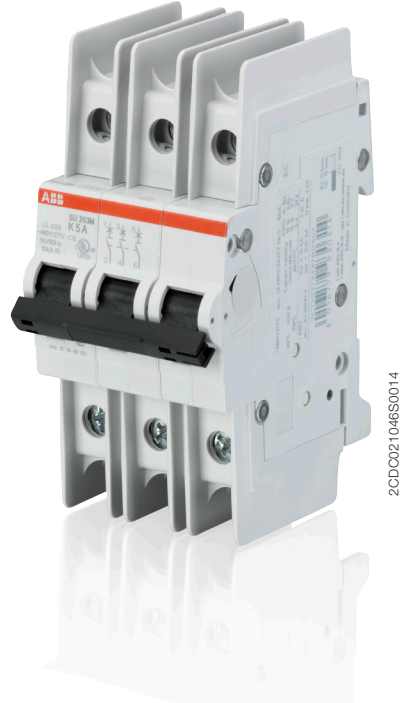


System pro M compact® Miniature Circuit Breaker SU200 M for branch circuit protection acc. to UL 489



The miniature circuit breaker SU200 M is ABB's solution for UL 489 branch circuit protection up to 480 Y/277 V AC and 96 V DC. This circuit breaker is an all-round device for AC and DC applications for universal use in North American and global markets due to its approvals acc. to the international standards UL, CSA and IEC. Moreover, SU200 M is fully compatible with System pro M compact® UL 489 accessories.

Features

- High performance MCB with 10 kA interrupting capacity acc. to UL 489 / CSA 22.2 No. 5 and 15 kA breaking capacity acc. to IEC/EN 60947-2
- Certified up to $I_n = 40$ A at 480 Y/277 V AC acc. to UL 489 / CSA 22.2 No. 5
- Certified for AC and DC use acc. to UL and CSA
- 40 °C reference temperature acc. to UL and CSA
- Current limiting acc. to UL 489
- Clear contact position indication in red/green ("real CPI")

Standards and approvals

Standards

UL 489
CSA 22.2 No. 5
IEC/EN 60947-2

Approvals

UL 489	US
CSA 22.2 No. 5	CA
VDE	DE
CCC	CN

Miniature Circuit Breaker SU200 M

Technical data

General Data	
Standards	UL 489, CSA 22.2 No. 5, IEC/EN 60947-2
Poles	1P, 2P, 3P, 4P
Tripping characteristics	C, K, Z
Rated current I_n	0.2 - 63 A
Rated frequency f	50 / 60 Hz, DC (0 Hz)
Rated insulation voltage $U_{acc.}$ to IEC/EN 60664-1	250 V AC (phase to ground), 440 V AC (phase to phase)
Overvoltage category	III
Pollution degree	3
IEC/EN 60947-2	
Rated operational voltage U_n	1P: 230 V AC; 2P, 3P, 4P: 400 V AC
Max. power frequency recovery voltage U_{rmax}	AC 1P: 253 V AC; 2P, 3P, 4P: 440 V AC
Min. operating voltage	12 V AC, 12 V DC
Rated ultimate short-circuit breaking capacity I_{cu}	15 kA
Rated service short-circuit breaking capacity I_{cs}	≤ 40 A: 11.25 kA > 40 A: 7.5 kA
Rated impulse withstand voltage U_{imp} (1.2/50µs)	4 kV (test voltage 6.2 kV at sea level, 5 kV at 2,000 m)
Dielectric test voltage	2 kV (50 / 60Hz, 1 min.)
Reference temperature for tripping characteristics	30 °C
Electrical endurance	$I_n < 30$ A: 20,000 ops (AC), $I_n \geq 30$ A: 10,000 ops. (AC); 1 cycle (2 s - ON, 13 s - OFF, $I_n \leq 32$ A), 1 cycle (2 s - ON, 28 s - OFF, $I_n > 32$ A)
UL / CSA	
Rated voltage	AC 1P: 277 V AC up to 40 A for C, Z char., AC 277 V AC up to 35 A for K char., 240 V AC AC 2P, 3P, 4P: 480 Y / 277 V AC up to 40 A for C, Z char., AC 480 Y / 277 V AC up to 35 A for K char., 240 V AC DC 1P: 48 V DC; 2P: 96 V DC (2p in series)
Rated interrupting capacity acc. to UL 1077	-
Short-circuit current rating acc. to UL 489	10 kA
Application	-
Reference temperature for tripping characteristics	40 °C
Electrical endurance	6,000 ops (AC), 6,000 ops. (DC); 1 cycle (1 s - ON, 9 s - OFF)
Mechanical data	
Housing	Insulation group II, RAL 7035
Toggle	Insulation group II, black, sealable
Contact position indication	Real CPI (green OFF / red ON)
Protection degree acc. to DIN EN 60529	IP20*, IP40 in enclosure with cover
Mechanical endurance	20,000 ops.
Shock resistance acc. to IEC/EN 60068-2-27	25 g - 2 shocks - 13 ms
Vibration resistance acc. to IEC/EN 60068-2-6	5g - 20 cycles at 5...150...5 Hz with load 0.8 I_n
Environmental conditions (damp heat cyclic) acc. to IEC/EN 60068-2-30	28 cycles with 55°C/90-96% and 25°C/95-100%
Ambient temperature	-25 ... +55°C
Storage temperature	-40 ... +70 °C
Installation	
Terminal	Failsafe bi-directional cylinder-lift terminal
Cross-section of conductors (top/bottom)	solid, stranded: 35 mm ² / 35 mm ² flexible: 25 mm ² / 25 mm ² 18 - 4 AWG
Cross-section of busbars (top/bottom)	10 mm ² / 10 mm ² 18 - 8 AWG
Torque	2.8 Nm AWG 18-16: 13.3 in-lbs. AWG 14-10: 17.7 in-lbs. AWG 8-4: 39.8 in-lbs.
Screwdriver	No. 2 Pozidrive
Mounting	On DIN rail 35 mm acc. to EN 60715 by fast clip
Mounting position	any
Supply	optional
Dimensions and weight	
Mounting dimensions acc. to DIN 43880	Mounting dimension 3
Pole dimensions (H x D x W)	111 x 69 x 17.5 mm
Pole weight	approx. 125 g
Combination with auxiliary elements	
Auxiliary contact	Yes
Signal contact	Yes
Shunt trip	Yes

* Also fulfilling the requirements acc. to the protection degree IPXXB

Miniature Circuit Breaker SU200 M

Tripping characteristics

Tripping characteristics

Acc. to	Tripping characteristics	Rated current I_n	Thermal release ¹⁾		Electromagnetic release ²⁾		
			Conventional non-tripping current I_1	conventional tripping current I_2	Tripping time	Range of instantaneous tripping	Tripping time
IEC/EN 60947-2	C	0.5 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	$> 1 \text{ h}$ $< 1 \text{ h}^{3)}$	$5 \cdot I_n$ $10 \cdot I_n$	$> 0.2 \text{ s}$ $< 0.2 \text{ s}$
	K	0.2 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	$> 1 \text{ h}$ $< 1 \text{ h}^{3)}$	$10 \cdot I_n$ $14 \cdot I_n$	$> 0.2 \text{ s}$ $< 0.2 \text{ s}$
	Z	0.5 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	$> 1 \text{ h}$ $< 1 \text{ h}^{3)}$	$2 \cdot I_n$ $3 \cdot I_n$	$> 0.2 \text{ s}$ $< 0.2 \text{ s}$

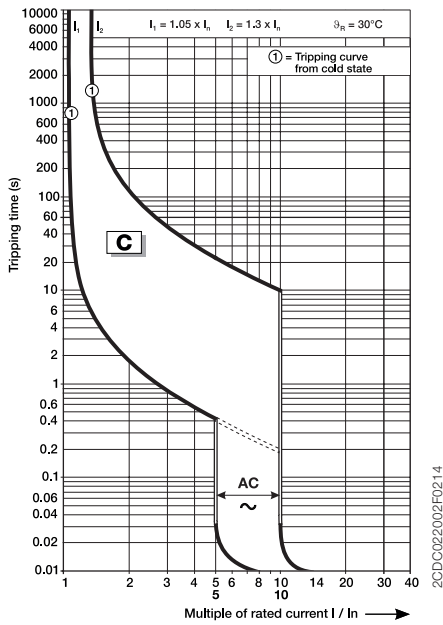
¹⁾ The thermal releases are calibrated to a nominal reference ambient temperature of 30 °C.

In the case of higher ambient temperatures, the current values fall by approx. 6 % for each 10 K temperature rise.

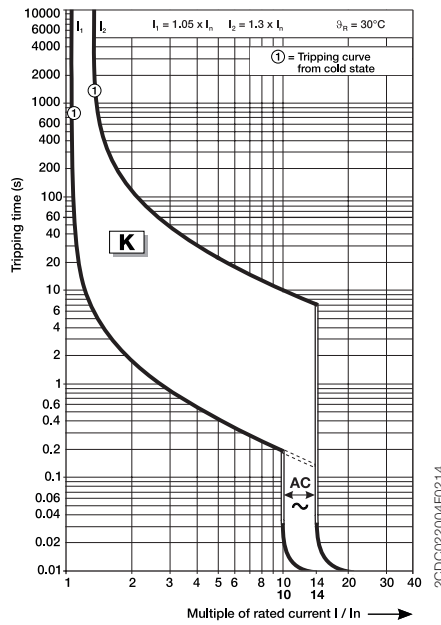
²⁾ The indicated tripping values of electromagnetic tripping devices apply to a frequency of 50/60 Hz. The thermal release operates independent of frequency.

³⁾ As from operating temperature (after $I_1 > 1 \text{ h}$)

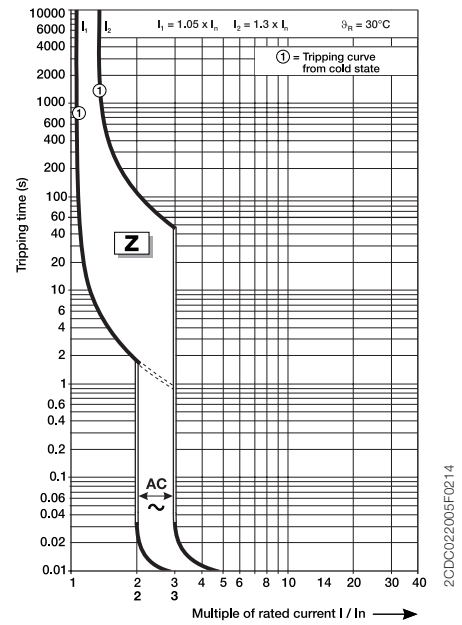
C characteristic



K characteristic



Z characteristic



Miniature Circuit Breaker SU200 M Derating

Deviating ambient temperature

The rated value of the current of a miniature circuit breaker of SU200 M series refers to a reference ambient temperature of 30 °C acc. to IEC/EN 60947-2 and 40° acc. to UL/CSA. The

following table shows derating factors for ambient temperature from -40 °C to 70 °C for the characteristics C, K, Z.

Standard	Rated current I_n A	Maximum operating current at ambient temperature T											
		A	- 40 °C	- 30 °C	- 20 °C	- 10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C
IEC/EN 60947-2	0.2 *	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.17
	0.3 *	0.39	0.37	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26
	0.5	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.5	0.48	0.46	0.45	0.43
	0.75 *	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.70	0.67	0.65
	1	1.29	1.24	1.20	1.16	1.12	1.08	1.04	1	0.96	0.93	0.89	0.86
	1.6	1.68	1.62	1.56	1.50	1.45	1.40	1.35	1.3	1.25	1.21	1.16	1.12
	2	2.58	2.49	2.40	2.31	2.23	2.15	2.07	2	1.93	1.85	1.79	1.72
	3	3.87	3.73	3.60	3.47	3.35	3.23	3.11	3	2.89	2.78	2.68	2.58
	4	5.16	4.97	4.80	4.63	4.46	4.30	4.15	4	3.85	3.71	3.57	3.44
	5	6.45	6.22	6.00	5.78	5.58	5.38	5.19	5	4.82	4.64	4.47	4.30
	6	7.74	7.46	7.20	6.94	6.69	6.45	6.22	6	5.78	5.56	5.36	5.16
	8	10.32	9.95	9.59	9.25	8.92	8.60	8.30	8	7.70	7.42	7.14	6.88
	10	12.90	12.44	11.99	11.56	11.15	10.75	10.37	10	9.63	9.27	8.93	8.60
	13	16.76	16.17	15.59	15.03	14.50	13.98	13.48	13	12.52	12.06	11.61	11.18
	15	19.34	18.65	17.99	17.35	16.73	16.13	15.56	15	14.45	13.91	13.40	12.90
	16	20.63	19.90	19.19	18.50	17.84	17.21	16.59	16	15.41	14.84	14.29	13.76
	20	25.79	24.87	23.98	23.13	22.30	21.51	20.74	20	19.26	18.55	17.86	17.20
25	32.24	31.09	29.98	28.91	27.88	26.88	25.93	25	24.08	23.18	22.33	21.50	
30	38.69	37.31	35.98	34.69	33.45	32.26	31.11	30	28.89	27.82	26.79	25.80	
32	41.27	39.79	38.37	37.01	35.69	34.41	33.18	32	30.82	29.68	28.58	27.52	
35	45.14	43.53	41.97	40.47	39.03	37.64	36.30	35	33.71	32.46	31.26	30.10	
40	51.58	49.74	47.97	46.26	44.61	43.01	41.48	40	38.52	37.09	35.72	34.40	
50	64.48	62.18	59.96	57.82	55.76	53.77	51.85	50	48.15	46.37	44.65	43.00	
60	77.38	74.61	71.95	69.39	66.91	64.52	62.22	60	57.78	55.64	53.58	51.60	
63	81.24	78.35	75.55	72.85	70.25	67.75	65.33	63	61	58	56	54	
UL 489	0.2 *	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18
	0.3 *	0.40	0.39	0.37	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27
	0.5	0.67	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.5	0.48	0.46	0.45
	0.75 *	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.70	0.67
	1	1.34	1.29	1.24	1.20	1.16	1.12	1.08	1.04	1	0.96	0.93	0.89
	1.6	1.74	1.68	1.62	1.56	1.50	1.45	1.40	1.35	1.3	1.25	1.21	1.16
	2	2.67	2.58	2.49	2.40	2.31	2.23	2.15	2.07	2	1.93	1.85	1.79
	3	4.01	3.87	3.73	3.60	3.47	3.35	3.23	3.11	3	2.89	2.78	2.68
	4	5.35	5.16	4.97	4.80	4.63	4.46	4.30	4.15	4	3.85	3.71	3.57
	5	6.69	6.45	6.22	6.00	5.78	5.58	5.38	5.19	5	4.82	4.64	4.47
	6	8.02	7.74	7.46	7.20	6.94	6.69	6.45	6.22	6	5.78	5.56	5.36
	8	10.70	10.32	9.95	9.59	9.25	8.92	8.60	8.30	8	7.70	7.42	7.14
	10	13.37	12.90	12.44	11.99	11.56	11.15	10.75	10.37	10	9.63	9.27	8.93
	13	17.38	16.76	16.17	15.59	15.03	14.50	13.98	13.48	13	12.52	12.06	11.61
	15	20.06	19.34	18.65	17.99	17.35	16.73	16.13	15.56	15	14.45	13.91	13.40
	16	21.40	20.63	19.90	19.19	18.50	17.84	17.21	16.59	16	15.41	14.84	14.29
	20	26.75	25.79	24.87	23.98	23.13	22.30	21.51	20.74	20	19.26	18.55	17.86
25	33.43	32.24	31.09	29.98	28.91	27.88	26.88	25.93	25	24.08	23.18	22.33	
30	40.12	38.69	37.31	35.98	34.69	33.45	32.26	31.11	30	28.89	27.82	26.79	
32	42.79	41.27	39.79	38.37	37.01	35.69	34.41	33.18	32	30.82	29.68	28.58	
35	46.81	45.14	43.53	41.97	40.47	39.03	37.64	36.30	35	33.71	32.46	31.26	
40	53.49	51.58	49.74	47.97	46.26	44.61	43.01	41.48	40	38.52	37.09	35.72	
50	66.87	64.48	62.18	59.96	57.82	55.76	53.77	51.85	50	48.15	46.37	44.65	
60	80.24	77.38	74.61	71.95	69.39	66.91	64.52	62.22	60	57.78	55.64	53.58	
63	84.25	81.24	78.35	75.55	72.85	70.25	67.75	65.33	63	60.67	58.42	56.26	

* Current ratings 0.2, 0.3 and 0.75 A available with K characteristic only

Miniature Circuit Breaker SU200 M Derating

Influence of adjacent devices, internal resistance and power loss

Influence of adjacent devices

If several miniature circuit breakers are installed directly side by side with high load on all poles, a correction factor has to be applied to the rated current (see table). If distance pieces are used, the factor is not to be considered.

No. of adjacent devices	Factor F
1	1
2, 3	0.9
4, 5	0.8
≥ 6	0.75

Internal resistance and power loss per pole

Rated current I_n A	C, K characteristics		Z characteristics	
	Internal resistance per pole R_i mΩ	Power loss P_v W	Internal resistance per pole R_i mΩ	Power loss P_v W
0.2	42500	1.7	-	-
0.3	18889	1.7	-	-
0.5	5600	1.4	9000	2.3
0.75	2489	1.4	-	-
1	1400	1.4	2200	2.2
1.6	703	1.8	1000	2.6
2	450	1.8	650	2.6
3	178	1.6	250	2.3
4	113	1.8	140	2.2
5	50	1.3	100	2.5
6	56	2.0	70	2.5
8	23	1.5	28	1.8
10	21	2.1	21	2.1
13	14	2.3	17	2.9
15	11	2.4	13	2.9
16	9.8	2.5	10	2.6
20	6.3	2.5	6.5	2.6
25	5.1	3.2	5.1	3.2
30	3.9	3.5	3.9	3.5
32	3.6	3.7	3.6	3.7
35	3.3	4.1	3.3	4.1
40	2.8	4.5	2.8	4.5
50	1.8	4.5	1.8	4.5
60	1.4	4.9	1.4	4.9
63	1.4	5.4	1.4	5.4

Internal resistances are subject to application-specific and environment-specific conditions and are therefore to be considered as typical values.

Miniature Circuit Breaker SU200 M

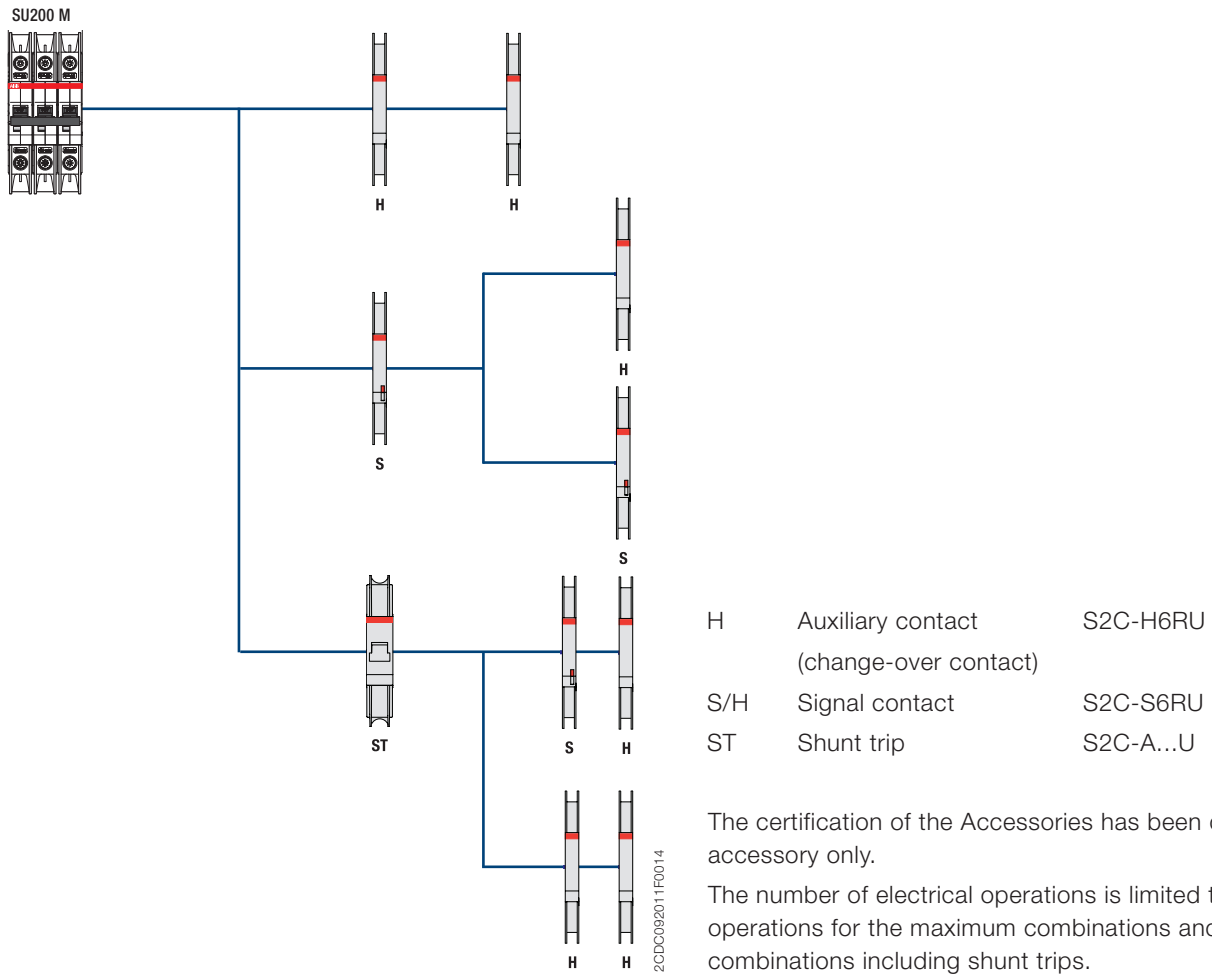
Current limiting – I_{peak} and I^2t values acc. to UL 489

Characteristic	Nominal current A	Voltage V	Current A	Power Factor	I_{Peak} kA	I^2t kA ² S
K	≤ 35	480Y/277	10000	0.45-0.5	9.5	80.0
	> 35	240	10000	0.45-0.5	8.0	110.0
C, Z	≤ 40	480Y/277	10000	0.45-0.5	9.5	80.0
	> 40	240	10000	0.45-0.5	8.0	110.0

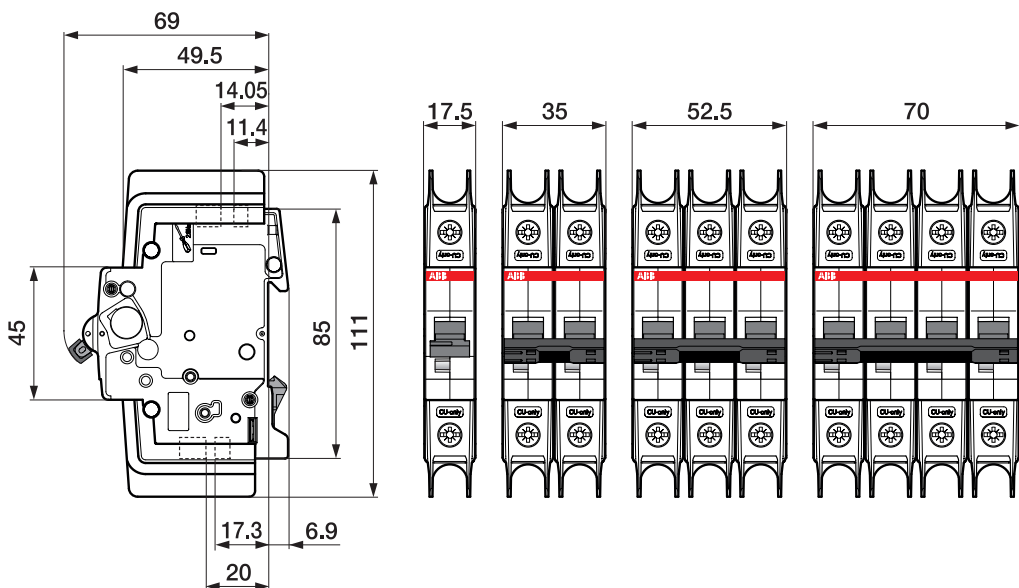
Miniature Circuit Breaker SU200 M

Accessories and dimensional drawing

Accessory overview



Dimensional drawing



Miniature Circuit Breaker SU200 M

Ordering data characteristic C



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
1	0.5	SU201M-C0,5	2CDS271337R0984	0.125	10
	1	SU201M-C1	2CDS271337R0014	0.125	10
	1.6	SU201M-C1,6	2CDS271337R0974	0.125	10
	2	SU201M-C2	2CDS271337R0024	0.125	10
	3	SU201M-C3	2CDS271337R0034	0.125	10
	4	SU201M-C4	2CDS271337R0044	0.125	10
	5	SU201M-C5	2CDS271337R0054	0.125	10
	6	SU201M-C6	2CDS271337R0064	0.125	10
	8	SU201M-C8	2CDS271337R0084	0.125	10
	10	SU201M-C10	2CDS271337R0104	0.125	10
	13	SU201M-C13	2CDS271337R0134	0.125	10
	15	SU201M-C15	2CDS271337R0154	0.125	10
	16	SU201M-C16	2CDS271337R0164	0.125	10
	20	SU201M-C20	2CDS271337R0204	0.125	10
	25	SU201M-C25	2CDS271337R0254	0.125	10
	30	SU201M-C30	2CDS271337R0304	0.125	10
	32	SU201M-C32	2CDS271337R0324	0.125	10
	35	SU201M-C35	2CDS271337R0354	0.125	10
	40	SU201M-C40	2CDS271337R0404	0.125	10
	50	SU201M-C50	2CDS271337R0504	0.125	10
60	SU201M-C60	2CDS271337R0604	0.125	10	
63	SU201M-C63	2CDS271337R0634	0.125	10	
2	0.5	SU202M-C0,5	2CDS272337R0984	0.250	5
	1	SU202M-C1	2CDS272337R0014	0.250	5
	1.6	SU202M-C1,6	2CDS272337R0974	0.250	5
	2	SU202M-C2	2CDS272337R0024	0.250	5
	3	SU202M-C3	2CDS272337R0034	0.250	5
	4	SU202M-C4	2CDS272337R0044	0.250	5
	5	SU202M-C5	2CDS272337R0054	0.250	5
	6	SU202M-C6	2CDS272337R0064	0.250	5
	8	SU202M-C8	2CDS272337R0084	0.250	5
	10	SU202M-C10	2CDS272337R0104	0.250	5
	13	SU202M-C13	2CDS272337R0134	0.250	5
	15	SU202M-C15	2CDS272337R0154	0.250	5
	16	SU202M-C16	2CDS272337R0164	0.250	5
	20	SU202M-C20	2CDS272337R0204	0.250	5
	25	SU202M-C25	2CDS272337R0254	0.250	5
	30	SU202M-C30	2CDS272337R0304	0.250	5
	32	SU202M-C32	2CDS272337R0324	0.250	5
	35	SU202M-C35	2CDS272337R0354	0.250	5
	40	SU202M-C40	2CDS272337R0404	0.250	5
	50	SU202M-C50	2CDS272337R0504	0.250	5
60	SU202M-C60	2CDS272337R0604	0.250	5	
63	SU202M-C63	2CDS272337R0634	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic C



2CDC021046S0014



2CDC021047S0014

Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.5	SU203M-C0,5	2CDS273337R0984	0.375	3
	1	SU203M-C1	2CDS273337R0014	0.375	3
	1.6	SU203M-C1,6	2CDS273337R0974	0.375	3
	2	SU203M-C2	2CDS273337R0024	0.375	3
	3	SU203M-C3	2CDS273337R0034	0.375	3
	4	SU203M-C4	2CDS273337R0044	0.375	3
	5	SU203M-C5	2CDS273337R0054	0.375	3
	6	SU203M-C6	2CDS273337R0064	0.375	3
	8	SU203M-C8	2CDS273337R0084	0.375	3
	10	SU203M-C10	2CDS273337R0104	0.375	3
	13	SU203M-C13	2CDS273337R0134	0.375	3
	15	SU203M-C15	2CDS273337R0154	0.375	3
	16	SU203M-C16	2CDS273337R0164	0.375	3
	20	SU203M-C20	2CDS273337R0204	0.375	3
	25	SU203M-C25	2CDS273337R0254	0.375	3
	30	SU203M-C30	2CDS273337R0304	0.375	3
	32	SU203M-C32	2CDS273337R0324	0.375	3
	35	SU203M-C35	2CDS273337R0354	0.375	3
	40	SU203M-C40	2CDS273337R0404	0.375	3
50	SU203M-C50	2CDS273337R0504	0.375	3	
60	SU203M-C60	2CDS273337R0604	0.375	3	
63	SU203M-C63	2CDS273337R0634	0.375	3	
4	0.5	SU204M-C0,5	2CDS274337R0984	0.500	2
	1	SU204M-C1	2CDS274337R0014	0.500	2
	1.6	SU204M-C1,6	2CDS274337R0974	0.500	2
	2	SU204M-C2	2CDS274337R0024	0.500	2
	3	SU204M-C3	2CDS274337R0034	0.500	2
	4	SU204M-C4	2CDS274337R0044	0.500	2
	5	SU204M-C5	2CDS274337R0054	0.500	2
	6	SU204M-C6	2CDS274337R0064	0.500	2
	8	SU204M-C8	2CDS274337R0084	0.500	2
	10	SU204M-C10	2CDS274337R0104	0.500	2
	13	SU204M-C13	2CDS274337R0134	0.500	2
	15	SU204M-C15	2CDS274337R0154	0.500	2
	16	SU204M-C16	2CDS274337R0164	0.500	2
	20	SU204M-C20	2CDS274337R0204	0.500	2
	25	SU204M-C25	2CDS274337R0254	0.500	2
	30	SU204M-C30	2CDS274337R0304	0.500	2
	32	SU204M-C32	2CDS274337R0324	0.500	2
	35	SU204M-C35	2CDS274337R0354	0.500	2
	40	SU204M-C40	2CDS274337R0404	0.500	2
50	SU204M-C50	2CDS274337R0504	0.500	2	
60	SU204M-C60	2CDS274337R0604	0.500	2	
63	SU204M-C63	2CDS274337R0634	0.500	2	

Miniature Circuit Breaker SU200 M

Ordering data characteristic K



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
1	0.2	SU201M-K0,2	2CDS271337R0087	0.125	10
	0.3	SU201M-K0,3	2CDS271337R0117	0.125	10
	0.5	SU201M-K0,5	2CDS271337R0157	0.125	10
	0.75	SU201M-K0,75	2CDS271337R0187	0.125	10
	1	SU201M-K1	2CDS271337R0217	0.125	10
	1.6	SU201M-K1,6	2CDS271337R0257	0.125	10
	2	SU201M-K2	2CDS271337R0277	0.125	10
	3	SU201M-K3	2CDS271337R0317	0.125	10
	4	SU201M-K4	2CDS271337R0337	0.125	10
	5	SU201M-K5	2CDS271337R0357	0.125	10
	6	SU201M-K6	2CDS271337R0377	0.125	10
	8	SU201M-K8	2CDS271337R0407	0.125	10
	10	SU201M-K10	2CDS271337R0427	0.125	10
	13	SU201M-K13	2CDS271337R0447	0.125	10
	15	SU201M-K15	2CDS271337R0457	0.125	10
	16	SU201M-K16	2CDS271337R0467	0.125	10
	20	SU201M-K20	2CDS271337R0487	0.125	10
	25	SU201M-K25	2CDS271337R0517	0.125	10
	30	SU201M-K30	2CDS271337R0527	0.125	10
	32	SU201M-K32	2CDS271337R0537	0.125	10
	35	SU201M-K35	2CDS271337R0547	0.125	10
40	SU201M-K40	2CDS271337R0557	0.125	10	
50	SU201M-K50	2CDS271337R0577	0.125	10	
60	SU201M-K60	2CDS271337R0587	0.125	10	
63	SU201M-K63	2CDS271337R0607	0.125	10	
2	0.2	SU202M-K0,2	2CDS272337R0087	0.250	5
	0.3	SU202M-K0,3	2CDS272337R0117	0.250	5
	0.5	SU202M-K0,5	2CDS272337R0157	0.250	5
	0.75	SU202M-K0,75	2CDS272337R0187	0.250	5
	1	SU202M-K1	2CDS272337R0217	0.250	5
	1.6	SU202M-K1,6	2CDS272337R0257	0.250	5
	2	SU202M-K2	2CDS272337R0277	0.250	5
	3	SU202M-K3	2CDS272337R0317	0.250	5
	4	SU202M-K4	2CDS272337R0337	0.250	5
	5	SU202M-K5	2CDS272337R0357	0.250	5
	6	SU202M-K6	2CDS272337R0377	0.250	5
	8	SU202M-K8	2CDS272337R0407	0.250	5
	10	SU202M-K10	2CDS272337R0427	0.250	5
	13	SU202M-K13	2CDS272337R0447	0.250	5
	15	SU202M-K15	2CDS272337R0457	0.250	5
	16	SU202M-K16	2CDS272337R0467	0.250	5
	20	SU202M-K20	2CDS272337R0487	0.250	5
	25	SU202M-K25	2CDS272337R0517	0.250	5
	30	SU202M-K30	2CDS272337R0527	0.250	5
	32	SU202M-K32	2CDS272337R0537	0.250	5
	35	SU202M-K35	2CDS272337R0547	0.250	5
40	SU202M-K40	2CDS272337R0557	0.250	5	
50	SU202M-K50	2CDS272337R0577	0.250	5	
60	SU202M-K60	2CDS272337R0587	0.250	5	
63	SU202M-K63	2CDS272337R0607	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic K



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Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.2	SU203M-K0,2	2CDS273337R0087	0.375	3
	0.3	SU203M-K0,3	2CDS273337R0117	0.375	3
	0.5	SU203M-K0,5	2CDS273337R0157	0.375	3
	0.75	SU203M-K0,75	2CDS273337R0187	0.375	3
	1	SU203M-K1	2CDS273337R0217	0.375	3
	1.6	SU203M-K1,6	2CDS273337R0257	0.375	3
	2	SU203M-K2	2CDS273337R0277	0.375	3
	3	SU203M-K3	2CDS273337R0317	0.375	3
	4	SU203M-K4	2CDS273337R0337	0.375	3
	5	SU203M-K5	2CDS273337R0357	0.375	3
	6	SU203M-K6	2CDS273337R0377	0.375	3
	8	SU203M-K8	2CDS273337R0407	0.375	3
	10	SU203M-K10	2CDS273337R0427	0.375	3
	13	SU203M-K13	2CDS273337R0447	0.375	3
	15	SU203M-K15	2CDS273337R0457	0.375	3
	16	SU203M-K16	2CDS273337R0467	0.375	3
	20	SU203M-K20	2CDS273337R0487	0.375	3
	25	SU203M-K25	2CDS273337R0517	0.375	3
	30	SU203M-K30	2CDS273337R0527	0.375	3
32	SU203M-K32	2CDS273337R0537	0.375	3	
35	SU203M-K35	2CDS273337R0547	0.375	3	
40	SU203M-K40	2CDS273337R0557	0.375	3	
50	SU203M-K50	2CDS273337R0577	0.375	3	
60	SU203M-K60	2CDS273337R0587	0.375	3	
63	SU203M-K63	2CDS273337R0607	0.375	3	
4	0.2	SU204M-K0,2	2CDS274337R0087	0.500	2
	0.3	SU204M-K0,3	2CDS274337R0117	0.500	2
	0.5	SU204M-K0,5	2CDS274337R0157	0.500	2
	0.75	SU204M-K0,75	2CDS274337R0187	0.500	2
	1	SU204M-K1	2CDS274337R0217	0.500	2
	1.6	SU204M-K1,6	2CDS274337R0257	0.500	2
	2	SU204M-K2	2CDS274337R0277	0.500	2
	3	SU204M-K3	2CDS274337R0317	0.500	2
	4	SU204M-K4	2CDS274337R0337	0.500	2
	5	SU204M-K5	2CDS274337R0357	0.500	2
	6	SU204M-K6	2CDS274337R0377	0.500	2
	8	SU204M-K8	2CDS274337R0407	0.500	2
	10	SU204M-K10	2CDS274337R0427	0.500	2
	13	SU204M-K13	2CDS274337R0447	0.500	2
	15	SU204M-K15	2CDS274337R0457	0.500	2
	16	SU204M-K16	2CDS274337R0467	0.500	2
	20	SU204M-K20	2CDS274337R0487	0.500	2
	25	SU204M-K25	2CDS274337R0517	0.500	2
	30	SU204M-K30	2CDS274337R0527	0.500	2
32	SU204M-K32	2CDS274337R0537	0.500	2	
35	SU204M-K35	2CDS274337R0547	0.500	2	
40	SU204M-K40	2CDS274337R0557	0.500	2	
50	SU204M-K50	2CDS274337R0577	0.500	2	
60	SU204M-K60	2CDS274337R0587	0.500	2	
63	SU204M-K63	2CDS274337R0607	0.500	2	

Miniature Circuit Breaker SU200 M

Ordering data characteristic Z



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE	Packing unit
				kg	PCE
1	0.5	SU201M-Z0,5	2CDS271337R0158	0.125	10
	1	SU201M-Z1	2CDS271337R0218	0.125	10
	1.6	SU201M-Z1,6	2CDS271337R0258	0.125	10
	2	SU201M-Z2	2CDS271337R0278	0.125	10
	3	SU201M-Z3	2CDS271337R0318	0.125	10
	4	SU201M-Z4	2CDS271337R0338	0.125	10
	5	SU201M-Z5	2CDS271337R0358	0.125	10
	6	SU201M-Z6	2CDS271337R0378	0.125	10
	8	SU201M-Z8	2CDS271337R0408	0.125	10
	10	SU201M-Z10	2CDS271337R0428	0.125	10
	13	SU201M-Z13	2CDS271337R0448	0.125	10
	15	SU201M-Z15	2CDS271337R0458	0.125	10
	16	SU201M-Z16	2CDS271337R0468	0.125	10
	20	SU201M-Z20	2CDS271337R0488	0.125	10
	25	SU201M-Z25	2CDS271337R0518	0.125	10
	30	SU201M-Z30	2CDS271337R0528	0.125	10
	32	SU201M-Z32	2CDS271337R0538	0.125	10
	35	SU201M-Z35	2CDS271337R0548	0.125	10
	40	SU201M-Z40	2CDS271337R0558	0.125	10
	50	SU201M-Z50	2CDS271337R0578	0.125	10
60	SU201M-Z60	2CDS271337R0588	0.125	10	
63	SU201M-Z63	2CDS271337R0608	0.125	10	
2	0.5	SU202M-Z0,5	2CDS272337R0158	0.250	5
	1	SU202M-Z1	2CDS272337R0218	0.250	5
	1.6	SU202M-Z1,6	2CDS272337R0258	0.250	5
	2	SU202M-Z2	2CDS272337R0278	0.250	5
	3	SU202M-Z3	2CDS272337R0318	0.250	5
	4	SU202M-Z4	2CDS272337R0338	0.250	5
	5	SU202M-Z5	2CDS272337R0358	0.250	5
	6	SU202M-Z6	2CDS272337R0378	0.250	5
	8	SU202M-Z8	2CDS272337R0408	0.250	5
	10	SU202M-Z10	2CDS272337R0428	0.250	5
	13	SU202M-Z13	2CDS272337R0448	0.250	5
	15	SU202M-Z15	2CDS272337R0458	0.250	5
	16	SU202M-Z16	2CDS272337R0468	0.250	5
	20	SU202M-Z20	2CDS272337R0488	0.250	5
	25	SU202M-Z25	2CDS272337R0518	0.250	5
	30	SU202M-Z30	2CDS272337R0528	0.250	5
	32	SU202M-Z32	2CDS272337R0538	0.250	5
	35	SU202M-Z35	2CDS272337R0548	0.250	5
	40	SU202M-Z40	2CDS272337R0558	0.250	5
	50	SU202M-Z50	2CDS272337R0578	0.250	5
60	SU202M-Z60	2CDS272337R0588	0.250	5	
63	SU202M-Z63	2CDS272337R0608	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic Z



2CDC021046S0014



2CDC021047S0014

Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.5	SU203M-Z0,5	2CDS273337R0158	0.375	3
	1	SU203M-Z1	2CDS273337R0218	0.375	3
	1.6	SU203M-Z1,6	2CDS273337R0258	0.375	3
	2	SU203M-Z2	2CDS273337R0278	0.375	3
	3	SU203M-Z3	2CDS273337R0318	0.375	3
	4	SU203M-Z4	2CDS273337R0338	0.375	3
	5	SU203M-Z5	2CDS273337R0358	0.375	3
	6	SU203M-Z6	2CDS273337R0378	0.375	3
	8	SU203M-Z8	2CDS273337R0408	0.375	3
	10	SU203M-Z10	2CDS273337R0428	0.375	3
	13	SU203M-Z13	2CDS273337R0448	0.375	3
	15	SU203M-Z15	2CDS273337R0458	0.375	3
	16	SU203M-Z16	2CDS273337R0468	0.375	3
	20	SU203M-Z20	2CDS273337R0488	0.375	3
	25	SU203M-Z25	2CDS273337R0518	0.375	3
	30	SU203M-Z30	2CDS273337R0528	0.375	3
	32	SU203M-Z32	2CDS273337R0538	0.375	3
	35	SU203M-Z35	2CDS273337R0548	0.375	3
	40	SU203M-Z40	2CDS273337R0558	0.375	3
	4	0.5	SU204M-Z0,5	2CDS274337R0158	0.500
1		SU204M-Z1	2CDS274337R0218	0.500	2
1.6		SU204M-Z1,6	2CDS274337R0258	0.500	2
2		SU204M-Z2	2CDS274337R0278	0.500	2
3		SU204M-Z3	2CDS274337R0318	0.500	2
4		SU204M-Z4	2CDS274337R0338	0.500	2
5		SU204M-Z5	2CDS274337R0358	0.500	2
6		SU204M-Z6	2CDS274337R0378	0.500	2
8		SU204M-Z8	2CDS274337R0408	0.500	2
10		SU204M-Z10	2CDS274337R0428	0.500	2
13		SU204M-Z13	2CDS274337R0448	0.500	2
15		SU204M-Z15	2CDS274337R0458	0.500	2
16		SU204M-Z16	2CDS274337R0468	0.500	2
20		SU204M-Z20	2CDS274337R0488	0.500	2
25		SU204M-Z25	2CDS274337R0518	0.500	2
30		SU204M-Z30	2CDS274337R0528	0.500	2
32		SU204M-Z32	2CDS274337R0538	0.500	2
35		SU204M-Z35	2CDS274337R0548	0.500	2
40		SU204M-Z40	2CDS274337R0558	0.500	2
50		SU204M-Z50	2CDS274337R0578	0.500	2
60	SU204M-Z60	2CDS274337R0588	0.500	2	
63	SU204M-Z63	2CDS274337R0608	0.500	2	

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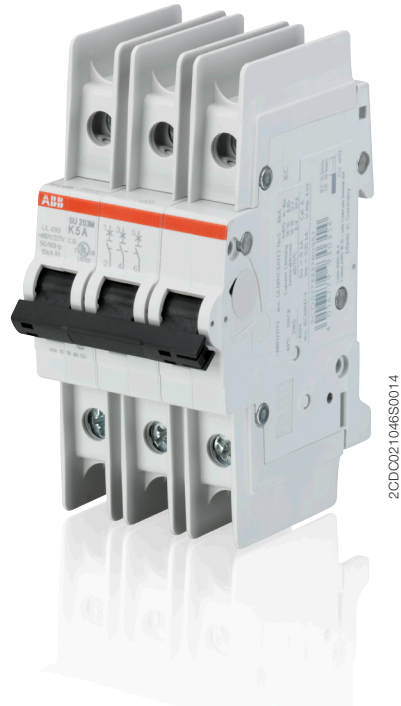
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System pro M compact® Miniature Circuit Breaker SU200 M for branch circuit protection acc. to UL 489



The miniature circuit breaker SU200 M is ABB's solution for UL 489 branch circuit protection up to 480 Y/277 V AC and 96 V DC. This circuit breaker is an all-round device for AC and DC applications for universal use in North American and global markets due to its approvals acc. to the international standards UL, CSA and IEC. Moreover, SU200 M is fully compatible with System pro M compact® UL 489 accessories.

Features

- High performance MCB with 10 kA interrupting capacity acc. to UL 489 / CSA 22.2 No. 5 and 15 kA breaking capacity acc. to IEC/EN 60947-2
- Certified up to $I_n = 40$ A at 480 Y/277 V AC acc. to UL 489 / CSA 22.2 No. 5
- Certified for AC and DC use acc. to UL and CSA
- 40 °C reference temperature acc. to UL and CSA
- Current limiting acc. to UL 489
- Clear contact position indication in red/green ("real CPI")

Standards and approvals

Standards

UL 489
CSA 22.2 No. 5
IEC/EN 60947-2

Approvals

UL 489	US
CSA 22.2 No. 5	CA
VDE	DE
CCC	CN

Miniature Circuit Breaker SU200 M

Technical data

General Data	
Standards	UL 489, CSA 22.2 No. 5, IEC/EN 60947-2
Poles	1P, 2P, 3P, 4P
Tripping characteristics	C, K, Z
Rated current I_n	0.2 - 63 A
Rated frequency f	50 / 60 Hz, DC (0 Hz)
Rated insulation voltage $U_{acc.}$ to IEC/EN 60664-1	250 V AC (phase to ground), 440 V AC (phase to phase)
Overvoltage category	III
Pollution degree	3
IEC/EN 60947-2	
Rated operational voltage U_n	1P: 230 V AC; 2P, 3P, 4P: 400 V AC
Max. power frequency recovery voltage U_{rmax}	AC 1P: 253 V AC; 2P, 3P, 4P: 440 V AC
Min. operating voltage	12 V AC, 12 V DC
Rated ultimate short-circuit breaking capacity I_{cu}	15 kA
Rated service short-circuit breaking capacity I_{cs}	≤ 40 A: 11.25 kA > 40 A: 7.5 kA
Rated impulse withstand voltage U_{imp} (1.2/50µs)	4 kV (test voltage 6.2 kV at sea level, 5 kV at 2,000 m)
Dielectric test voltage	2 kV (50 / 60Hz, 1 min.)
Reference temperature for tripping characteristics	30 °C
Electrical endurance	$I_n < 30$ A: 20,000 ops (AC), $I_n \geq 30$ A: 10,000 ops. (AC); 1 cycle (2 s - ON, 13 s - OFF, $I_n \leq 32$ A), 1 cycle (2 s - ON, 28 s - OFF, $I_n > 32$ A)
UL / CSA	
Rated voltage	AC 1P: 277 V AC up to 40 A for C, Z char., AC 277 V AC up to 35 A for K char., 240 V AC AC 2P, 3P, 4P: 480 Y / 277 V AC up to 40 A for C, Z char., AC 480 Y / 277 V AC up to 35 A for K char., 240 V AC DC 1P: 48 V DC; 2P: 96 V DC (2p in series)
Rated interrupting capacity acc. to UL 1077	-
Short-circuit current rating acc. to UL 489	10 kA
Application	-
Reference temperature for tripping characteristics	40 °C
Electrical endurance	6,000 ops (AC), 6,000 ops. (DC); 1 cycle (1 s - ON, 9 s - OFF)
Mechanical data	
Housing	Insulation group II, RAL 7035
Toggle	Insulation group II, black, sealable
Contact position indication	Real CPI (green OFF / red ON)
Protection degree acc. to DIN EN 60529	IP20*, IP40 in enclosure with cover
Mechanical endurance	20,000 ops.
Shock resistance acc. to IEC/EN 60068-2-27	25 g - 2 shocks - 13 ms
Vibration resistance acc. to IEC/EN 60068-2-6	5g - 20 cycles at 5...150...5 Hz with load 0.8 I_n
Environmental conditions (damp heat cyclic) acc. to IEC/EN 60068-2-30	28 cycles with 55°C/90-96% and 25°C/95-100%
Ambient temperature	-25 ... +55°C
Storage temperature	-40 ... +70 °C
Installation	
Terminal	Failsafe bi-directional cylinder-lift terminal
Cross-section of conductors (top/bottom)	solid, stranded: 35 mm ² / 35 mm ² flexible: 25 mm ² / 25 mm ² 18 - 4 AWG
Cross-section of busbars (top/bottom)	10 mm ² / 10 mm ² 18 - 8 AWG
Torque	2.8 Nm AWG 18-16: 13.3 in-lbs. AWG 14-10: 17.7 in-lbs. AWG 8-4: 39.8 in-lbs.
Screwdriver	No. 2 Pozidrive
Mounting	On DIN rail 35 mm acc. to EN 60715 by fast clip
Mounting position	any
Supply	optional
Dimensions and weight	
Mounting dimensions acc. to DIN 43880	Mounting dimension 3
Pole dimensions (H x D x W)	111 x 69 x 17.5 mm
Pole weight	approx. 125 g
Combination with auxiliary elements	
Auxiliary contact	Yes
Signal contact	Yes
Shunt trip	Yes

* Also fulfilling the requirements acc. to the protection degree IPXXB

Miniature Circuit Breaker SU200 M

Tripping characteristics

Tripping characteristics

Acc. to	Tripping characteristics	Rated current I_n	Thermal release ¹⁾		Electromagnetic release ²⁾		
			Currents: conventional non-tripping current I_1	conventional tripping current I_2	Tripping time	Range of instantaneous tripping	Tripping time
IEC/EN 60947-2	C	0.5 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	> 1 h < 1 h ³⁾	$5 \cdot I_n$ $10 \cdot I_n$	> 0.2 s < 0.2 s
	K	0.2 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	> 1 h < 1 h ³⁾	$10 \cdot I_n$ $14 \cdot I_n$	> 0.2 s < 0.2 s
	Z	0.5 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	> 1 h < 1 h ³⁾	$2 \cdot I_n$ $3 \cdot I_n$	> 0.2 s < 0.2 s

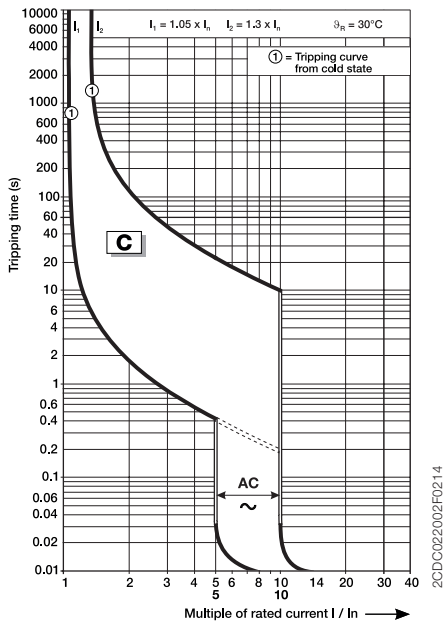
¹⁾ The thermal releases are calibrated to a nominal reference ambient temperature of 30 °C.

In the case of higher ambient temperatures, the current values fall by approx. 6 % for each 10 K temperature rise.

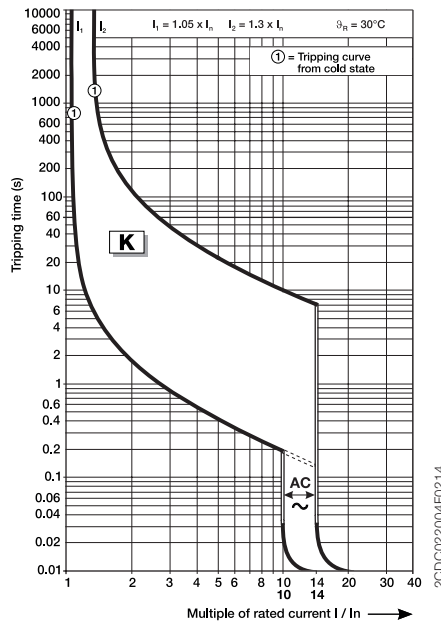
²⁾ The indicated tripping values of electromagnetic tripping devices apply to a frequency of 50/60 Hz. The thermal release operates independent of frequency.

³⁾ As from operating temperature (after $I_1 > 1$ h)

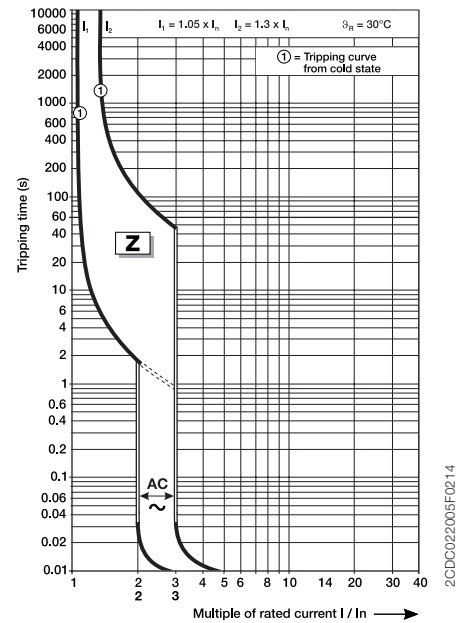
C characteristic



K characteristic



Z characteristic



Miniature Circuit Breaker SU200 M Derating

Deviating ambient temperature

The rated value of the current of a miniature circuit breaker of SU200 M series refers to a reference ambient temperature of 30 °C acc. to IEC/EN 60947-2 and 40° acc. to UL/CSA. The

following table shows derating factors for ambient temperature from -40 °C to 70 °C for the characteristics C, K, Z.

Standard	Rated current I_n A	Maximum operating current at ambient temperature T												
		A	- 40 °C	- 30 °C	- 20 °C	- 10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
IEC/EN 60947-2	0.2 *	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.17	
	0.3 *	0.39	0.37	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	
	0.5	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.5	0.48	0.46	0.45	0.43	
	0.75 *	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.70	0.67	0.65	
	1	1.29	1.24	1.20	1.16	1.12	1.08	1.04	1	0.96	0.93	0.89	0.86	
	1.6	1.68	1.62	1.56	1.50	1.45	1.40	1.35	1.3	1.25	1.21	1.16	1.12	
	2	2.58	2.49	2.40	2.31	2.23	2.15	2.07	2	1.93	1.85	1.79	1.72	
	3	3.87	3.73	3.60	3.47	3.35	3.23	3.11	3	2.89	2.78	2.68	2.58	
	4	5.16	4.97	4.80	4.63	4.46	4.30	4.15	4	3.85	3.71	3.57	3.44	
	5	6.45	6.22	6.00	5.78	5.58	5.38	5.19	5	4.82	4.64	4.47	4.30	
	6	7.74	7.46	7.20	6.94	6.69	6.45	6.22	6	5.78	5.56	5.36	5.16	
	8	10.32	9.95	9.59	9.25	8.92	8.60	8.30	8	7.70	7.42	7.14	6.88	
	10	12.90	12.44	11.99	11.56	11.15	10.75	10.37	10	9.63	9.27	8.93	8.60	
	13	16.76	16.17	15.59	15.03	14.50	13.98	13.48	13	12.52	12.06	11.61	11.18	
	15	19.34	18.65	17.99	17.35	16.73	16.13	15.56	15	14.45	13.91	13.40	12.90	
	16	20.63	19.90	19.19	18.50	17.84	17.21	16.59	16	15.41	14.84	14.29	13.76	
	20	25.79	24.87	23.98	23.13	22.30	21.51	20.74	20	19.26	18.55	17.86	17.20	
25	32.24	31.09	29.98	28.91	27.88	26.88	25.93	25	24.08	23.18	22.33	21.50		
30	38.69	37.31	35.98	34.69	33.45	32.26	31.11	30	28.89	27.82	26.79	25.80		
32	41.27	39.79	38.37	37.01	35.69	34.41	33.18	32	30.82	29.68	28.58	27.52		
35	45.14	43.53	41.97	40.47	39.03	37.64	36.30	35	33.71	32.46	31.26	30.10		
40	51.58	49.74	47.97	46.26	44.61	43.01	41.48	40	38.52	37.09	35.72	34.40		
50	64.48	62.18	59.96	57.82	55.76	53.77	51.85	50	48.15	46.37	44.65	43.00		
60	77.38	74.61	71.95	69.39	66.91	64.52	62.22	60	57.78	55.64	53.58	51.60		
63	81.24	78.35	75.55	72.85	70.25	67.75	65.33	63	61	58	56	54		
UL 489	0.2 *	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	
	0.3 *	0.40	0.39	0.37	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	
	0.5	0.67	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.5	0.48	0.46	0.45	
	0.75 *	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.70	0.67	
	1	1.34	1.29	1.24	1.20	1.16	1.12	1.08	1.04	1	0.96	0.93	0.89	
	1.6	1.74	1.68	1.62	1.56	1.50	1.45	1.40	1.35	1.3	1.25	1.21	1.16	
	2	2.67	2.58	2.49	2.40	2.31	2.23	2.15	2.07	2	1.93	1.85	1.79	
	3	4.01	3.87	3.73	3.60	3.47	3.35	3.23	3.11	3	2.89	2.78	2.68	
	4	5.35	5.16	4.97	4.80	4.63	4.46	4.30	4.15	4	3.85	3.71	3.57	
	5	6.69	6.45	6.22	6.00	5.78	5.58	5.38	5.19	5	4.82	4.64	4.47	
	6	8.02	7.74	7.46	7.20	6.94	6.69	6.45	6.22	6	5.78	5.56	5.36	
	8	10.70	10.32	9.95	9.59	9.25	8.92	8.60	8.30	8	7.70	7.42	7.14	
	10	13.37	12.90	12.44	11.99	11.56	11.15	10.75	10.37	10	9.63	9.27	8.93	
	13	17.38	16.76	16.17	15.59	15.03	14.50	13.98	13.48	13	12.52	12.06	11.61	
	15	20.06	19.34	18.65	17.99	17.35	16.73	16.13	15.56	15	14.45	13.91	13.40	
	16	21.40	20.63	19.90	19.19	18.50	17.84	17.21	16.59	16	15.41	14.84	14.29	
	20	26.75	25.79	24.87	23.98	23.13	22.30	21.51	20.74	20	19.26	18.55	17.86	
25	33.43	32.24	31.09	29.98	28.91	27.88	26.88	25.93	25	24.08	23.18	22.33		
30	40.12	38.69	37.31	35.98	34.69	33.45	32.26	31.11	30	28.89	27.82	26.79		
32	42.79	41.27	39.79	38.37	37.01	35.69	34.41	33.18	32	30.82	29.68	28.58		
35	46.81	45.14	43.53	41.97	40.47	39.03	37.64	36.30	35	33.71	32.46	31.26		
40	53.49	51.58	49.74	47.97	46.26	44.61	43.01	41.48	40	38.52	37.09	35.72		
50	66.87	64.48	62.18	59.96	57.82	55.76	53.77	51.85	50	48.15	46.37	44.65		
60	80.24	77.38	74.61	71.95	69.39	66.91	64.52	62.22	60	57.78	55.64	53.58		
63	84.25	81.24	78.35	75.55	72.85	70.25	67.75	65.33	63	60.67	58.42	56.26		

* Current ratings 0.2, 0.3 and 0.75 A available with K characteristic only

Miniature Circuit Breaker SU200 M Derating

Influence of adjacent devices, internal resistance and power loss

Influence of adjacent devices

If several miniature circuit breakers are installed directly side by side with high load on all poles, a correction factor has to be applied to the rated current (see table). If distance pieces are used, the factor is not to be considered.

No. of adjacent devices	Factor F
1	1
2, 3	0.9
4, 5	0.8
≥ 6	0.75

Internal resistance and power loss per pole

Rated current I_n A	C, K characteristics		Z characteristics	
	Internal resistance per pole R_i mΩ	Power loss P_v W	Internal resistance per pole R_i mΩ	Power loss P_v W
0.2	42500	1.7	-	-
0.3	18889	1.7	-	-
0.5	5600	1.4	9000	2.3
0.75	2489	1.4	-	-
1	1400	1.4	2200	2.2
1.6	703	1.8	1000	2.6
2	450	1.8	650	2.6
3	178	1.6	250	2.3
4	113	1.8	140	2.2
5	50	1.3	100	2.5
6	56	2.0	70	2.5
8	23	1.5	28	1.8
10	21	2.1	21	2.1
13	14	2.3	17	2.9
15	11	2.4	13	2.9
16	9.8	2.5	10	2.6
20	6.3	2.5	6.5	2.6
25	5.1	3.2	5.1	3.2
30	3.9	3.5	3.9	3.5
32	3.6	3.7	3.6	3.7
35	3.3	4.1	3.3	4.1
40	2.8	4.5	2.8	4.5
50	1.8	4.5	1.8	4.5
60	1.4	4.9	1.4	4.9
63	1.4	5.4	1.4	5.4

Internal resistances are subject to application-specific and environment-specific conditions and are therefore to be considered as typical values.

Miniature Circuit Breaker SU200 M

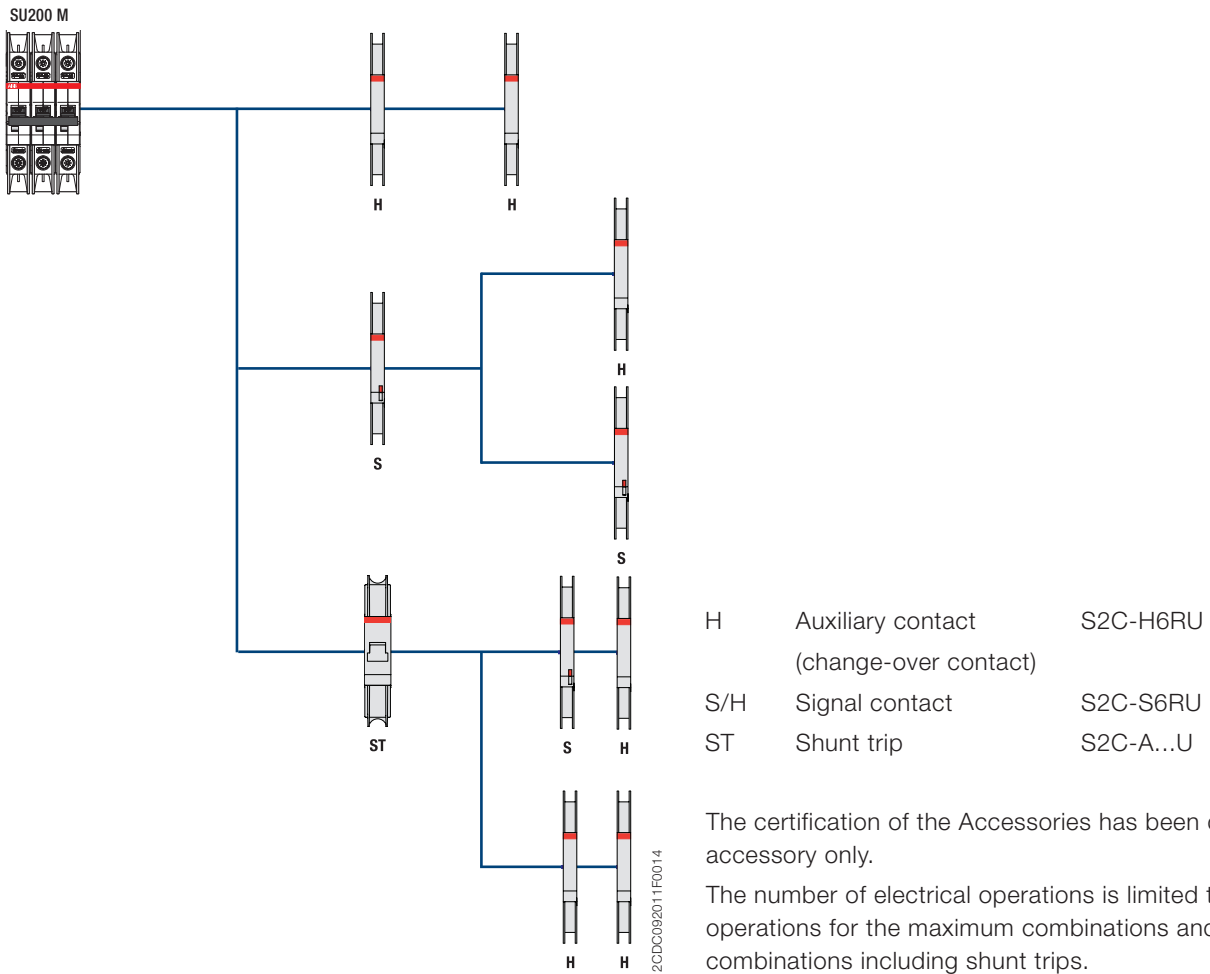
Current limiting – I_{peak} and I^2t values acc. to UL 489

Characteristic	Nominal current A	Voltage V	Current A	Power Factor	I_{Peak} kA	I^2t kA ² S
K	≤ 35	480Y/277	10000	0.45-0.5	9.5	80.0
	> 35	240	10000	0.45-0.5	8.0	110.0
C, Z	≤ 40	480Y/277	10000	0.45-0.5	9.5	80.0
	> 40	240	10000	0.45-0.5	8.0	110.0

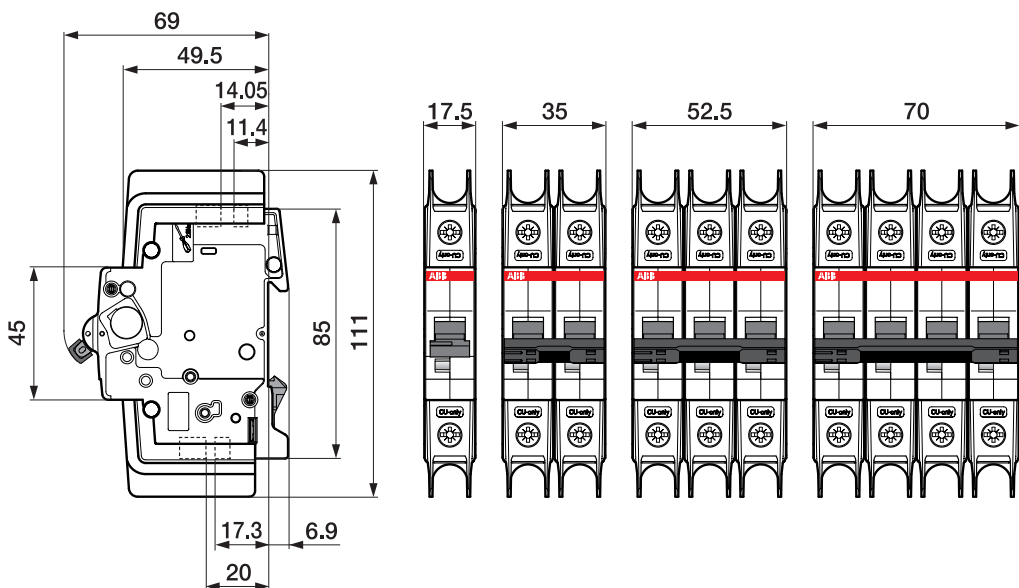
Miniature Circuit Breaker SU200 M

Accessories and dimensional drawing

Accessory overview



Dimensional drawing



Miniature Circuit Breaker SU200 M

Ordering data characteristic C



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
1	0.5	SU201M-C0,5	2CDS271337R0984	0.125	10
	1	SU201M-C1	2CDS271337R0014	0.125	10
	1.6	SU201M-C1,6	2CDS271337R0974	0.125	10
	2	SU201M-C2	2CDS271337R0024	0.125	10
	3	SU201M-C3	2CDS271337R0034	0.125	10
	4	SU201M-C4	2CDS271337R0044	0.125	10
	5	SU201M-C5	2CDS271337R0054	0.125	10
	6	SU201M-C6	2CDS271337R0064	0.125	10
	8	SU201M-C8	2CDS271337R0084	0.125	10
	10	SU201M-C10	2CDS271337R0104	0.125	10
	13	SU201M-C13	2CDS271337R0134	0.125	10
	15	SU201M-C15	2CDS271337R0154	0.125	10
	16	SU201M-C16	2CDS271337R0164	0.125	10
	20	SU201M-C20	2CDS271337R0204	0.125	10
	25	SU201M-C25	2CDS271337R0254	0.125	10
	30	SU201M-C30	2CDS271337R0304	0.125	10
	32	SU201M-C32	2CDS271337R0324	0.125	10
	35	SU201M-C35	2CDS271337R0354	0.125	10
	40	SU201M-C40	2CDS271337R0404	0.125	10
	50	SU201M-C50	2CDS271337R0504	0.125	10
60	SU201M-C60	2CDS271337R0604	0.125	10	
63	SU201M-C63	2CDS271337R0634	0.125	10	
2	0.5	SU202M-C0,5	2CDS272337R0984	0.250	5
	1	SU202M-C1	2CDS272337R0014	0.250	5
	1.6	SU202M-C1,6	2CDS272337R0974	0.250	5
	2	SU202M-C2	2CDS272337R0024	0.250	5
	3	SU202M-C3	2CDS272337R0034	0.250	5
	4	SU202M-C4	2CDS272337R0044	0.250	5
	5	SU202M-C5	2CDS272337R0054	0.250	5
	6	SU202M-C6	2CDS272337R0064	0.250	5
	8	SU202M-C8	2CDS272337R0084	0.250	5
	10	SU202M-C10	2CDS272337R0104	0.250	5
	13	SU202M-C13	2CDS272337R0134	0.250	5
	15	SU202M-C15	2CDS272337R0154	0.250	5
	16	SU202M-C16	2CDS272337R0164	0.250	5
	20	SU202M-C20	2CDS272337R0204	0.250	5
	25	SU202M-C25	2CDS272337R0254	0.250	5
	30	SU202M-C30	2CDS272337R0304	0.250	5
	32	SU202M-C32	2CDS272337R0324	0.250	5
	35	SU202M-C35	2CDS272337R0354	0.250	5
	40	SU202M-C40	2CDS272337R0404	0.250	5
	50	SU202M-C50	2CDS272337R0504	0.250	5
60	SU202M-C60	2CDS272337R0604	0.250	5	
63	SU202M-C63	2CDS272337R0634	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic C



2CDC021046S0014



2CDC021047S0014

Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.5	SU203M-C0,5	2CDS273337R0984	0.375	3
	1	SU203M-C1	2CDS273337R0014	0.375	3
	1.6	SU203M-C1,6	2CDS273337R0974	0.375	3
	2	SU203M-C2	2CDS273337R0024	0.375	3
	3	SU203M-C3	2CDS273337R0034	0.375	3
	4	SU203M-C4	2CDS273337R0044	0.375	3
	5	SU203M-C5	2CDS273337R0054	0.375	3
	6	SU203M-C6	2CDS273337R0064	0.375	3
	8	SU203M-C8	2CDS273337R0084	0.375	3
	10	SU203M-C10	2CDS273337R0104	0.375	3
	13	SU203M-C13	2CDS273337R0134	0.375	3
	15	SU203M-C15	2CDS273337R0154	0.375	3
	16	SU203M-C16	2CDS273337R0164	0.375	3
	20	SU203M-C20	2CDS273337R0204	0.375	3
	25	SU203M-C25	2CDS273337R0254	0.375	3
	30	SU203M-C30	2CDS273337R0304	0.375	3
	32	SU203M-C32	2CDS273337R0324	0.375	3
	35	SU203M-C35	2CDS273337R0354	0.375	3
40	SU203M-C40	2CDS273337R0404	0.375	3	
50	SU203M-C50	2CDS273337R0504	0.375	3	
60	SU203M-C60	2CDS273337R0604	0.375	3	
63	SU203M-C63	2CDS273337R0634	0.375	3	
4	0.5	SU204M-C0,5	2CDS274337R0984	0.500	2
	1	SU204M-C1	2CDS274337R0014	0.500	2
	1.6	SU204M-C1,6	2CDS274337R0974	0.500	2
	2	SU204M-C2	2CDS274337R0024	0.500	2
	3	SU204M-C3	2CDS274337R0034	0.500	2
	4	SU204M-C4	2CDS274337R0044	0.500	2
	5	SU204M-C5	2CDS274337R0054	0.500	2
	6	SU204M-C6	2CDS274337R0064	0.500	2
	8	SU204M-C8	2CDS274337R0084	0.500	2
	10	SU204M-C10	2CDS274337R0104	0.500	2
	13	SU204M-C13	2CDS274337R0134	0.500	2
	15	SU204M-C15	2CDS274337R0154	0.500	2
	16	SU204M-C16	2CDS274337R0164	0.500	2
	20	SU204M-C20	2CDS274337R0204	0.500	2
	25	SU204M-C25	2CDS274337R0254	0.500	2
	30	SU204M-C30	2CDS274337R0304	0.500	2
	32	SU204M-C32	2CDS274337R0324	0.500	2
	35	SU204M-C35	2CDS274337R0354	0.500	2
40	SU204M-C40	2CDS274337R0404	0.500	2	
50	SU204M-C50	2CDS274337R0504	0.500	2	
60	SU204M-C60	2CDS274337R0604	0.500	2	
63	SU204M-C63	2CDS274337R0634	0.500	2	

Miniature Circuit Breaker SU200 M

Ordering data characteristic K



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
1	0.2	SU201M-K0,2	2CDS271337R0087	0.125	10
	0.3	SU201M-K0,3	2CDS271337R0117	0.125	10
	0.5	SU201M-K0,5	2CDS271337R0157	0.125	10
	0.75	SU201M-K0,75	2CDS271337R0187	0.125	10
	1	SU201M-K1	2CDS271337R0217	0.125	10
	1.6	SU201M-K1,6	2CDS271337R0257	0.125	10
	2	SU201M-K2	2CDS271337R0277	0.125	10
	3	SU201M-K3	2CDS271337R0317	0.125	10
	4	SU201M-K4	2CDS271337R0337	0.125	10
	5	SU201M-K5	2CDS271337R0357	0.125	10
	6	SU201M-K6	2CDS271337R0377	0.125	10
	8	SU201M-K8	2CDS271337R0407	0.125	10
	10	SU201M-K10	2CDS271337R0427	0.125	10
	13	SU201M-K13	2CDS271337R0447	0.125	10
	15	SU201M-K15	2CDS271337R0457	0.125	10
	16	SU201M-K16	2CDS271337R0467	0.125	10
	20	SU201M-K20	2CDS271337R0487	0.125	10
	25	SU201M-K25	2CDS271337R0517	0.125	10
	30	SU201M-K30	2CDS271337R0527	0.125	10
	32	SU201M-K32	2CDS271337R0537	0.125	10
	35	SU201M-K35	2CDS271337R0547	0.125	10
40	SU201M-K40	2CDS271337R0557	0.125	10	
50	SU201M-K50	2CDS271337R0577	0.125	10	
60	SU201M-K60	2CDS271337R0587	0.125	10	
63	SU201M-K63	2CDS271337R0607	0.125	10	
2	0.2	SU202M-K0,2	2CDS272337R0087	0.250	5
	0.3	SU202M-K0,3	2CDS272337R0117	0.250	5
	0.5	SU202M-K0,5	2CDS272337R0157	0.250	5
	0.75	SU202M-K0,75	2CDS272337R0187	0.250	5
	1	SU202M-K1	2CDS272337R0217	0.250	5
	1.6	SU202M-K1,6	2CDS272337R0257	0.250	5
	2	SU202M-K2	2CDS272337R0277	0.250	5
	3	SU202M-K3	2CDS272337R0317	0.250	5
	4	SU202M-K4	2CDS272337R0337	0.250	5
	5	SU202M-K5	2CDS272337R0357	0.250	5
	6	SU202M-K6	2CDS272337R0377	0.250	5
	8	SU202M-K8	2CDS272337R0407	0.250	5
	10	SU202M-K10	2CDS272337R0427	0.250	5
	13	SU202M-K13	2CDS272337R0447	0.250	5
	15	SU202M-K15	2CDS272337R0457	0.250	5
	16	SU202M-K16	2CDS272337R0467	0.250	5
	20	SU202M-K20	2CDS272337R0487	0.250	5
	25	SU202M-K25	2CDS272337R0517	0.250	5
	30	SU202M-K30	2CDS272337R0527	0.250	5
	32	SU202M-K32	2CDS272337R0537	0.250	5
	35	SU202M-K35	2CDS272337R0547	0.250	5
40	SU202M-K40	2CDS272337R0557	0.250	5	
50	SU202M-K50	2CDS272337R0577	0.250	5	
60	SU202M-K60	2CDS272337R0587	0.250	5	
63	SU202M-K63	2CDS272337R0607	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic K



2CDC021046S0014



2CDC021047S0014

Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.2	SU203M-K0,2	2CDS273337R0087	0.375	3
	0.3	SU203M-K0,3	2CDS273337R0117	0.375	3
	0.5	SU203M-K0,5	2CDS273337R0157	0.375	3
	0.75	SU203M-K0,75	2CDS273337R0187	0.375	3
	1	SU203M-K1	2CDS273337R0217	0.375	3
	1.6	SU203M-K1,6	2CDS273337R0257	0.375	3
	2	SU203M-K2	2CDS273337R0277	0.375	3
	3	SU203M-K3	2CDS273337R0317	0.375	3
	4	SU203M-K4	2CDS273337R0337	0.375	3
	5	SU203M-K5	2CDS273337R0357	0.375	3
	6	SU203M-K6	2CDS273337R0377	0.375	3
	8	SU203M-K8	2CDS273337R0407	0.375	3
	10	SU203M-K10	2CDS273337R0427	0.375	3
	13	SU203M-K13	2CDS273337R0447	0.375	3
	15	SU203M-K15	2CDS273337R0457	0.375	3
	16	SU203M-K16	2CDS273337R0467	0.375	3
	20	SU203M-K20	2CDS273337R0487	0.375	3
	25	SU203M-K25	2CDS273337R0517	0.375	3
30	SU203M-K30	2CDS273337R0527	0.375	3	
32	SU203M-K32	2CDS273337R0537	0.375	3	
35	SU203M-K35	2CDS273337R0547	0.375	3	
40	SU203M-K40	2CDS273337R0557	0.375	3	
50	SU203M-K50	2CDS273337R0577	0.375	3	
60	SU203M-K60	2CDS273337R0587	0.375	3	
63	SU203M-K63	2CDS273337R0607	0.375	3	
4	0.2	SU204M-K0,2	2CDS274337R0087	0.500	2
	0.3	SU204M-K0,3	2CDS274337R0117	0.500	2
	0.5	SU204M-K0,5	2CDS274337R0157	0.500	2
	0.75	SU204M-K0,75	2CDS274337R0187	0.500	2
	1	SU204M-K1	2CDS274337R0217	0.500	2
	1.6	SU204M-K1,6	2CDS274337R0257	0.500	2
	2	SU204M-K2	2CDS274337R0277	0.500	2
	3	SU204M-K3	2CDS274337R0317	0.500	2
	4	SU204M-K4	2CDS274337R0337	0.500	2
	5	SU204M-K5	2CDS274337R0357	0.500	2
	6	SU204M-K6	2CDS274337R0377	0.500	2
	8	SU204M-K8	2CDS274337R0407	0.500	2
	10	SU204M-K10	2CDS274337R0427	0.500	2
	13	SU204M-K13	2CDS274337R0447	0.500	2
	15	SU204M-K15	2CDS274337R0457	0.500	2
	16	SU204M-K16	2CDS274337R0467	0.500	2
	20	SU204M-K20	2CDS274337R0487	0.500	2
	25	SU204M-K25	2CDS274337R0517	0.500	2
30	SU204M-K30	2CDS274337R0527	0.500	2	
32	SU204M-K32	2CDS274337R0537	0.500	2	
35	SU204M-K35	2CDS274337R0547	0.500	2	
40	SU204M-K40	2CDS274337R0557	0.500	2	
50	SU204M-K50	2CDS274337R0577	0.500	2	
60	SU204M-K60	2CDS274337R0587	0.500	2	
63	SU204M-K63	2CDS274337R0607	0.500	2	

Miniature Circuit Breaker SU200 M

Ordering data characteristic Z



Number of poles	Rated current I_n A	Type	Order code	Weight per PCE	Packing unit
				kg	PCE
1	0.5	SU201M-Z0,5	2CDS271337R0158	0.125	10
	1	SU201M-Z1	2CDS271337R0218	0.125	10
	1.6	SU201M-Z1,6	2CDS271337R0258	0.125	10
	2	SU201M-Z2	2CDS271337R0278	0.125	10
	3	SU201M-Z3	2CDS271337R0318	0.125	10
	4	SU201M-Z4	2CDS271337R0338	0.125	10
	5	SU201M-Z5	2CDS271337R0358	0.125	10
	6	SU201M-Z6	2CDS271337R0378	0.125	10
	8	SU201M-Z8	2CDS271337R0408	0.125	10
	10	SU201M-Z10	2CDS271337R0428	0.125	10
	13	SU201M-Z13	2CDS271337R0448	0.125	10
	15	SU201M-Z15	2CDS271337R0458	0.125	10
	16	SU201M-Z16	2CDS271337R0468	0.125	10
	20	SU201M-Z20	2CDS271337R0488	0.125	10
	25	SU201M-Z25	2CDS271337R0518	0.125	10
	30	SU201M-Z30	2CDS271337R0528	0.125	10
	32	SU201M-Z32	2CDS271337R0538	0.125	10
	35	SU201M-Z35	2CDS271337R0548	0.125	10
	40	SU201M-Z40	2CDS271337R0558	0.125	10
	50	SU201M-Z50	2CDS271337R0578	0.125	10
60	SU201M-Z60	2CDS271337R0588	0.125	10	
63	SU201M-Z63	2CDS271337R0608	0.125	10	
2	0.5	SU202M-Z0,5	2CDS272337R0158	0.250	5
	1	SU202M-Z1	2CDS272337R0218	0.250	5
	1.6	SU202M-Z1,6	2CDS272337R0258	0.250	5
	2	SU202M-Z2	2CDS272337R0278	0.250	5
	3	SU202M-Z3	2CDS272337R0318	0.250	5
	4	SU202M-Z4	2CDS272337R0338	0.250	5
	5	SU202M-Z5	2CDS272337R0358	0.250	5
	6	SU202M-Z6	2CDS272337R0378	0.250	5
	8	SU202M-Z8	2CDS272337R0408	0.250	5
	10	SU202M-Z10	2CDS272337R0428	0.250	5
	13	SU202M-Z13	2CDS272337R0448	0.250	5
	15	SU202M-Z15	2CDS272337R0458	0.250	5
	16	SU202M-Z16	2CDS272337R0468	0.250	5
	20	SU202M-Z20	2CDS272337R0488	0.250	5
	25	SU202M-Z25	2CDS272337R0518	0.250	5
	30	SU202M-Z30	2CDS272337R0528	0.250	5
	32	SU202M-Z32	2CDS272337R0538	0.250	5
	35	SU202M-Z35	2CDS272337R0548	0.250	5
	40	SU202M-Z40	2CDS272337R0558	0.250	5
	50	SU202M-Z50	2CDS272337R0578	0.250	5
60	SU202M-Z60	2CDS272337R0588	0.250	5	
63	SU202M-Z63	2CDS272337R0608	0.250	5	

Miniature Circuit Breaker SU200 M

Ordering data characteristic Z



2CDC021046S0014



2CDC021047S0014

Number of poles	Rated current I_n A	Type	Order code	Weight per PCE kg	Packing unit PCE
3	0.5	SU203M-Z0,5	2CDS273337R0158	0.375	3
	1	SU203M-Z1	2CDS273337R0218	0.375	3
	1.6	SU203M-Z1,6	2CDS273337R0258	0.375	3
	2	SU203M-Z2	2CDS273337R0278	0.375	3
	3	SU203M-Z3	2CDS273337R0318	0.375	3
	4	SU203M-Z4	2CDS273337R0338	0.375	3
	5	SU203M-Z5	2CDS273337R0358	0.375	3
	6	SU203M-Z6	2CDS273337R0378	0.375	3
	8	SU203M-Z8	2CDS273337R0408	0.375	3
	10	SU203M-Z10	2CDS273337R0428	0.375	3
	13	SU203M-Z13	2CDS273337R0448	0.375	3
	15	SU203M-Z15	2CDS273337R0458	0.375	3
	16	SU203M-Z16	2CDS273337R0468	0.375	3
	20	SU203M-Z20	2CDS273337R0488	0.375	3
	25	SU203M-Z25	2CDS273337R0518	0.375	3
	30	SU203M-Z30	2CDS273337R0528	0.375	3
	32	SU203M-Z32	2CDS273337R0538	0.375	3
	35	SU203M-Z35	2CDS273337R0548	0.375	3
	40	SU203M-Z40	2CDS273337R0558	0.375	3
	50	SU203M-Z50	2CDS273337R0578	0.375	3
60	SU203M-Z60	2CDS273337R0588	0.375	3	
63	SU203M-Z63	2CDS273337R0608	0.375	3	
4	0.5	SU204M-Z0,5	2CDS274337R0158	0.500	2
	1	SU204M-Z1	2CDS274337R0218	0.500	2
	1.6	SU204M-Z1,6	2CDS274337R0258	0.500	2
	2	SU204M-Z2	2CDS274337R0278	0.500	2
	3	SU204M-Z3	2CDS274337R0318	0.500	2
	4	SU204M-Z4	2CDS274337R0338	0.500	2
	5	SU204M-Z5	2CDS274337R0358	0.500	2
	6	SU204M-Z6	2CDS274337R0378	0.500	2
	8	SU204M-Z8	2CDS274337R0408	0.500	2
	10	SU204M-Z10	2CDS274337R0428	0.500	2
	13	SU204M-Z13	2CDS274337R0448	0.500	2
	15	SU204M-Z15	2CDS274337R0458	0.500	2
	16	SU204M-Z16	2CDS274337R0468	0.500	2
	20	SU204M-Z20	2CDS274337R0488	0.500	2
	25	SU204M-Z25	2CDS274337R0518	0.500	2
	30	SU204M-Z30	2CDS274337R0528	0.500	2
	32	SU204M-Z32	2CDS274337R0538	0.500	2
	35	SU204M-Z35	2CDS274337R0548	0.500	2
	40	SU204M-Z40	2CDS274337R0558	0.500	2
	50	SU204M-Z50	2CDS274337R0578	0.500	2
60	SU204M-Z60	2CDS274337R0588	0.500	2	
63	SU204M-Z63	2CDS274337R0608	0.500	2	

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