Selection and ordering data


3RT201.-1A


3RT201. -2A. . .


3RT2028-1N...


3RT2025-2B...


3RT2035-1A...


3RT2045-1A...

Frame Size	Amp Ratings AC3	AC1	Single-phase HP ratings 115V	208V	230V	Three-phase HP ratings 208V	230V	460V	575V	Auxiliary contacts NO	NC	Screw Terminals Order No.	Spring-Loaded Terminals[1] Order No.	Weight approx. kg
3RT 3-pole contactors														
S00	**6**	18	0.25	0.5	0.75	1.5	2	**3**	5	1	0	**3RT2015-1□●●1**	**3RT2015-2□●●1**	0.24/0.29
										0	1	**3RT2015-1□●●2**	**3RT2015-2□●●2**	
	9	22	0.33	1	1	2	3	**5**	7.5	1	0	**3RT2016-1□●●1**	**3RT2016-2□●●1**	
										0	1	**3RT2016-1□●●2**	**3RT2016-2□●●2**	
	12	22	0.5	1.5	2	3	3	**7.5**	10	1	0	**3RT2017-1□●●1**	**3RT2017-2□●●1**	
										0	1	**3RT2017-1□●●2**	**3RT2017-2□●●2**	
	16	22	1	2	2	3	5	**10**	10	1	0	**3RT2018-1□●●1**	**3RT2018-2□●●1**	
										0	1	**3RT2018-1□●●2**	**3RT2018-2□●●2**	
S0	**9**	40	1	1	1	2	3	**5**	7.5	1	1	**3RT2023-1□●●0**	**3RT2023-2□●●0**	0.42/0.60
	12	40	1	2	2	3	3	**7.5**	10	1	1	**3RT2024-1□●●0**	**3RT2024-2□●●0**	
	17	40	1	2	3	5	5	**10**	15	1	1	**3RT2025-1□●●0**	**3RT2025-2□●●0**	
	25	40	2	3	3	7.5	7.5	**15**	20	1	1	**3RT2026-1□●●0**	**3RT2026-2□●●0**	
	32	50	2	5	5	10	10	**20**	25	1	1	**3RT2027-1□●●0**	**3RT2027-2□●●0**	
	38	50	3	5	5	10	10	**25**	25	1	1	**3RT2028-1□●●0**	**3RT2028-2□●●0**	
S2	**40**	60	3	5	7.5	10	15	**30**	40	1	1	**3RT2035-1□●●0**	**3RT2035-3□●●0**	0.99/1.121
	50	70	3	7.5	10	15	15	**40**	50	1	1	**3RT2036-1□●●0**	**3RT2036-3□●●0**	
	65	80	5	10	10	20	20	**50**	50	1	1	**3RT2037-1□●●0**	**3RT2037-3□●●0**	
	80[2]	90	5	10	15	20	25	**50**	60	1	1	**3RT2038-1□●●0**	**3RT2038-3□●●0**	
S3	**80**	125	7.5	10	15	25	30	**60**	60	1	1	**3RT2045-1□●●0**	**3RT2045-3□●●0**	1.8/2.8
	95	130	10	10	20	30	30	**75**	75	1	1	**3RT2046-1□●●0**	**3RT2046-3□●●0**	
	110	130	10	10	20	30	40	**75**	100	1	1	**3RT2047-1□●●0**	**3RT2047-3□●●0**	
												□	**□**	
	Size S2 & S3 only: Replace "B" with "K" for 24VDC coil only **Size S0-S3 only: UC Electronic with integrated varistor**											**AC Coil = A** **DC Coil = B** **UC Coil = N**	**A** **B** **N**	

NEMA Size	Amp Ratings	Single-phase HP ratings 115V	230V	Three-phase HP ratings 208V	230V	460V	575V	Auxiliary contacts NO	NC	Screw Terminals with AC coil Order No.	Screw Terminals with 24 VDC coil Order No.	Weight approx. kg
NEMA Labeled Contactors												
0	**18**	1	2	3	3	**5**	5	1	0	**3RT2018-1A●●1-0UA0**	**3RT2018-1BB41-0UA0**	0.28
1	**27**	2	3	7.5	7.5	**10**	10	1	1	**3RT2027-1A●●0-0UA0**	**3RT2027-1BB40-0UA0**	0.42
2	**45**	3	7.5	10	15	**25**	25	1	1	**3RT2036-1A●●0-0UA0**	**3RT2036-1NB30-0UA0**	0.986/1.121
3	**90**	7.5	15	25	30	**50**	50	1	1	**3RT2046-1A●●0-0UA0**	**3RT2046-1NB30-0UA0**	1.8 / 2.8

Note: Ring lug terminals are also available in size S00 & S0 contactors, except contactors with communication interface or UC coil. Change the 8th digit of the order number to a "4", e. g. 3RT2015-4AK61.

For further coil voltages, see page 2/51.
For auxiliaries and accessories, see page 2/68-2/85.
For spare parts, see page 2/96-2/101.
For technical data, see page 2/123-2/144.
For description, see page 2/106-2/107.
For int. circuit diagrams, see page 2/192-2/199.
For dimension drawings, see page 2/211-2/214.

[1] All terminals are spring loaded on frame sizes S00 & S0. Only the coil terminals are spring loaded on frame sizes S2 & S3.
[2] Max UL FLA = 65A at 460V

AC Coil Selection for 3RT201 through 3RT204

●●Coil Code	C2[3]	H2[4]	K6	P6	U6	V6	T6
60 Hz	24 V	48 V	120 V	240 V	277 V	480 V	600 V
50 Hz	24 V	48 V	110 V	220 V	—	—	—

DC Coil Selection for 3RT201 & 3RT202 (for 3RT203 & 3RT204 see UC)

●●Coil Code	A4[5]	B4	W4	E4	F4	G4	M4
DC	12 V	24 V	48 V	60 V	110 V	125 V	220 V

UC Coil Selection for 3RT202

●●Coil Code	B3	F3	P3[5]
UC	21-28V	95-130V	200-280V

UC Coil Selection for 3RT203 & 3RT204

●●	B3	F3	P3[6]
	20-33V	83-155V	175-280V

[3] Use Code **B0** for 3RT201, S00
[4] Use Code **H0** for 3RT201, S00
[5] 3RT201 and 3RT202 only
[6] at upper limit = 1.1 x U_S

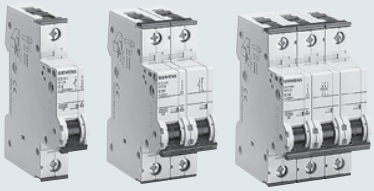
contents

5SJ4 Branch Circuit Protectors

5SJ4 Page

Selection and ordering data

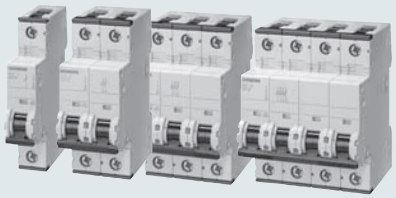
5SY4 Supplementary Protectors



5SY4 Page

Selection and ordering data

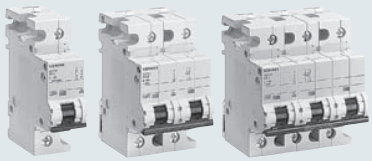
5SY6 Supplementary Protectors



5SY6 Page

Selection and ordering data

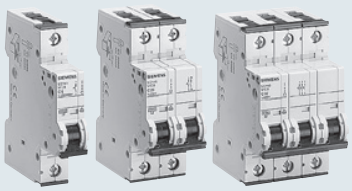
5SP Supplementary Protectors



5SP4 Page

Selection and ordering data

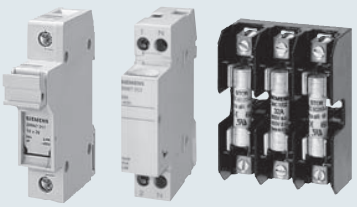
AC/DC Product Range 5SY5 Supplementary Protectors



5SY5 Page

Selection and ordering data

3NW7 Cylindrical Fuse Holders



3NW7 and 3NC10 Page

Selection and ordering data

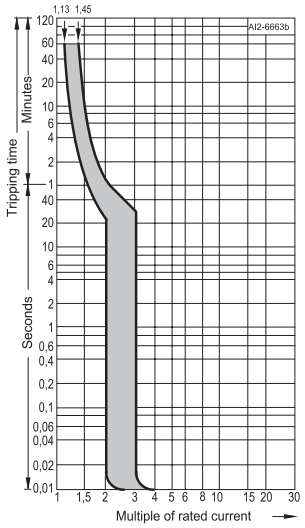
General Data

Trip characteristics

Tripping characteristics acc. to EN 60 898

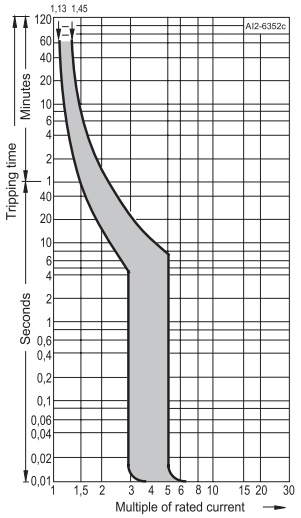
Tripping characteristic A, -5

Type A characteristic is designed to protect very sensitive circuits such as semiconductors. Magnetic trip point - 2 to 3 times I_n rating. Thermal trip point - 1.13 to 1.45 protector rating.



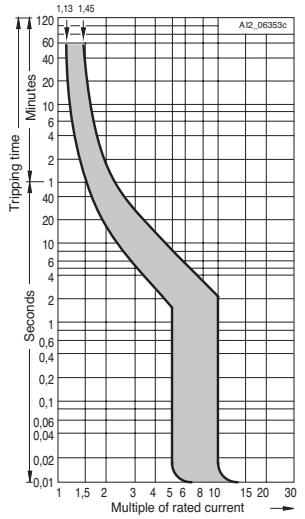
Tripping characteristic B, -6

Type B characteristic designed for European residential circuit protection. This characteristic can also be used for protection of computers and electronic equipment. Magnetic trip point - 3 to 5 times I_n rating. Thermal trip point - 1.13 to 1.45 protector rating.



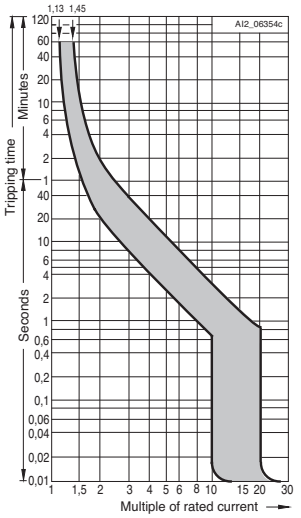
Tripping characteristic C, -7

Type C characteristic is for general device protection in control circuits. Magnetic trip point - 5 to10 times I_n rating. Thermal trip point - 1.13 to 1.45 protector rating.



Tripping characteristic D, -8

Type D characteristic is designed for high inrush loads. Magnetic trip point - 10 to 20 times I_n rating. Thermal trip point - 1.13 to 1.45 protector rating.



For different ambient temperatures, the current values of the delayed tripping operation change by approximately 5% per 10°K temperature difference. Specifically they increase for temperatures below 25°C (5SJ41), 30°C (5SP, 5SY) and decrease for temperatures above 25°C (5SJ41), 30°C (5SP, 5SY).

For DC voltages the maximum current values of the instantaneous tripping operation increase by a factor of 1.2.

If more that one electrical circuit is loaded in a series of miniature circuit breakers or supplementary protectors, the resulting increase in ambient temperature affects the characteristic curve. In this case an additional correction factor found in the following table must be used.

Number	1	2 - 3	4 - 6	> 7
Correction factor K	1.00	0.90	0.88	0.85

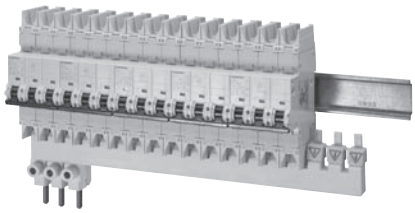
General Data

5SJ4 70 mm mounting depth

Selection and ordering data

5SJ4 Miniature Circuit Breaker Guide			
Catalog Series	5SJ41...-.HG40	5SJ4...-.HG41	5SJ4...-.HG42
Rated Voltage	240, 120 VAC 60 VDC Same Polarity	240 VAC 60/125 VDC	480Y/277 VAC 60/125 VDC
Number of Poles	1-Pole	1-, 2- and 3-Poles	
Trip Characteristics	B, C, D	C, D	
Rated Current	B Characteristic: 6 to 63 A C and D Characteristic: 0.3 to 63 A		C Characteristic: 03. to 40 A D Characteristic: 0.3 to 32 A
Interrupting Ratings[1]	B Characteristic: 14 kA (6 to 63 A)	—	—
	C Characteristic: 14 kA (0.3 to 40 A) 10 kA (45 to 63 A)		C Characteristic: 10 kA (0.3 to 40 A)[2]
	D Characteristic: 14 kA (0.3 to 20 A) 10 kA (25 to 63 A)		D Characteristic: 10 kA (0.3 to 32 A)[2]

1) 14 kA = Type HSJ; 10 kA = Type NSJ.
2) At 240 VAC the Interrupting Rating is the same as the 5SJ4...-.HG40 and .HG41.



5SJ4…-.HG41 Miniature Circuit Breakers

Certitications:
CE
UL Listed and Certified to Canadian Standards
HACR Rated

Features

Features – UL 489
- Suitable for Branch Circuit Protection Applications up to 277 VAC and 60 VDC (1-pole); and, up to 480Y VAC and 125 VDC (2- and 3-pole)
- UL Listed and Certified to Canadian Standards, File E243414
- HACR Rated
- Hight AC Interrupting Ratings of up to 14,000 (Type HSJ) or 10,000 (Type NSJ) Maximum RMS Symmetrical Amps and, DC interrupting ratings of 10,000 Amps
- 40°C Calibration Base (Industrial Applications)
- Can be used for “field wiring” applications; AWG 14 to AWG 4, Copper (Cu) Only
- Suitable for “reverse feed” applications

Features – EN/IEC 60 898
- 30°C Calibration Base
- Trip Characteristic B, C and D
  B: Designed for the protection of computers and electronic equipment. Magnetic trip point is 3 to 5 times the MCB rating.
  C: Designed for general device protection in control circuits and all other miniature circuit breaker systems. Magnetic trip point is 5 to 10 times the MCB rating.
  D: Designed for high inrush loads. Magnetic trip point is 10 to 20 times the MCB rating.
- Rated voltage of 24 VAC minimum, 440 VAC Maximum and 60 VDC per pole
- High Interrupting Rating (I_{cn}) of up to 10,000 Amps
- 0.75 to 35 mm^2 solid and stranded conductors

Features – Common
- Depending on the device selected
  - Available with 1-, 2- or 3-poles
  - Available from 0.3 to 63 amps
- Visible Indicator for ON and OFF/Trip
- Touch Protection to EN50274
- DIN Rail Mounting (Standard 35 mm)
- Identical Wlre Screw Connections on Line and Load Sides
- Smaller Size than traditionsl MCCB’s

Auxiliary Circuit Switches (AS) 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 (FC) 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.

Shunt Trip Switches (ST) 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.

5ST366.-.HG busbars, touch protection covers and terminal connectors are intended for use with Siemens lines of 5SJ4…-.HG4. UL 489 Miniature Circuit Breakers. They are UL Recognized (File E32159) with a rating of 115 Amps maximum at 480Y/277 VAC. Busbars are available in 1-, 2- or 3-pole versions.

Touch Protection Covers are used to cover any unused busbar terminals. They are intended to protect a user from live electrical parts.

Terminal Connectors are used to connect electrical conductors up to 1 AWG (50mm^2) to the busbar terminals. Two versions are available; connecton directly to the miniature circuit breaker or direct connection to the busbar.

5SJ Branch Circuit Protection

5SJ4 70 mm mounting depth

Features

5SJ41..-.HG40 miniature circuit breakers are designed to comply with UL 489 and CSA 22.2 No. 5-02 standards. They are used in single pole, branch circuit protection applications up to 240 VAC maximum and 60 VDC maximum, same polarity. Refer to Technical Data (page 16/8) for additional information.

Selection and ordering data

		I_n	Characteristic B			Characteristic C			Characteristic D			Weight
			Order No.	Interruption Type [1]	List Price $	Order No.	Interruption Type [1]	List Price $	Order No.	Interruption Type [1]	List Price $	1 Item
		A			1 item			1 item			1 item	kg
	**1-pole**	0.3	—	—		**5SJ4114-7HG40**	**HSJ**		**5SJ4114-8HG40**	**HSJ**		0.155
		0.5	—	—		**5SJ4105-7HG40**	**HSJ**		**5SJ4105-8HG40**	**HSJ**		
		1	—	—		**5SJ4101-7HG40**	**HSJ**		**5SJ4101-8HG40**	**HSJ**		
		1.6	—	—		**5SJ4115-7HG40**	**HSJ**		**5SJ4115-8HG40**	**HSJ**		
		2	—	—		**5SJ4102-7HG40**	**HSJ**		**5SJ4102-8HG40**	**HSJ**		
		3	—	—		**5SJ4103-7HG40**	**HSJ**		**5SJ4103-8HG40**	**HSJ**		
		4	—	—		**5SJ4104-7HG40**	**HSJ**		**5SJ4104-8HG40**	**HSJ**		
		5	—	—		**5SJ4111-7HG40**	**HSJ**		**5SJ4111-8HG40**	**HSJ**		
		6	**5SJ4106-6HG40**	**HSJ**		**5SJ4106-7HG40**	**HSJ**		**5SJ4106-8HG40**	**HSJ**		
		8	—	—		**5SJ4108-7HG40**	**HSJ**		**5SJ4108-8HG40**	**HSJ**		
		10	**5SJ4110-6HG40**	**HSJ**		**5SJ4110-7HG40**	**HSJ**		**5SJ4110-8HG40**	**HSJ**		
		13	**5SJ4113-6HG40**	**HSJ**		**5SJ4113-7HG40**	**HSJ**		**5SJ4113-8HG40**	**HSJ**		
		15	**5SJ4118-6HG40**	**HSJ**		**5SJ4118-7HG40**	**HSJ**		**5SJ4118-8HG40**	**HSJ**		
		16	**5SJ4116-6HG40**	**HSJ**		**5SJ4116-7HG40**	**HSJ**		**5SJ4116-8HG40**	**HSJ**		
		20	**5SJ4120-6HG40**	**HSJ**		**5SJ4120-7HG40**	**HSJ**		**5SJ4120-8HG40**	**HSJ**		
		25	**5SJ4125-6HG40**	**HSJ**		**5SJ4125-7HG40**	**HSJ**		**5SJ4125-8HG40**	**NSJ**		
		30	**5SJ4130-6HG40**	**HSJ**		**5SJ4130-7HG40**	**HSJ**		**5SJ4130-8HG40**	**NSJ**		
		32	**5SJ4132-6HG40**	**HSJ**		**5SJ4132-7HG40**	**HSJ**		**5SJ4132-8HG40**	**NSJ**		
		35	**5SJ4135-6HG40**	**HSJ**		**5SJ4135-7HG40**	**HSJ**		**5SJ4135-8HG40**	**NSJ**		
		40	**5SJ4140-6HG40**	**HSJ**		**5SJ4140-7HG40**	**HSJ**		**5SJ4140-8HG40**	**NSJ**		
		45	**5SJ4145-6HG40**	**HSJ**		**5SJ4145-7HG40**	**NSJ**		**5SJ4145-8HG40**	**NSJ**		
		50	**5SJ4150-6HG40**	**HSJ**		**5SJ4150-7HG40**	**NSJ**		**5SJ4150-8HG40**	**NSJ**		
		60	**5SJ4160-6HG40**	**HSJ**		**5SJ4160-7HG40**	**NSJ**		**5SJ4160-8HG40**	**NSJ**		
		63	**5SJ4163-6HG40**	**HSJ**		**5SJ4163-7HG40**	**NSJ**		**5SJ4163-8HG40**	**NSJ**		

1) Interrupting Rating to UL489, AC Max. RMS Symmetrical: Type NSJ = 10kA, Type HSJ = 14 kA.

General Data

5SJ4 Branch Circuit Protection

Technical data

		5SJ41..-.HG40	5SJ4...-.HG41	5SJ4...-.HG42
Standards **Certifications**		EN 60898; EN 60947-2; UL 489; CSA C22.2 No. 5-02 CE; cULus, UL File No. E243414		
Tripping characteristic		B, C, D	C, D	
Number of poles		1	1, 2 & 3	
Operating 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 Same Polarity	240	480Y/277
	V DC/1P	60	60	60
	V DC/2P, 3P	—	125	125
Interrupting rating [1]				
- I_{cn} to IEC 60898-1	kA AC	10		
- UL 489 and CSA C22.2 No. 5-02		Type NSJ: 10kA		
AC: Max. RMS Symmetrical	kA AC	Type HSJ: 14kA		Type NSJ: 10kA
Touch protection to EN 50274		Yes		
Degree of protection to EN 60529		IP20, with connected conductors		
CFC and silicone free		Yes		
Mounting		On standard mounting rail (DIN 35 mm)		
Device depth	mm	70		
Terminals				
- Identical screw terminals on both line and load sides		Yes		
- Terminal tightening torque	lb. in.	31		
	Nm	3.5		
Conductor cross sections	mm^2	Solid and Stranded: 0.75 to 35		
	mm^2	Finely Stranded, with end sleeve: 0.75 to 25		
	AWG	14 to 4, 60/75°C, Cu Only		
Calibration Base	°C	40 (UL 489) 30 (EN 60898)		
Average service life, with rated load		20,000 actuations		
Ambient temperature	°C	-25 to 45, occassionally +55, max. 95% humidity		
Storage Temperature	°C	-40 to +75		
Resistance to vibration to IEC 60068-2-6	m/s^2	60 at 10 Hz to 150 Hz		

1) See Selection and ordering data for specific device interrupting rating

Busbar & Connecting Terminals

Material Version		**Busbars** **5ST3663** **5ST3664** **5ST3665**	**Connecting Terminals** **5ST3666-0HG**	 **5ST3666-2HG**
Standards **Certifications**		UL 489 UL Listed, File No. E243414		
Operating voltage				
- IEC 60898	VAC	690		
- UL 489	VAC	480Y/277 and 240		
Rated current to 40°C	A	115		
Busbar cross section	mm^2	16 (Copper)		
Conductor cross sections	Solid and Stranded mm^2	-	2.5 to 35	2.5 to 50
	AWG	-	14 to 2	14 to 1
Terminal tightening torque	lb. in.	-	30	30
	Nm	-	3.3	3.3
Temperature Resistance	°C	200 - UL 94-V0/0.4mm		