	5.0
60	1.7	6.1	1.7	6.1	1.7	6.1
63	1.7	6.7	1.7	6.7	1.7	6.7

