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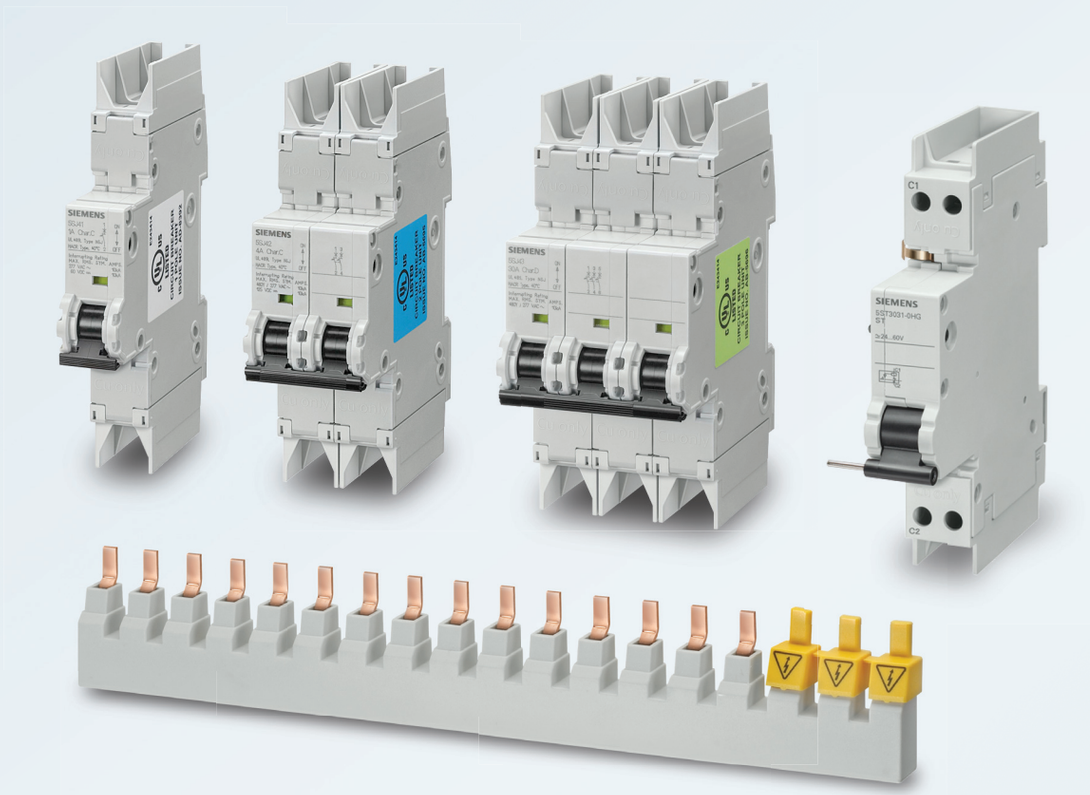


Product Guide

5SJ4...-HG4 Miniature Circuit Breakers

for North American and International applications

usa.siemens.com/5SJ

Table of contents

Certifications and features

Certifications and Standards

- UL Listed
- UL 489
- CSA 22.2 No. 5-02
- HACR
- IEC/EN 60 898, IEC/EN 60 947-2

Features – UL 489

- Suitable for branch circuit and feeder protection applications
  - **-.HG40**: up to 240 VAC, and 60 VDC (1-pole);
  - **-.HG41**: up to 240 VAC, and 60 VDC (1-pole); and up to 240 VAC, and 125 VDC (2- and 3-pole)
  - **-.HG42**: up to 277 VAC, and 60 VDC (1-pole); and, up to 480/277 VAC and 125 VDC (2- and 3-pole)
- cULus: UL listed and certified to Canadian Standards. File E24314
- HACR rated
- Thermal magnetic protection
- High interrupting rating:
  - VAC: up to 14,000 (Type HSJ) or 10,000 (Type NSJ) Maximum RMS symmetrical amps depending on the device selected
  - VDC: up to 10,000 amps (Type HSJ and Type NSJ) at 60/125 VDC
- 40°C (104°F) calibration base (industrial applications)
- Can be used for "field wiring" applications, AWG 14 to AWG 4, Copper (Cu) only
  - **-.HG40**: suitable for "same polarity" connections only
  - **-.HG41** and **-.HG42**: suitable for "reverse feed" application No "same polarity" restrictions

5SJ4 miniature circuit breakers are also CE marked according to IEC/EN 60 898 and IEC/EN 60 947-2 making them suitable for use in international applications.

Features – EN/IEC 60 898, EN/IEC 60 947-2

- CE marked
- 30°C (86°F) calibration base
- Meets trip characteristics
  - -.HG40: B, C and D
  - -.HG41 and -.HG42: C and D
- Rated voltage
  - VAC/DC: 24 minimum
  - VDC/pole: 60 maximum
  - VAC: 440 maximum
- High interrupting rating (I_{cn}) to IEC 60 898-1 of up to 10,000 A AC
- High interrupting rating (I_{cn}) to IEC 60 898-1 of up to 15,000 A AC

Features – Common

- Available with
  - **-.HG40**: 1-pole
  - **-.HG41** and **-HG42**: 1-, 2- or 3-poles
- Available from
  - **-.HG40** and **-.HG41**: 0.3 to 63 amps depending on the device selected
  - **-.HG42**: 0.3 to 40 A (C Characteristic); 0.3 to 32A (D characteristic)
- Visible indicator for ON and OFF/Trip
- Finger-safe design
- Standard DIN rail mounting (35 mm)
- Identical wire screw connections on line and load sides
- CFC and silicone free

Description

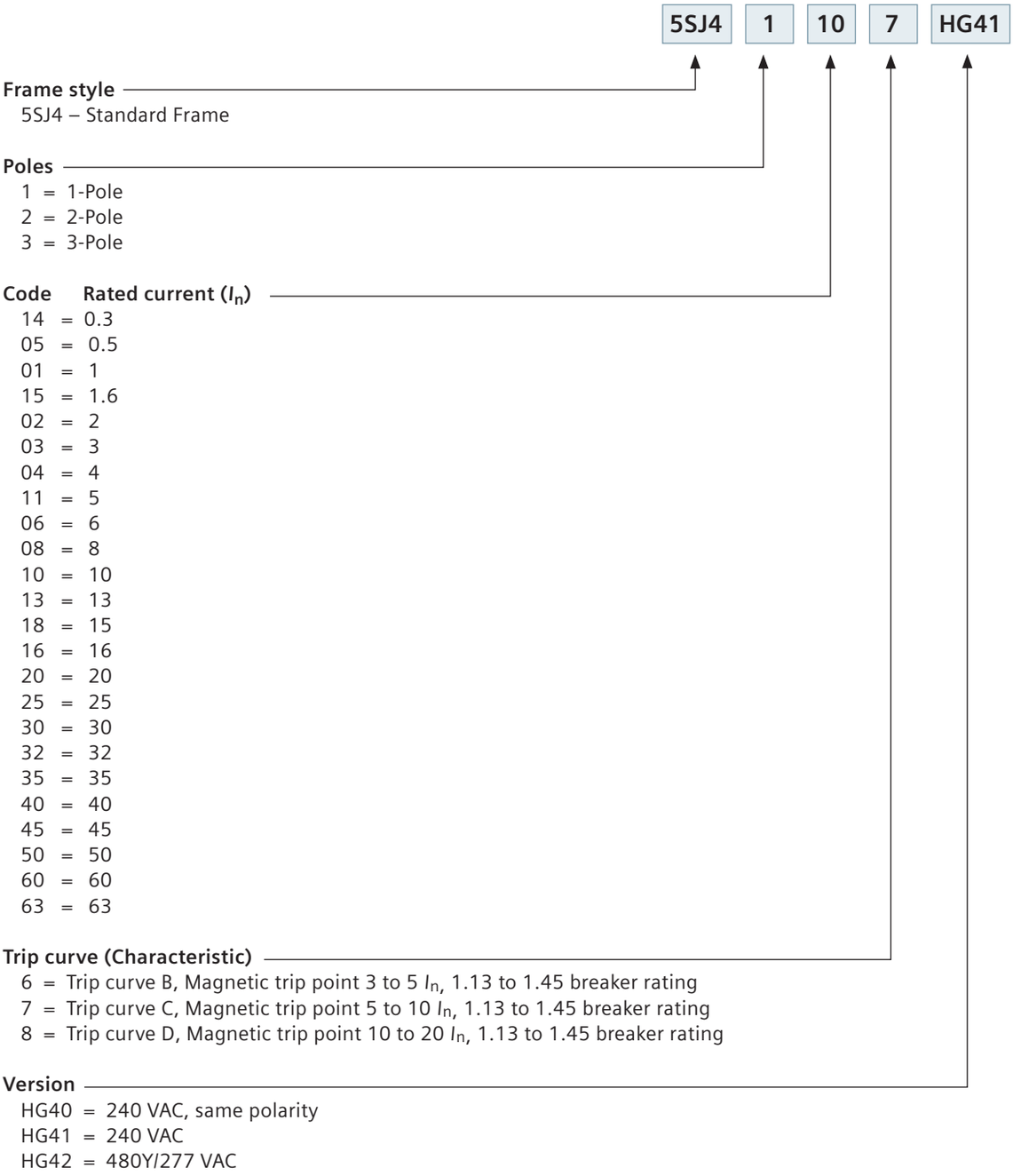
5SJ4...-.HG4. Miniature Circuit Breakers (mCB) are 1-, 2- and 3-pole thermal / magnetic overcurrent protection devices that are intended for general industrial use such as Branch Circuit and Feeder Protection. They are UL Listed (File No. E243414, Volume 1, Section 1) in accordance with UL 489, 11th edition, "Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures" and Certified to Canadian Standards (CSA 22.2 No. 5.02). They are provided with a manual means for opening the circuit and they are not ambient compensated.

5SJ4...-.HG4. Miniature Circuit Breakers are rated

- **-.HG40:** 240 VAC max. and 60 VDC max. for 1-pole devices.
- **-.HG41:** 240 VAC max. and 60 VDC max. for 1-pole devices; 240 VAC max. and 125 VDC max. for 2- and 3-pole devices.
- **-.HG42:** 277 VAC max. and 60 VDC max. for 1-pole devices; 480Y/277 VAC max. and 125 VDC max. for 2- and 3-pole devices.
- The load current ranges form 0.3 to 63 A depending on the device selected with interrupting ratings stated in the following table for 1-, 2- and 3-pole devices.

Description	**Characteristic**	**Current** A	**Rated switching capacity** (operational voltage 230 V AC) kA AC	**Rated switching capacity** (operational voltage 480Y/277 V AC) kA AC
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

Circuit breaker catalog number nomenclature



Product selection – 5SJ41..-.HG40

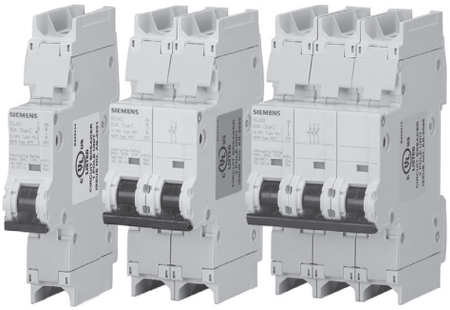
Type HSJ: Interrupting rating
240 VAC: 14,000 maximum RMS symmetrical amps
60 VDC: 10,000 amps

Type NSJ: Interrupting rating
240 VAC: 10,000 maximum RMS symmetrical amps
60 VDC: (1-pole) / 125 VDC (2- & 3-pole)
10,000 amps

TYPE →		**HSJ**	**HSJ**	**NSJ**	**HSJ**	**NSJ**
No. of Poles	I_n (A)	Characteristic B Order No.	Characteristic C Order No.	Characteristic C Order No.	Characteristic D Order No.	Characteristic D Order No.
1	0 .3	—	5SJ4114-7HG40*		5SJ4114-8HG40*	
1	0.5	—	5SJ4105-7HG40		5SJ4105-8HG40	
1	1	—	5SJ4101-7HG40		5SJ4101-8HG40	
1	1.6	—	5SJ4115-7HG40		5SJ4115-8HG40	
1	2	—	5SJ4102-7HG40		5SJ4102-8HG40	
1	3	—	5SJ4103-7HG40		5SJ4103-8HG40	
1	4	—	5SJ4104-7HG40		5SJ4104-8HG40	
1	5	—	5SJ4111-7HG40		5SJ4111-8HG40	
1	6	5SJ4106-6HG40	5SJ4106-7HG40		5SJ4106-8HG40	
1	8	—	5SJ4108-7HG40		5SJ4108-8HG40	
1	10	5SJ4110-6HG40	5SJ4110-7HG40		5SJ4110-8HG40	
1	13	5SJ4113-6HG40*	5SJ4113-7HG40		5SJ4113-8HG40 *	
1	15	5SJ4118-6HG40	5SJ4118-7HG40		5SJ4118-8HG40	
1	16	5SJ4116-6HG40	5SJ4116-7HG40		5SJ4116-8HG40	
1	20	5SJ4120-6HG40	5SJ4120-7HG40		5SJ4120-8HG40	
1	25	5SJ4125-6HG40 *	5SJ4125-7HG40			5SJ4125-8HG40 *
1	30	5SJ4130-6HG40 *	5SJ4130-7HG40			5SJ4130-8HG40
1	32	5SJ4132-6HG40 *	5SJ4132-7HG40			5SJ4132-8HG40 *
1	35	5SJ4135-6HG40 *	5SJ4135-7HG40			5SJ4135-8HG40 *
1	40	5SJ4140-6HG40 *	5SJ4140-7HG40			5SJ4140-8HG40
1	45	5SJ4145-6HG40 *		5SJ4145-7HG40 *		5SJ4145-8HG40
1	50	5SJ4150-6HG40 *		5SJ4150-7HG40		5SJ4150-8HG40 *
1	60	5SJ4160-6HG40 *		5SJ4160-7HG40		5SJ4160-8HG40 *
1	63	5SJ4163-6HG40 *		5SJ4163-7HG40 *		5SJ4163-8HG40 *

* Not stocked in the US.

Product selection– 5SJ4..-.HG41



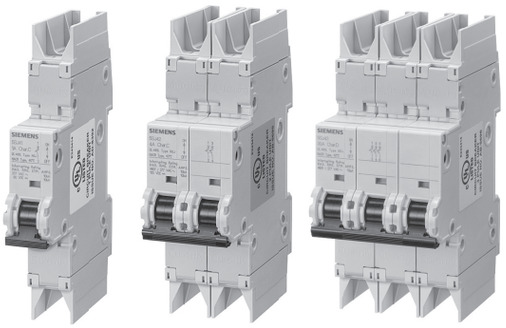
Type HSJ: Interrupting rating
240 VAC: 14 kA maximum RMS symmetrical
60 VDC: (1-pole) / 125 VDC (2- & 3-pole)
10,000 A

Type NSJ: Interrupting rating
240 VAC: 10 kA maximum RMS symmetrical
60 VDC: (1-pole) / 125 VDC (2- & 3-pole)
10,000 kA

TYPE →		**HSJ**	**NSJ**	**HSJ**	**NSJ**
No. of Poles [1]	I_n (A)	Characteristic C Order No.	Characteristic C Order No.	Characteristic D Order No.	Characteristic D Order No.
*	0.3	5SJ4*14-7HG41		5SJ4*14-8HG41	
*	0.5	5SJ4*05-7HG41		5SJ4*05-8HG41	
*	1	5SJ4*01-7HG41		5SJ4*01-8HG41	
*	1.6	5SJ4*15-7HG41		5SJ4*15-8HG41	
*	2	5SJ4*02-7HG41		5SJ4*02-8HG41	
*	3	5SJ4*03-7HG41		5SJ4*03-8HG41	
*	4	5SJ4*04-7HG41		5SJ4*04-8HG41	
*	5	5SJ4*11-7HG41		5SJ4*11-8HG41	
*	6	5SJ4*06-7HG41		5SJ4*06-8HG41	
*	8	5SJ4*08-7HG41		5SJ4*08-8HG41	
*	10	5SJ4*10-7HG41		5SJ4*10-8HG41	
*	13	5SJ4*13-7HG41		5SJ4*13-8HG41	
*	15	5SJ4*18-7HG41		5SJ4*18-8HG41	
*	16	5SJ4*16-7HG41		5SJ4*16-8HG41	
*	20	5SJ4*20-7HG41		5SJ4*20-8HG41	
*	25	5SJ4*25-7HG41			5SJ4*25-8HG41
*	30	5SJ4•30-7HG41			5SJ4*30-8HG41
*	32	5SJ4*32-7HG41			5SJ4*32-8HG41
*	35	5SJ4*35-7HG41			5SJ4*35-8HG41
*	40	5SJ4*40-7HG41			5SJ4*40-8HG41
*	45		5SJ4*45-7HG41		5SJ4*45-8HG41
*	50		5SJ4*50-7HG41		5SJ4*50-8HG41
*	60		5SJ4*60-7HG41		5SJ4*60-8HG41
*	63		5SJ4*63-7HG41		5SJ4*63-8HG41

[1] Substitute the "*" with:
1 for 1-pole mCBs
2 for 2-pole mCBs
3 for 3-pole mCBs

Product selection – 5SJ4..-.HG42



Type NSJ: Interrupting rating
480Y/277 VAC 10,000 maximum RMS symmetrical amps
60 VDC: (1-pole) / 125 VDC (2- & 3-pole)
10,000 amps

TYPE →		HSJ	NSJ	HSJ	NSJ
No. of Poles [1]	I_n (A)	Characteristic C Order No.	Characteristic C Order No.	Characteristic D Order No.	Characteristic D Order No.
*	0.3	—	5SJ4*14-7HG42	—	5SJ4*14-8HG42
*	0.5	—	5SJ4*05-7HG42	—	5SJ4*05-8HG42
*	1	—	5SJ4*01-7HG42	—	5SJ4*01-8HG42
*	1.6	—	5SJ4*15-7HG42	—	5SJ4*15-8HG42
*	2	—	5SJ4*02-7HG42	—	5SJ4*02-8HG42
*	3	—	5SJ4*03-7HG42	—	5SJ4*03-8HG42
*	4	—	5SJ4*04-7HG42	—	5SJ4*04-8HG42
*	5	—	5SJ4*11-7HG42	—	5SJ4*11-8HG42
*	6	—	5SJ4*06-7HG42	—	5SJ4*06-8HG42
*	8	—	5SJ4*08-7HG42	—	5SJ4*08-8HG42
*	10	—	5SJ4*10-7HG42	—	5SJ4*10-8HG42
*	13	—	5SJ4*13-7HG42	—	5SJ4*13-8HG42
*	15	—	5SJ4*18-7HG42	—	5SJ4*18-8HG42
*	16	—	5SJ4*16-7HG42	—	5SJ4*16-8HG42
*	20	—	5SJ4*20-7HG42	—	5SJ4*20-8HG42
*	25	—	5SJ4*25-7HG42	—	5SJ4*25-8HG42
*	30	—	5SJ4*30-7HG42	—	5SJ4*30-8HG42
*	32	—	5SJ4*32-7HG42	—	5SJ4*32-8HG42
*	35	—	5SJ4*35-7HG42	—	—
*	40	—	5SJ4*40-7HG42	—	—
*	45	—	—	—	—
*	50	—	—	—	—
*	60	—	—	—	—
*	63	—	—	—	—

1) Substitute the "*" with:
1 for 1-pole mCBs
2 for 2-pole mCBs
3 for 3-pole mCBs

Product selection – Accessories

		MW[1]	Length DT mm	Order No.	PU Unit(s)	PS [2] P. unit Unit(s)	PG	Weight per PU approx. 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 UL489**							
	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.

5ST30..-0HG Accessories are intended for use with UL489 miniature circuit breakers of the 5SJ4...-.HG.. series.

Auxiliary Circuit Switches are available with One Normally Open + One Normally Closed, Two Normally Open or Two Normally Closed contacts. They are primarily used to signal the miniature circuit breaker's trip mechanism position.

Fault Signal Contacts are available with One Normally Open + One Normally Closed, Two Normally Open or Two Normally Closed contacts. They are primarily used to signal the automatic tripping of the miniature circuit breaker's trip mechanism; and, trip position.

Siemens Auxiliary Switches and Fault Signal Contacts are UL Listed and Certified to Canadian Standards to 480 VAC maximum. This offers a competitive advantage in that 480Y/277 VAC miniature circuit breakers are not limited to 300 VAC maximum when an auxiliary device is used.

Shunt Trip switches are available in voltages of 110 to 480 VAC and 24 to 60 V AC/DC. They are used for remote tripping of a miniature circuit breaker.

A maximum of one shunt trip (ST) and a maximum of two auxiliary switches (AS) or fault current contacts (FC) in any combination may be used; three devices maximum. Refer to mounting diagram on page 20.

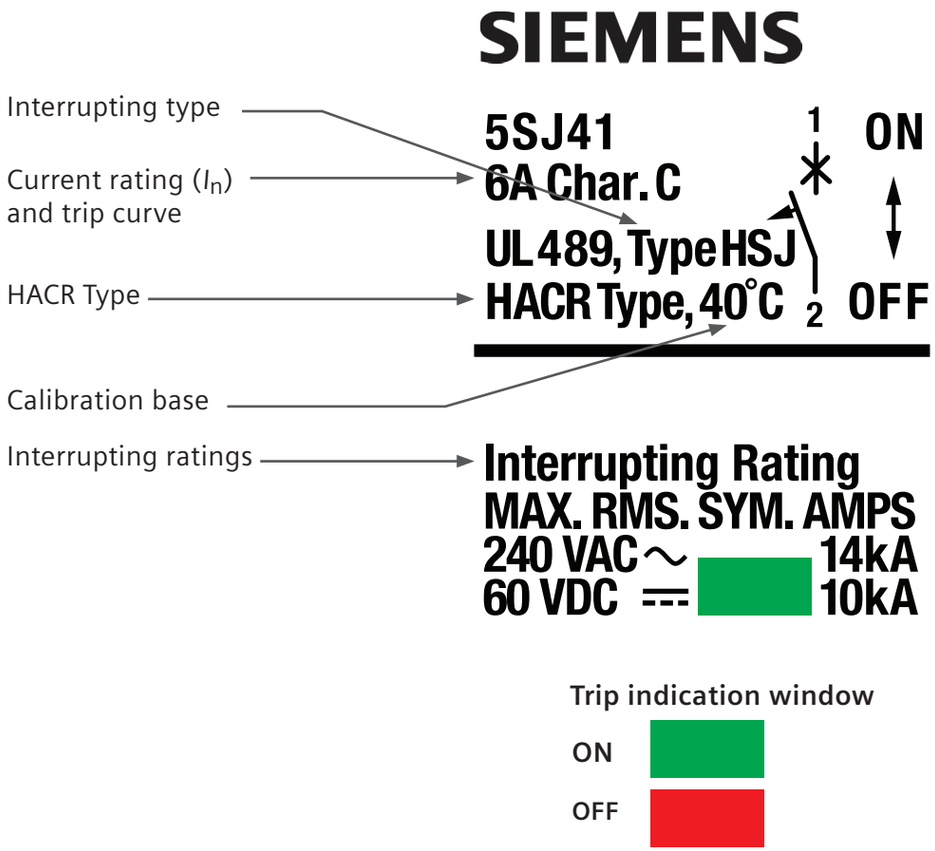
Product selection – Busbar and connection terminals

		Pin spacing MW	Length mm	DT	Order No.
	**Busbars acc. to UL 489** **for use with 5SJ4...-.HG..** [1] Single Pole				
	For 6 MCB 1P	1	100	A	**5ST3-663-0HG**
	For 12 MCB 1P	1	205	A	**5ST3-663-1HG**
	For 18 MCB 1P	1	310	A	**5ST3-663-2HG**
	Two-Pole				
	For 3 MCB 2P	1	100	A	**5ST3-664-0HG**
	For 6 MCB 2P	1	205	A	**5ST3-664-1HG**
	For 9 MCB 2P	1	310	A	**5ST3-664-2HG**
	Three-Pole				
	For 2 MCBs 3P	1	100	A	**5ST3-665-0HG**
	For 4 MCBs 3P	1	205	A	**5ST3-665-1HG**
	For 6 MCBs 3P	1	310	A	**5ST3-665-2HG**
	**Connection terminals acc. to UL489** **for use only with 5SJ4...-.HG..**				
	Infeed - MCBs 35 mm2			A	**5ST3-666-0HG**
	Infeed - busbars 50 mm2			A	**5ST3-666-2HG**
	**Touch protection covers for busbars** **acc. to UL489** [1] 3 x 1 pin			A	**5ST3-666-1HG**

[1] All unused busbar terminals must be covered with touch protection covers 5ST3666-1HG.

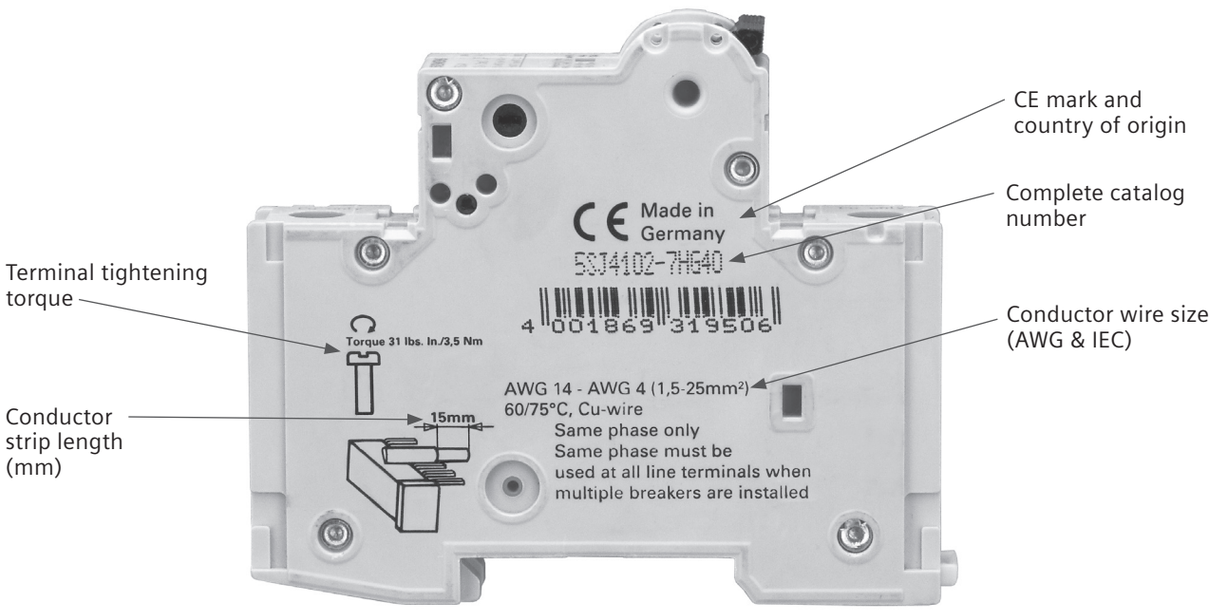
Typical miniature circuit breaker markings

Front markings

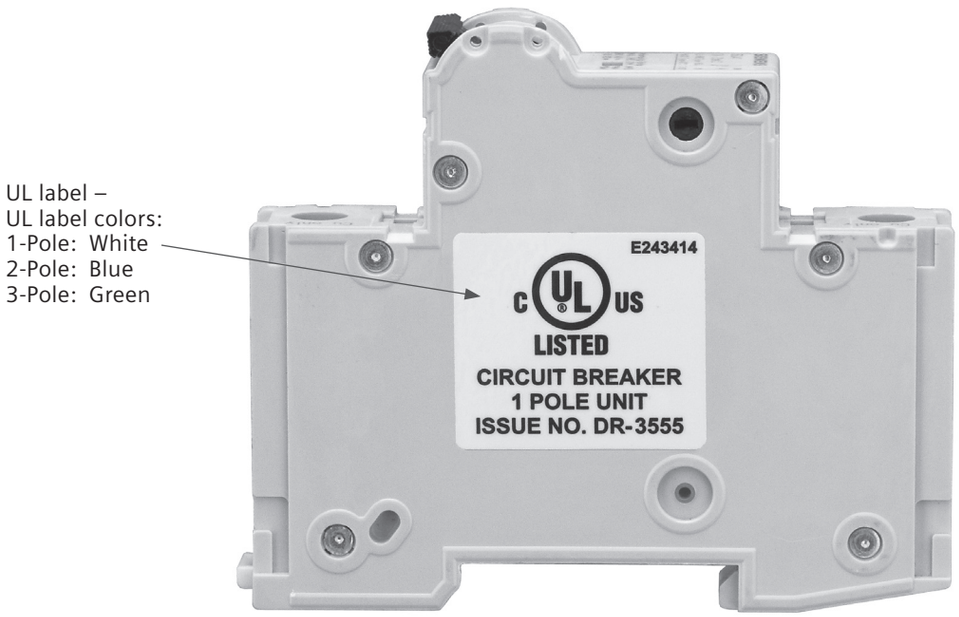


Typical miniature circuit breaker markings (continued)

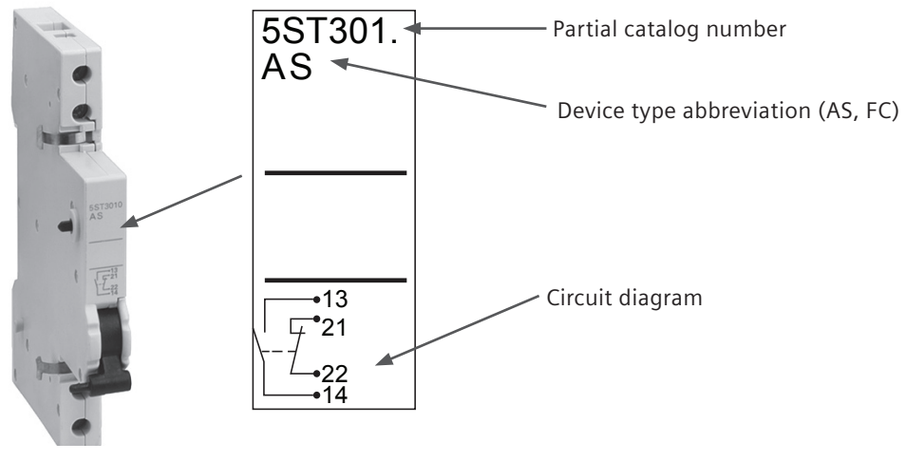
Left side markings

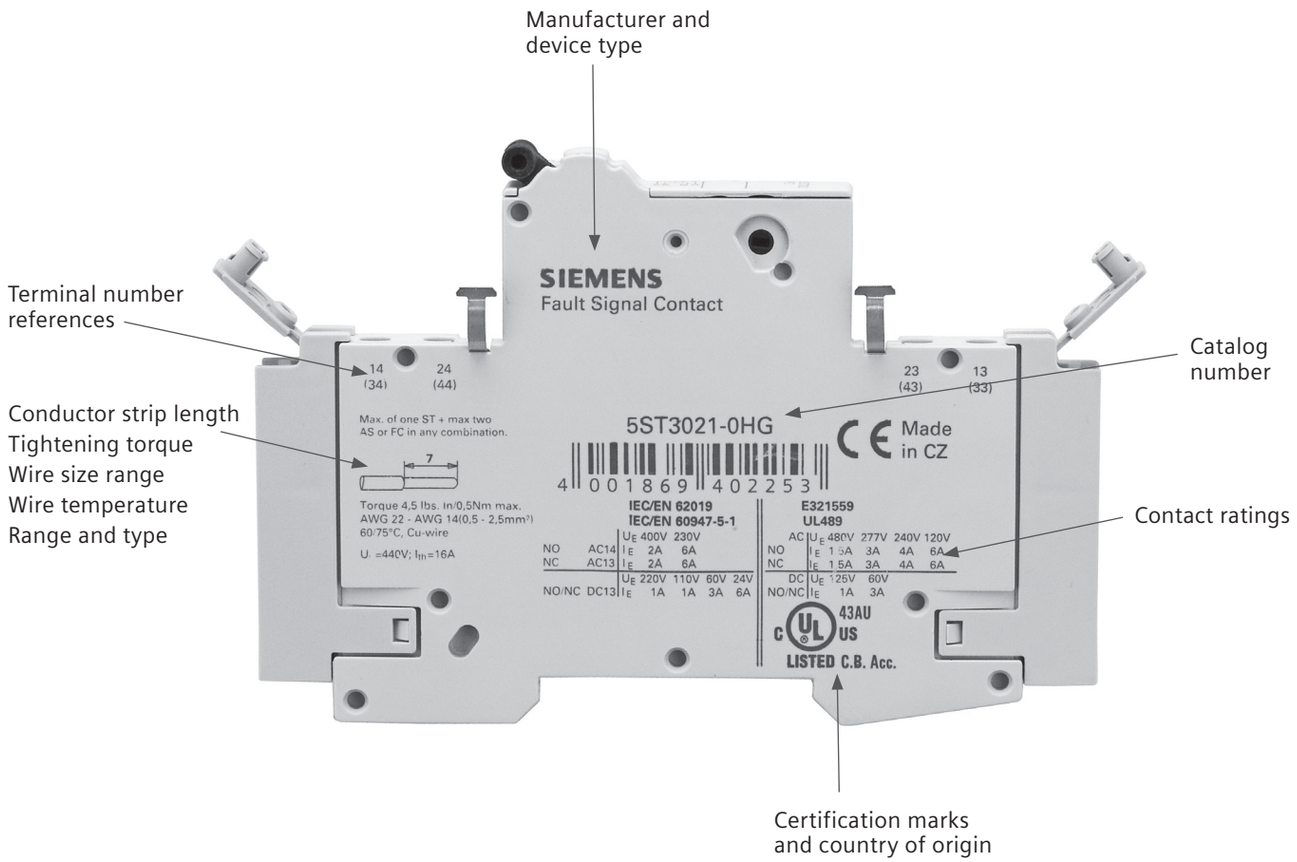


Right side markings

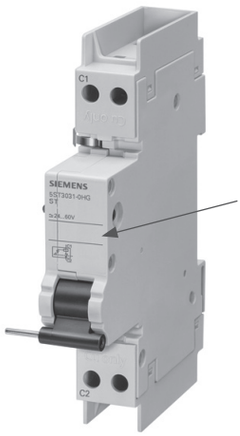


Typical auxiliary switch (AS) and fault signal contact (FC) markings





Typical shunt trip (ST) markings

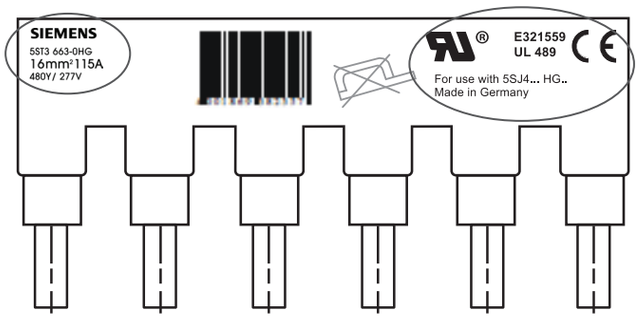


Certification marks and country of origin

Catalog number

Conductor strip length
Tightening torque
Wire size range
Wire temperature
Range and type

Typical busbar markings



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5ST3 663-0HG ← Catalog number

Busbar cross section → 16mm²115A ← Rated current

480Y/ 277V ← Operating voltage

UL mark

UL file number

E321559
UL 489

For use with 5SJ4... HG..
Made in Germany

Country of origin

Intended use with

Current ratings at ambient temperatures other than 40°C

(Additional temperature 'Correction Factors' found on page 18)

Use the following table to determine the CBs I_n current rating for ambient temperature 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	13.8
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

5SJ4 miniature circuit breakers are "Non 100 percent rated" as specified in UL 489, paragraph 7.1.4.2. When selecting a miniature circuit breaker for continuous loads no more than 80% of the device's marked current should be used.

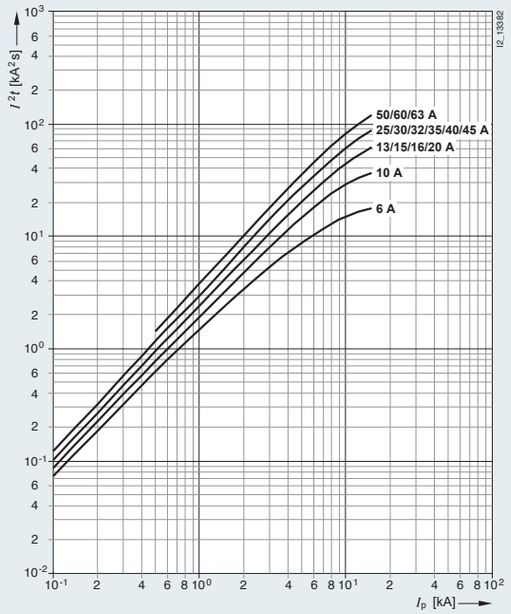
5SJ4 miniature circuit breakers are "Current-Limiting" as defined in UL 489, paragraph 2.25. Current-Limiting Circuit Breakers do not employ a fusible element and when operating within its current-limiting range, limits the let-through I^2t to a value less than the I^2t of a ½ cycle wave of the symmetrical prospective current. Current limiting circuit breakers provide a higher level of circuit protection than a typical external breaker.

Characteristic curves

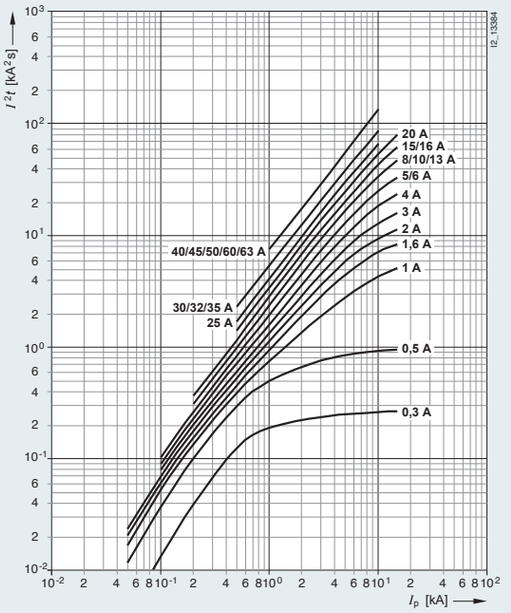
5SJ4 ...-.HG40, 5SJ4 ...-.HG41, 5SJ4 ...-.HG42

Let-through I^2t values

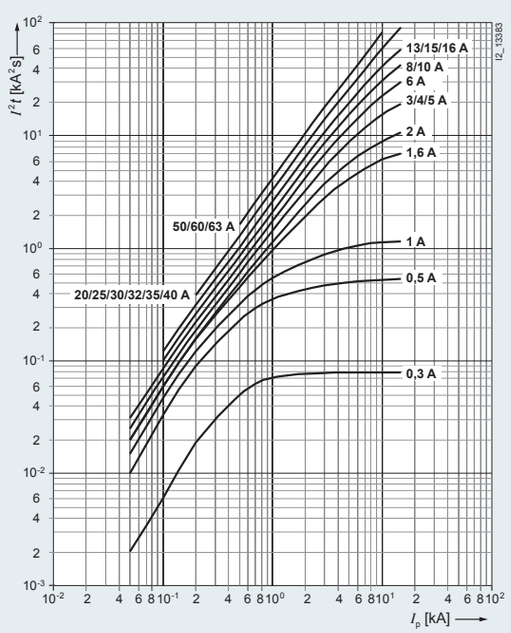
Characteristic B



Characteristic D



Characteristic C

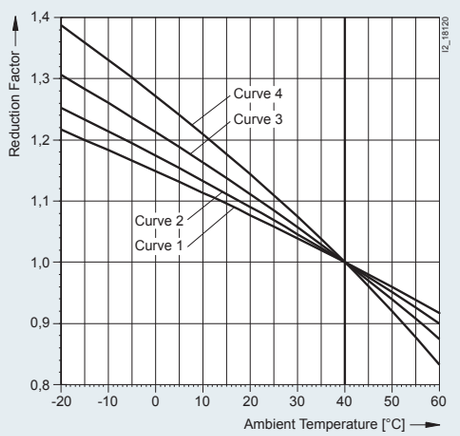


Power Loss

Rated current	Characteristic B		Characteristic C		Characteristic D	
I_n	R_i	P_v	R_i	P_v	R_i	P_v
A	mΩ	W	mΩ	W	mΩ	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

Correction factors for rated current at different ambient temperatures

Dependence of permissible continuous load current on ambient temperature



Curve for correction factor

Rated current (A)	03	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

Technical specifications

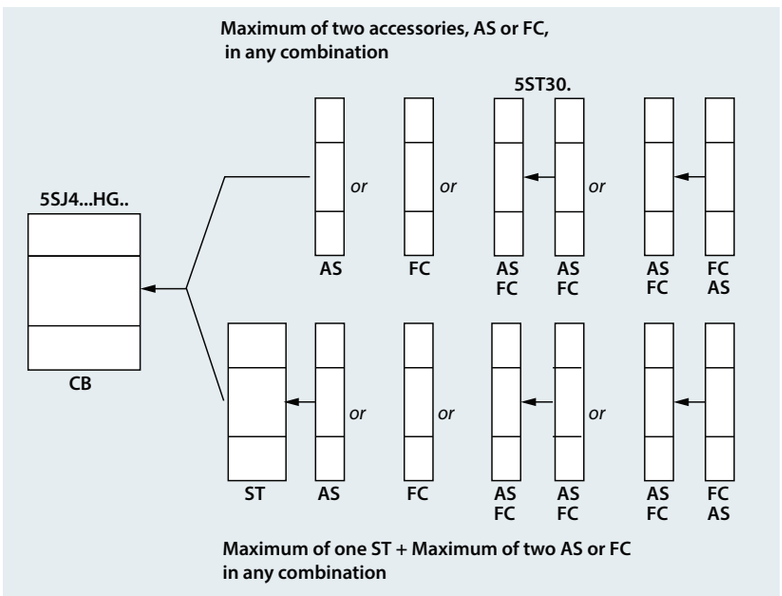
Circuit breakers			5SJ4 ...-.HG40	5SJ4 ...-.HG41	5SJ4 ...-.HG42
Standards			IEC/EN 60898; IEC/EN 60947-2; UL 489, CSA C22.2 No. 5-02		
Certifications			UL 489; CSA C22.2 No. 5-02 UL FIle No. E243414		
Tripping characteristic			B, C, D	C, D	
Operational voltage	min	V AC/DC	24		
• IEC 60898	max.	V DC/pole	60		
	max.	V AC	440		
• UL 489 and CSA C22.2 No. 5-02	max.	V AC	240/120	240	480Y/277
		V DC/1P	60	60	60
		V DC/2P	—	125	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		kA AC	14/10	14/10	10
Insulation coordination					
• Rated insulation voltage		VAC	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°		Nm	3.5		
		lb/in	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		

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 62019, IEC/EN 60947-5-1				IEC/EN 60947-1	
Certifications			UL 489; CSA, UL File Nr. E321559					
Operational voltage/operational load (current)								
• IEC		V AC	400	230			110 ... 415	24 ... 60
		A AC	2	6	(NC: AC13, NO: AC14)		—	—
		V DC	220	110	60	24	—	24 ... 60
		A DC	1	1	3	6 (DC13)	—	—
• UL		V AC	480	277	240	120	110 ... 480	24 ... 60
		A AC	1.5	3	4	6	—	—
		V DC	125	60			—	24 ... 60
		A DC	1	3			—	—
Short-circuit protection			Circuit breaker or fuse 6 A					
Contact load			min. 50 mA, 24 V					
Response limit		x U_n	—				0.7 ... 1.1	
Conductor cross-sections		AWG	22 ... 12				22 ... 12	
		mm^2	0.5 ... 2.5				0.5 ... 2.5	
Terminals – terminal tightening torque		Nm	0.5 max.				0.8 max.	
		lb/in.	4.5				6.8	

Technical specifications

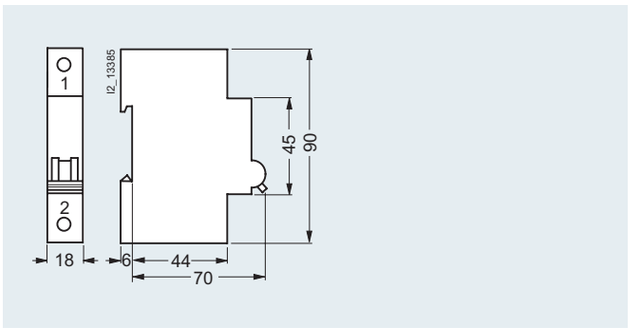
Busbars		5ST3 663-.HG 5ST3 664-.HG 5ST3 665-.HG	5ST3 663-.0HG	5ST3 666-.2HG
Standards		UL 489		
Certifications		UL 489 UL File Nr. E321559		
Operational voltage				
• IEC	V AC	690		
• UL 489	V AC	480Y/277 and 240		
Rated conditional short-circuit current	kA	15kA		
Dielectric strength	kV/mm	30		
Surge 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	mm^2Cu	16		
Infeed		Any		
Conductor cross-sections	AWG	—	14 ... 2	14 ... 1
	mm^2	—	1.5 ... 50	1.5 ... 50
Terminals – terminal tightening torque	Nm	—	3.5	3.5
	lb/in.	—	30	30
Temperature resistance	°C	200 - UL 489-V0/0.4 mm		

Mounting concept of accessories 5ST3 0 ..-0HG to circuit breakers 5SJ4 ...-.HG. The chart shows which additional components can be mounted on the right.

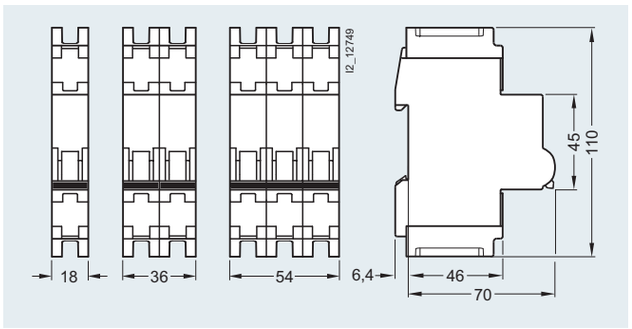


CB: circuit breaker
ST: shunt trip
AS: auxiliary switch
FC: fault signal contact

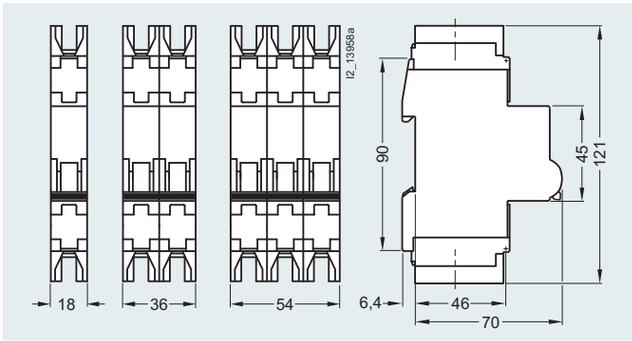
Dimensions



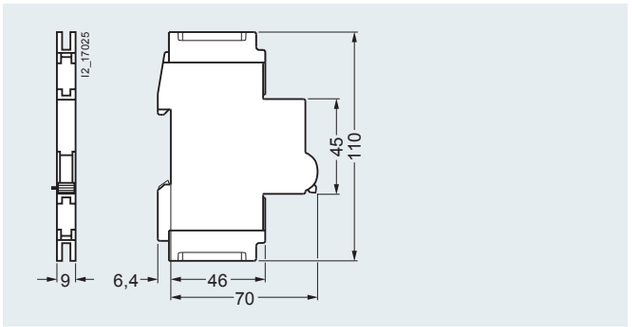
5SJ4 ...-.HG40



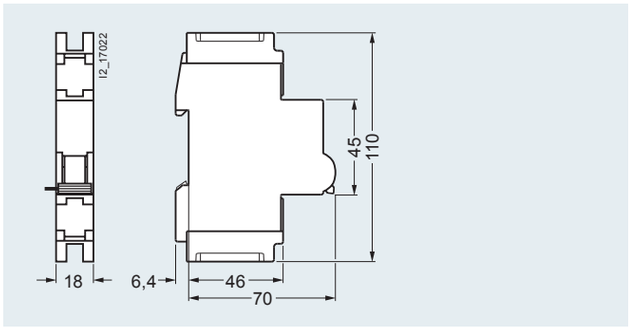
5SJ4 ...-.HG41



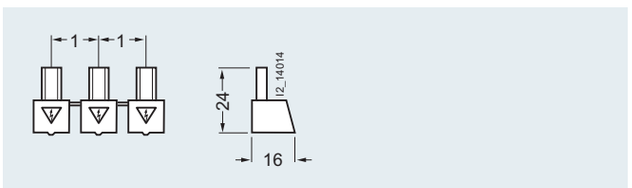
5SJ4 ...-.HG42



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

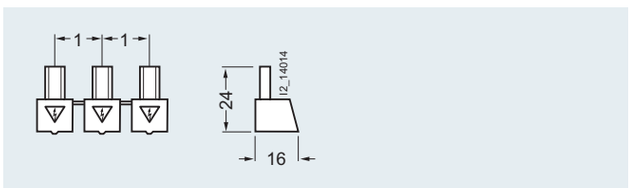


5ST3 030-0HG
5ST3 031-0HG



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).

Limitations of use

The information provided in this product profile contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. Availability and technical specifications are subject to change without notice.

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Order No: PDCA-5SJ4U-0913

Printed in USA.