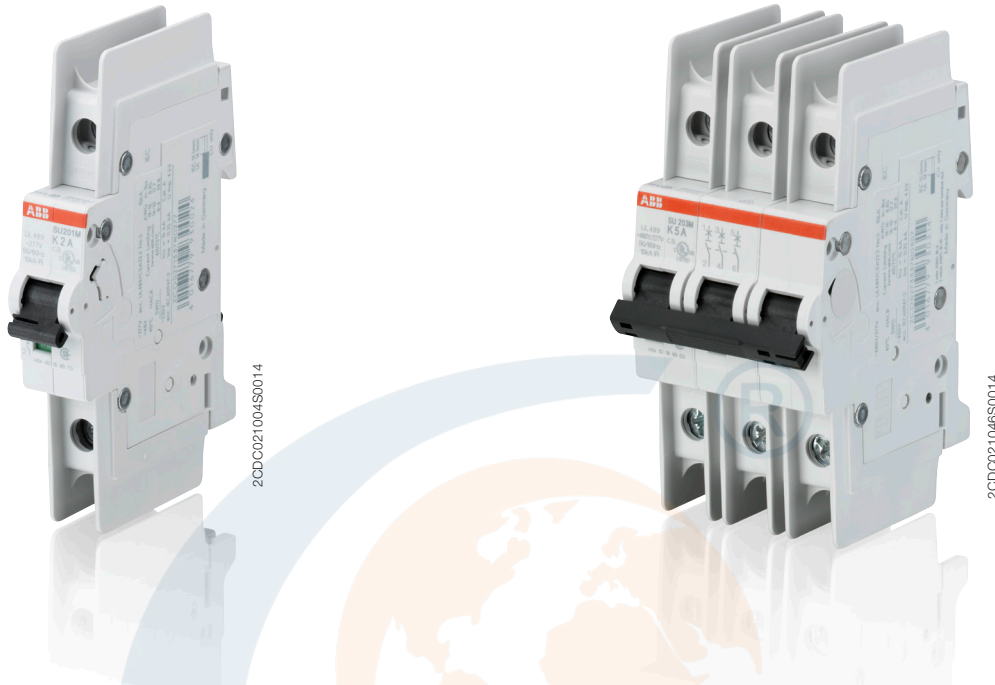


# System pro M compact® Miniature Circuit Breaker SU200 M for branch circuit protection acc. to UL 489



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

<b>General Data</b>	
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
<b>IEC/EN 60947-2</b>	
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)
<b>UL / CSA</b>	
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)
<b>Mechanical data</b>	
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
<b>Installation</b>	
Terminal	Failsafe bi-directional cylinder-lift terminal
Cross-section of conductors (top/bottom)	solid, stranded: 35 mm <sup>2</sup> / 35 mm <sup>2</sup> flexible: 25 mm <sup>2</sup> / 25 mm <sup>2</sup> 18 - 4 AWG
Cross-section of busbars (top/bottom)	10 mm <sup>2</sup> / 10 mm <sup>2</sup> 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
<b>Dimensions and weight</b>	
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
<b>Combination with auxiliary elements</b>	
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 <sup>1)</sup>		Electromagnetic release <sup>2)</sup>		
			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 <sup>3)</sup>	$5 \cdot I_n$ $10 \cdot I_n$	$> 0.2$ s $< 0.2$ s
	K	0.2 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	$> 1$ h $< 1$ h <sup>3)</sup>	$10 \cdot I_n$ $14 \cdot I_n$	$> 0.2$ s $< 0.2$ s
	Z	0.5 to 63 A	$1.05 \cdot I_n$	$1.3 \cdot I_n$	$> 1$ h $< 1$ h <sup>3)</sup>	$2 \cdot I_n$ $3 \cdot I_n$	$> 0.2$ s $< 0.2$ s

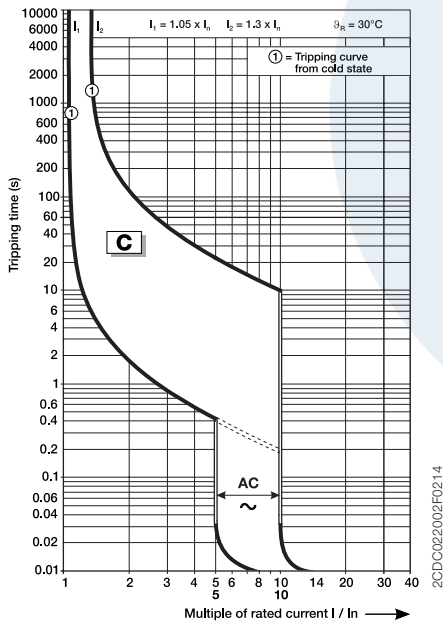
<sup>1)</sup> The thermal releases are calibrated to a nominal reference ambient temperature of 30 °C.

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

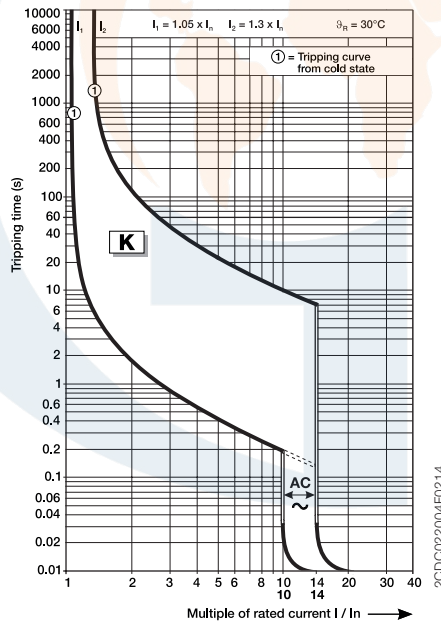
<sup>2)</sup> The indicated tripping values of electromagnetic tripping devices apply to a frequency of 50/60 Hz. The thermal release operates independent of frequency.

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

C characteristic



K characteristic



Z characteristic

