

US BROCHURE

# Circuit protection according to UL 489 and UL 1077



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## ABB miniature circuit breakers

The first of its kind in 1923, and still the best today. We didn't just change the market — we created it.

In 1923, Hugo Stotz made history. He invented a new and innovative circuit breaker that would revolutionize the world of electrical installation and safety.

The combination of a thermal and magnetic trip unit in a single device became the “thermal-electromagnetical circuit breaker,” that was then patented in 1924 as the first-ever resettable fuse. Because it could simply be screwed into usual fuse sockets, it was a huge success for the company, which has now been located in Germany for over 120 years.

This revolutionary circuit breaker was able to interrupt an electrical circuit in case of overload and was reclosable, whereas the metal wire in previous fuses would melt when too much current passed through it and had to be replaced.

Another key benefit to this pioneering design was that no electrician was needed to change fuses any more — even an unskilled person could do it. To this day, that is still the case.

### Then

In 1923, Hugo Stotz combined a thermal and a magnetic trip unit in a single device that could be screwed into regular fuse sockets. Stotz's invention opened a new world in electrical installation.

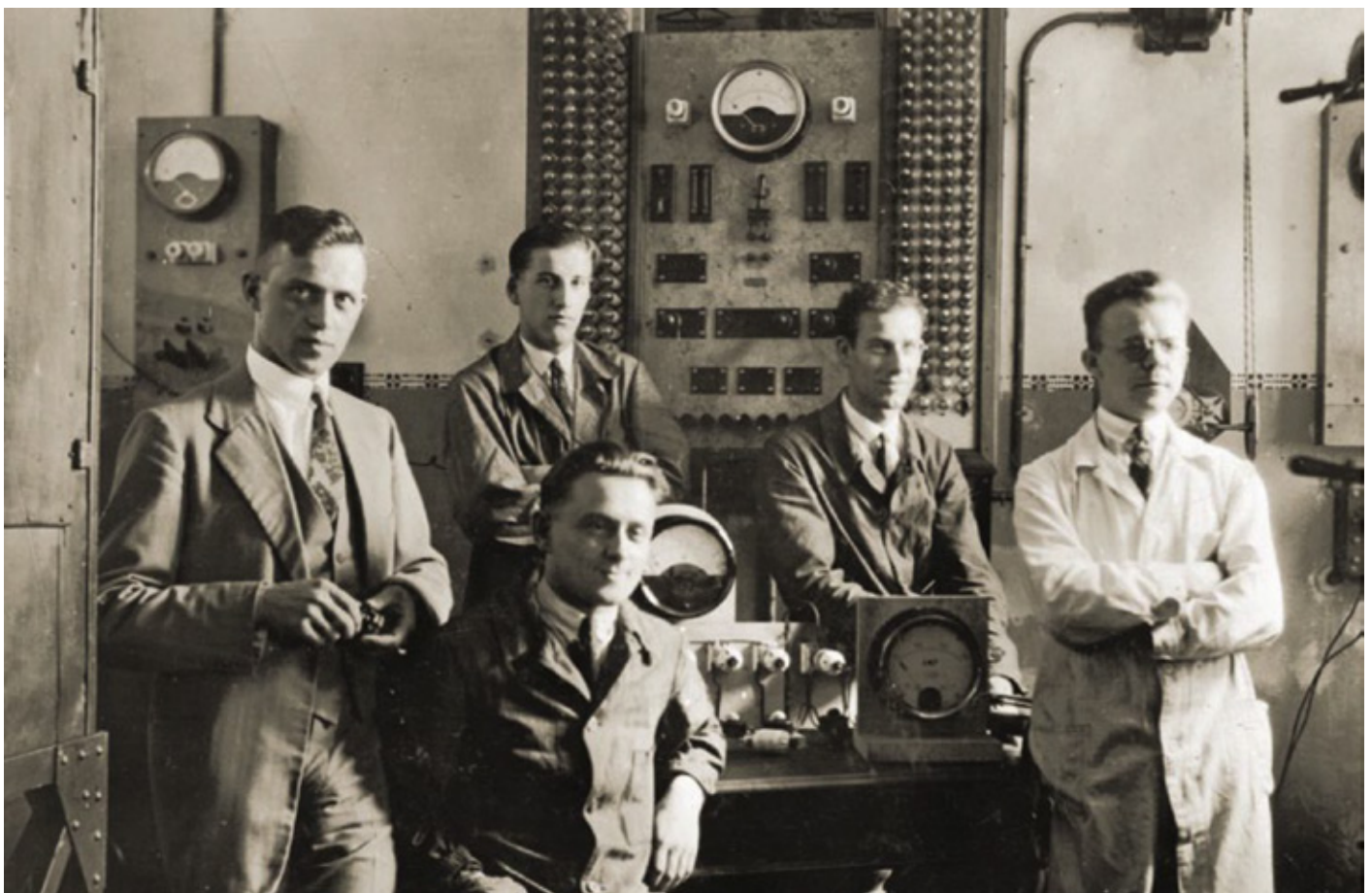
### Now

The latest generation of ABB mini circuit breakers (MCBs) provides the highest safety solutions for all types of electrical protection — and meets all relevant standards worldwide.

### System pro M compact™ MCBs

Miniature circuit breakers protect installations against overload and short circuit to ensure reliability and safety for operations. ABB MCBs feature current-limiting technology, which reduces the risk of arc flash and increases protection of connected cables and loads.

ABB MCBs are available with a wide variety of accessories, thus providing solutions for all types of applications.



## Quality and sustainability

Our MCBs are built to last. We achieve this through an uncompromising commitment to quality. We use only the best components and materials. All materials comply with EU (RoHS, REACH) standards for sustainability and are halogen-free. Every unit is inspected three times before it leaves our facilities.

Our reputation for innovation, quality and performance is built into every ABB circuit breaker with these patented features:

### Terminal

Extended size with insulation for IP20 protection and new pressure plate for improved conductor connection — easier to handle, safer to use

### Contact design

With a trip-free snap-action mechanism for improved arc movement and safe, optimized switching

### Switching mechanism

New design and assembly increases reliability of triggering — even under tough conditions

### Tripping device

Optimized arc extinguishing system improves safety

Patented twin terminals with captive screws add comfort and safety

Product code identifies basic technical specs

Patented tripping device ensures uncompromised safety

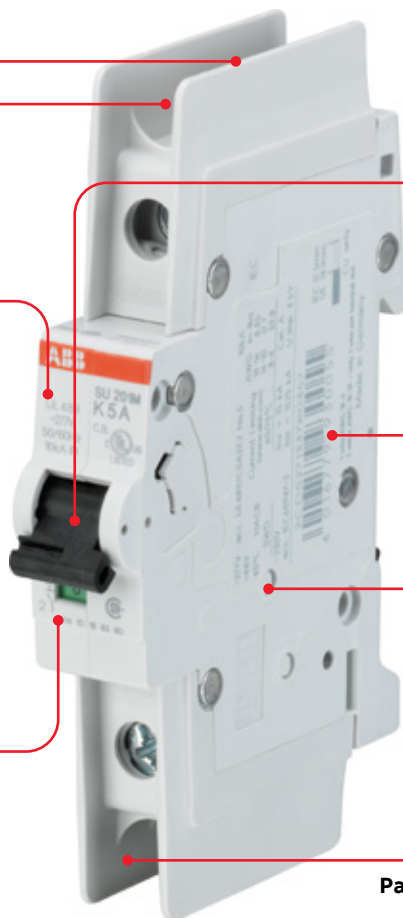
Contact-position indicator with direct contact connection clearly indicates position for extra safety

Simple switch mechanism provides immediate system availability after a fault

Laser printing resists scratches and solvents

Unit performs at its high rated voltage

Patented housing design offers environmental friendliness and optimized performance



## The details make the difference

### Miniature circuit breakers made by ABB

System pro M compact offers a complete range of first-class quality products including a variety of miniature circuit breakers that provide the right solution when both size and performance matter.

— 01 Patented IP20 touch-safe terminals

— 02 Red/green indicator shows actual position of contacts

— 03 Approvals printed on the dome

— 04 Safe, easy and fast connection with busbars (fixed length or cuttable to length)

— 05 Various cable combinations can be used with the dual terminals

— 06 For interrupt ratings up to 50 kA (S800 series)

#### Patented IP20 finger-safe terminals

Extended size with insulation for IP20 protection and new pressure plate for improved conductor connection available for the S200 series. Additionally, our innovative ring-lug terminals are available (SU200MR and S200MR). MCBs of the S800U series are equipped with a convertible lug or ring-lug terminal.

#### Contact position indication

All System pro M compact MCBs are equipped with real contact position indication (CPI). This allows for quick identification of the MCB's state, on or off, if maintenance is required. Working together, both the position of the toggle and the color of the CPI offer clear indication of the MCB's contact position, providing additional safety. If an event has occurred, the MCB provides reliable information on its state.

#### Approvals printed on the dome

SU200M MCBs comply with UL489/CSA 22.2 No. 5 and carry approvals for other relevant markets or segments in which they may be used. For ease of identification, certification markings are printed on the dome and side of the MCB.

#### Comfort connection

Dedicated busbars are available, depending on the application. The new cut-to-length UL Vario busbar is available for the SU200M. A special ring-lug busbar for the SU200MR and S200M was designed to fit these devices.

#### Maximum flexibility

The dual terminals with two separate slots allow connection of busbars and cables in separate spots. They also allow for installation of up to four cables in each terminal (2+2).

#### Extra power needed?

S800 series MCBs offer high performance in terms of current, voltage and short circuit interrupt ratings.



01



02



03



04



05

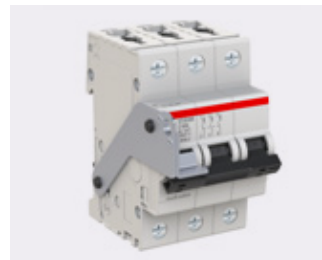


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MCB factory in Heidelberg, Germany



#### **Logout/tag out device**

The S2C-LOTO-L can be field installed on every 1-, 2- and 3-pole MCB from ABB (except for S800 series). It can be removed and reused on other MCBs if needed with extra connecting pins. The S2C-LOTO-L prevents a padlock from being installed on an MCB that's in the closed/ON position only.



#### **Patented housing design**

The SU200M range uses the latest halogen-free thermoplastic, making it possible to recycle the whole MCB and reduce environmental pollution.

—  
Fully automated production/assembly with 100% quality control

## Product selection guide

MCBs per UL 489 / CSA 22.2 No. 5 — SU200M / SUP200M / SU200MR / S200UDC / SU200ML / S800U / S804U-UCZ

### UL 489

This standard covers circuit breakers (molded-case circuit breakers for protection of service entrance, feeder and branch circuits). These circuit breakers are specifically intended to provide service entrance, feeder and branch circuit protection in accordance with the National Installation Codes in Annex B, Ref. No. 1. This standard also covers instantaneous-trip circuit breakers (circuit interrupters) specifically intended for use as part of a combination motor controller in accordance with the National Installation Codes in Annex B, Ref. No. 1.

### UL 489

	SU200M	SUP200M	SU200MR	S200UDC	SU200ML	S800U	S804U-UCZ
Interrupt rating	10 kA	14 kA	10 kA	14 kA	14 kA	30/50 kA (1-/multipole)	10 kA
Current rating	0.2 to 63 A	1 to 40 A (K:35)	0.2 to 63 A	1 to 63 A	0.2 to 63 A	10 to 100 A	10 to 80 A
Rated voltage	480Y/277 V AC 48/96 V DC	480Y/277 V AC	480Y/277 V AC	125/250 V DC	230 V AC	240 V AC	600 V DC
Characteristics	C, K, Z	C, K, Z	K	K, Z	C, K, Z	Z (B), K	Z (K)
Poles	1p–4p	1p–3p	1p–4p	1p–2p	1p–4p	1p–4p	4 in series
Max. 1-pole dimension (in.)	2.98 x 0.68 x 4.37	2.98 x 0.68 x 4.37	2.98 x 0.68 x 4.52	3.06 x 0.68 x 3.62	2.72 x 0.68 x 3.72	3.48 x 1.04 x 3.74	3.48 x 4.17 x 5.59
Cable size	18–4 AWG	18–4 AWG	18–4 AWG	18–4 AWG	18–4 AWG	14–2 AWG (up to 30 A) 8–1 AWG (40 A to 100 A)	14–2 AWG (up to 30 A) 8–1 AWG (40 A to 100 A)
Auxiliary contact	yes	yes	yes	yes	yes	yes	–
Bell alarm	yes	yes	yes	yes	yes	yes	–
Shunt trip	yes	yes	yes	yes	yes	yes	–
Special features	–	14 kA interrupt rating	Ring tongue terminal	–	Smallest/ compact UL 489 MCB 230 V range 14 kA	Ring tongue terminal Compact for 30/50 kA	–



SU200M



SU200MR



S200UDC



S800U

## Product selection guide

MCBs per UL 1077 / CSA 22.2 No. 235 — ST200M / S200MR / S200MUC / S300P / ST200MTR / S800S / S800C / S800P

### UL 1077

This standard covers supplementary protectors for use as an additional level of protection where branch circuit protection is already provided or not required. Typical applications are in control circuits or within appliances. Compliance with this standard is acceptable for use as a component of an end product.

### UL 1077

	ST200M	S200MR	S200MUC	S300P	ST200MTR	S800S	S800C	S800P
Interrupt rating	10/5 kA	10 kA	up to 10 kA	10 kA	ST200MTR: 6 kA ST200MTR (DC): 10 kA	up to 30 kA	up to 20 kA	up to 20 kA
Current rating	0.5 to 63 A	0.2 to 63 A	0.2 to 63 A	0.2 to 63 A	0.5 to 63 A	0.5 to 63 A	10 to 63 A	80 to 100 A
Rated voltage	480Y/ 277 V AC 60/125 V DC (1-/2-pole)	480Y/ 277 V AC	480Y/277 V AC 250/500 V DC (1-/2-pole)	480Y/277 V AC 60/125 V DC (1-/2-pole)	480Y/277 V AC 1P: 250 V DC 2+4P: up to 500 VDC	630Y/347 V AC	480Y/277 V AC up to 500 V DC	480Y/277 V AC up to 500 V DC
Characteristics	B, C, D, K, Z	K	C, K, Z	B, C, D, K, Z	K and Z	B, C, D, K	B, C, D, K	B, C, D, K
Poles	1p–4p	1p–4p	1p–4p	1p–4p	1p–4p AC 1p, 2p and 4p DC	1p–4p	1p–4p	1p–4p
Max. 1-pole dimension (in.)	2.98 x 0.68 x 3.46	2.98 x 0.68 x 3.94	2.98 x 0.68 x 3.46	2.98 x 0.68 x 3.46	2.95 x 0.68 x 3.94	3.48 x 1.04 x 3.74	3.48 x 1.04 x 3.74	3.48 x 1.04 x 3.74
Cable size	18–4 AWG	18–4 AWG	14–4 AWG	18–4 AWG	18–4 AWG	14–2 AWG (up to 30 A) 8–1 AWG (40 A to 100 A)	14–2 AWG (up to 30 A) 8–1 AWG (40 A to 100 A)	8–1 AWG
Auxiliary contact	yes	yes	yes	yes	yes	yes	yes	yes
Bell alarm	yes	yes	yes	yes	yes	yes	yes	yes
Shunt trip	yes	yes	yes	yes	yes	yes	yes	yes
Bottom-mount aux. contact	yes	-	yes	yes	-	-	-	-
Busbars	yes	yes	yes	yes	Ring tongue busbar	-	-	-
Special features	-	Ring tongue terminal	-	TPI and DIN rail release without tool	Ring tongue terminal	Also in ring tongue terminal	Also in ring tongue terminal	Also in ring tongue terminal



ST200M



S200MUC



S200MR



S800P






Accessories for UL 489 applications

Auxiliary contacts

The auxiliary contacts will signal whether the breaker is in the ON or OFF position.


Description	Cat. no.
For field mounting: right side	S2C-H6RU



Shunt trip

For remote tripping of breaker, a shunt trip device can be added to the MCB. The solenoid device opens the breaker after control voltage is applied.

Description	Cat. no.
For field mounting: right side 12...60 V AC/DC	S2C-A1U
For field mounting: right side 110...415 V AC 110...250 V DC	S2C-A2U




Note: For shafts and handles, refer to parts in the Disconnect Switch and MCCB section.

Bell alarm

The bell alarm includes a set of contacts that will only signal when the breaker has tripped. Typically, the contacts would be connected to an alarm or bell to signal the operator that an over-current trip has occurred. The bell alarm also includes a test button for testing the alarm contacts without opening the breaker.

Description	Cat. no.
For field mounting: right side	S2C-S6RU



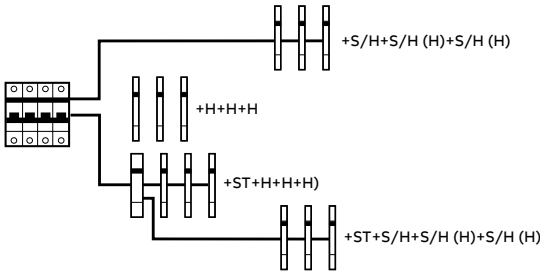
Possible mounting arrangements of MCB accessories

Legend

Auxiliary contact	H
Bell alarm/auxiliary contact	S/H
Bell alarm/auxiliary contact used as auxiliary contact	S/H (H)
Shunt trip	ST


Note: Right-hand mount accessories cannot be used in conjunction with S2C-DH, rotary operating mechanism.

Diagram


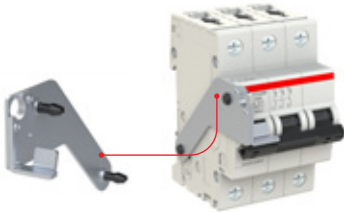


Accessories for UL 489 applications


**Rotary operating mechanism**  
For through-the-door operation with a pistol or selector handle in applications where the breaker is also used as a main disconnecting means (disconnect switch).

	Description	Cat. no.
	Rotary handle mechanism can be used with any 5 or 6 mm shaft and any kind of handle (for example, selector handles, pistol handles)	S2C-DH

Lockout/tag out device

	Product description	Cat. no.
	For single-pole MCBs	S2C-LOTO-S
	For multi-pole MCBs	S2C-LOTO-M
	For all MCBs	S2C-LOTO-L

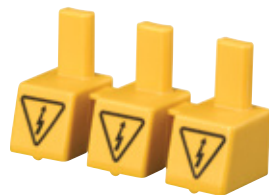
Busbars for use with SU200M, S200UDC, SU200ML and SUP200M, cannot be cut

	Amp rating*	Number of poles	Phases	Busbar length (mm)	Cat. no.
	80/115	6	1	103.2	PS1/6/16BP
		12	1	208.8	PS1/12/16BP
		18	1	314.4	PS1/18/16BP
	80/115	6	2	103.2	PS2/6/16BP
		12	2	208.8	PS2/12/16BP
		18	2	314.4	PS2/18/16BP
	80/115	6	3	103.2	PS3/6/16BP
		12	3	208.8	PS3/12/16BP
		18	3	314.4	PS3/18/16BP

\*Depending on enclosure size

## Accessories for UL 489 applications

### Busbar tooth covers for BS...BP (UL 489)



Description	Cat. no.
Covers three unused poles of busbar	BSK-BP

### Feeder terminals for PS...BP (UL 489)



Description	Cat. no.
Terminal, insulated with pin contact	AST35/15BP



Feeder terminal, single-pole terminal, can be mounted side by side, feed on the pin of the busbar	SZ-ESK BP
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### Busbars PS...BP-C for use with SU200M, SU200ML, SUP200M and S200UDC, can be cut to length



	Number of phases	Phase sequence	Cat. no.
PS...BP-C	1	L1-L1-L1...	PS1/57/25BP-C
		L1-Aux (free)-L1-Aux (free)...1)	PS1/37/25HBP-C
	2	L1-L2-L1-L2...	PS2/56/25BP-C
		L1-L2-Aux (free)-L1-L2-Aux (free)...1)	PS2/46/25HBP-C
	3	L1-L2-L3-L1-L2-L3...	PS3/57/25BP-C
		L1-L2-L3-Aux (free)-L1-L2-L3-Aux (free)...1)	PS3/48/25HBP-C
		L1-Aux (free)-L2-Aux (free)-L3-Aux (free)...1)	PS3/39/25HBP-C

<sup>1)</sup> For devices with auxiliary contact (half module) after each phase sequence

### Accessories

Description	Cat. no.
Tooth covers, for 3 pins	BSK BP-C
End caps	PS-END 3 BP-C
Feeder terminal	AST 35/58 BP-C

### Busbars for SU200MR, can be cut to length

#### Busbars PS...BP-CR for use with end caps PS-END 3 BP-C



	Number of phases	Phase sequence	Number of pins pc.	Cross section mm <sup>2</sup>	Cat. no.
PS...BP-CR	1	L1-L1-L1...	57	25	PS1/57/25BP-CR
		L1-Aux (free)-L1-Aux (free)...1)	37	25	PS1/37/25HBP-CR
	2	L1-L2-L1-L2...	56	25	PS2/56/25BP-CR
		L1-L2-Aux (free)-L1-L2-Aux (free)...1)	46	25	PS2/46/25HBP-CR
	3	L1-L2-L3-L1-L2-L3...	57	25	PS3/57/25BP-CR
		L1-L2-L3-Aux (free)-L1-L2-L3-Aux (free)...1)	48	25	PS3/48/25HBP-CR
		L1-Aux (free)-L2-Aux (free)-L3-Aux (free)...1)	39	25	PS3/39/25HBP-CR

<sup>1)</sup> For devices with auxiliary contact (half module) after each phase sequence

## Accessories for UL 489 and UL 1077 applications

### Rotary operating mechanism

For through-the-door operation with a pistol or selector handle in applications where the breaker is also used as a main disconnecting means (disconnect switch).



Description	Cat. no.
Rotary handle mechanism can be used with any 5 or 6 mm shaft and any kind of handle (for example, selector handles, pistol handles)	S2C-DH

### Filling piece

For heat dissipation of closely mounted devices that generate much heat. Width 8.75 mm, as spacer, two different heights, breakable, for DIN rails according to DIN EN 60 715, 35 x 7.5 mm.



Product description	Weight 1 piece kg	Pack unit pc.	Cat. no.
Filling piece	0.01	25	SZ-FST 2

### False poles



	Weight 1 piece kg	Pack unit pc.	Cat. no.
False pole — 1 module	0.01	100	FP1
Support for false pole	0.012	10	SFP

### Flanges




	Weight 1 piece kg	Pack unit pc.	Cat. no.
Flange for rear board mounting 1 module — IP40	0.040	1	ME 1
Flange for rear board mounting 2 modules — IP40	0.045	1	ME 2
Flange for rear board mounting 3 modules — IP40	0.055	1	ME 3
Flange for rear board mounting 4 modules — IP40	0.060	1	ME 4
Flange for rear board mounting 6 modules — IP40	0.070	1	ME 6
Flange for rear board mounting 8 modules — IP40	0.080	1	ME 8



## Accessories for UL 1077 applications


### Auxiliary contacts

The auxiliary contacts will signal whether the breaker is in the ON or OFF position.

	Description	Cat. no.
<b>For field mounting: right side</b>		
	Auxiliary contact 1 CO	S2C-H6R
	Auxiliary contact 1 NO/1 NC	S2C-H6-11R
	Auxiliary contact 2 NO	S2C-H6-20R
	Auxiliary contact 2 NC	S2C-H6-02R


### Bell alarm — signal contact

The bell alarm includes a set of contacts that will only signal when the breaker has tripped. Typically, the contacts would be connected to an alarm or bell to signal the operator that an over-current trip has occurred. The bell alarm also includes a test button for testing the alarm contacts without opening the breaker.



	Description	Cat. no.
	For field mounting: right side	S2C-S/H6R

### Shunt trip


For remote tripping of breaker, a shunt trip device can be added to the MCB. The solenoid device opens the breaker after control voltage is applied.

	Description	Cat. no.
<b>For field mounting: right side</b>		
	A1-12-110 V AC (12–110 V DC)	S3C-A1
	A2-110-415 V AC (110–250 V DC)	S3C-A2

### Locking device

	Description	Cat. no.
	Locking device, 3 mm	SA1
	Padlock with two keys	SA2

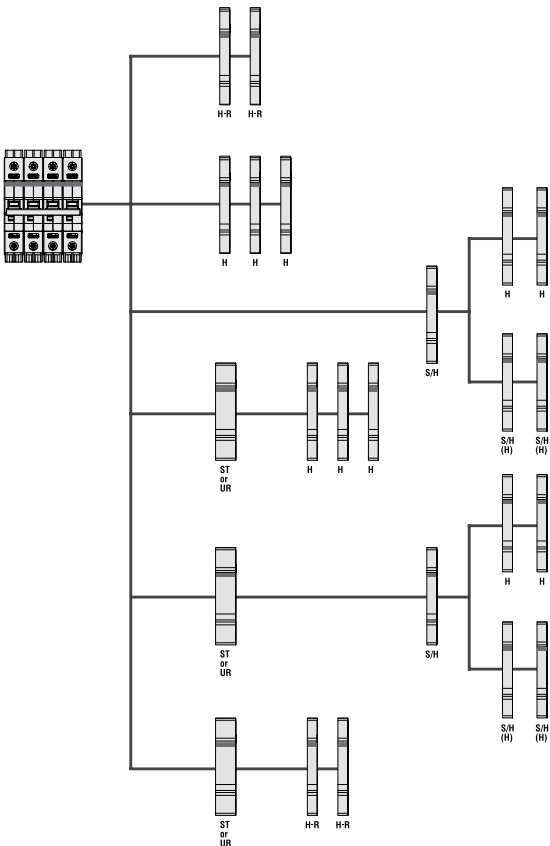
### Bottom-fitted auxiliary contact

	Description	Cat. no.
	Auxiliary contact 1 NC	S2C-H01
	Auxiliary contact 1 NO	S2C-H10



# Accessories for UL 1077 applications

## Accessory overview



- H Auxiliary contact S2C-H6R
- H-R Auxiliary contact S2C-H6-...R
- S/H Signal/auxiliary contact S2C-S/H6R
- S/H (H) Signal/auxiliary contact S2C-S/H6R used as auxiliary contact
- ST Shunt trip S3C A...
- UR Under-voltage release S2C-UA

## Busbars PS...CB and accessories according to UL 508

For MCBs ST200M, S200MUC and S300P



Busbars type PS...CB are used for quick and easy line side wiring of miniature circuit breakers according to UL 1077 as well as fuse disconnectors E90. The entire product line, including the accessories, is approved according to UL 508 (cULus) and can be used for applications in supplementary protection circuits in UL and CSA markets

### Application and installation

- UL listing according to UL 508
- For UL and CSA applications
- For use with MCB types according UL 1077, ranges S200, S200M, S200P, S200MUC, S200MTUC, ST200M and fuse disconnectors E90
- Quick and easy installation
- Can be cut off to the required length
- Suitable for AC and DC applications
- Global use in UL, CSA and IEC markets

### Product range

- 1-, 2-, 3-pole types
- 18 mm<sup>2</sup> and 25 mm<sup>2</sup> cross section
- For MCBs with or without auxiliary contact
- Touch-safe thanks to end caps and electric shock-protection caps installed over unused busbar pins
- Rated current max. 200 A
- Rated voltage according to UL
  - 1-phase: 1,000 V AC/DC
  - 2-/3-phase: 600 V AC/DC
- End caps, electric shock-protection caps and feeder terminals as accessories

## Busbars PS...CB and accessories according to UL 508

### Ordering data

#### Busbars suitable for cutting

Phases	mm²	No. of pins	Weight 1 piece	Pack unit	Cat. no.
			kg	pc.	
1-phase busbars, pin distance 17.6mm, end caps PS-END 1 CB					
1	18	57	0.289	10	PS1/57/18CB
1	25	57	0.360	10	PS1/57/25CB
1-phase busbars, connection of 1-pole devices with auxiliary, end caps PS-END 1 CB					
1	18	37	0.254	10	PS1/37/18HCB
1	25	37	0.310	10	PS1/37/25HCB
2-phase busbars, pin distance 17.6mm, end caps PS-END 3 CB					
2	18	56	0.639	10	PS2/56/18CB
2	25	56	0.795	10	PS2/56/25CB
2-phase busbars, connection of 2-pole devices with auxiliary, end caps PS-END 3 CB					
2	18	46	0.672	10	PS2/46/18HCB
2	25	46	0.782	10	PS2/46/25HCB
3-phase busbars, pin distance 17.6mm, end caps PS-END 3					
3	18	57	0.929	10	PS3/57/18CB
3	25	57	1.026	10	PS3/57/25CB
3-phase busbars, connection of 3-pole devices with auxiliary, end caps PS-END 3 CB					
3	18	48	0.788	10	PS3/48/18HCB
3	25	48	0.974	10	PS3/48/25HCB
3-phase busbars, connection of 1-pole devices with auxiliary, end caps PS-END 3 CB					
3	18	39	0.794	10	PS3/39/18HCB
3	25	39	0.974	10	PS3/39/25HCB

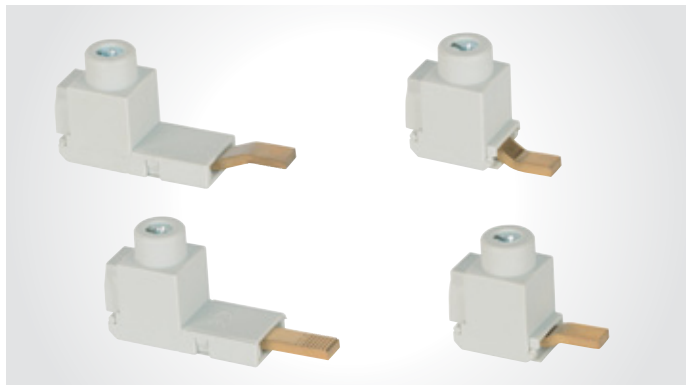
#### Accessories

	Weight 1 piece	Pack unit	
	kg	pc.	Cat. no.
Electric shock-protection cap			
	0.008	10	BSK CB
Feeder terminals with pin contact			
for use with MCB and 1-phase busbar	0.025	25	AST35/15-2CB
for use with MCB and 2-/3-phase busbar	0.032	10	AST35/38-2CB
for use with E90 and 2-/3-phase busbar	0.032	10	AST35/38-1CB
for use with E90 and 1-phase busbar	0.025	25	AST35/15-1CB
Single-pole terminal, can be mounted side by side, feed to the busbar pin			
	0.032	50	SZ ESK SP
End caps			
for use with PS 1...CB	0.001	50	PS-END 1 CB
for use with PS 2...CB and PS3...CB	0.002	50	PS-END 3 CB



## Busbars PS...CB and accessories according to UL 508

### Technical data feeder terminals



Feeder terminals AST..CB to connect copper wires up to a cross section of 50 mm<sup>2</sup> to DIN rail devices in pro M compact® system.

The terminals are cULus listed according to UL 508 and can be used for applications in supplementary protection circuits in combination with UL/CSA approved miniature circuit breakers and E90 fuse disconnectors.

#### Technical data

		Feeder terminal AST..CB
Electrical data	Standards	UL 508 / UL 486A / CSA C22.2 / IEC 60999
	Rated voltage U <sub>e</sub>	UL: 1,000 V AC/DC IEC: 1,000 V AC / 1,500 V DC
	Rated current I <sub>e</sub>	UL: 115 A IEC: 160 A
Mechanical data	Housing	PA66, gray RAL 7035
	Chassis	Brass
	Terminal screw	Steel, zinc-plated
	Protection degree	IP 20
Installation	Cross section	Solid / stranded: 6..50 mm <sup>2</sup> ; 10 AWG..1/0 AWG Flexible with ferrules: 6..35 mm <sup>2</sup> ; 10 AWG..2 AWG
	Tightening torque	6 mm <sup>2</sup> / 10 AWG: 4.0 Nm / 35 lbf-in 8 mm <sup>2</sup> / 8 AWG: 4.5 Nm / 40 lbf-in 10..16 mm <sup>2</sup> / 6..4 AWG: 5.1 Nm / 45 lbf-in 25..50 mm <sup>2</sup> / 3..1/0 AWG: 5.5 Nm / 50 lbf-in*
		* Tightening torque according to UL486A, Table 21, Clauses 9.1.9.4 and 9.1.9.6
	Stripping length	~ 14 mm; 9/16"
	Conductor material	Copper
Approvals	UL 508 CE, RoHS and REACH compliant	
	In addition to the approval of the feeder terminal, the approval of the switching device used must also be considered.	
Instruction of installation	The feeder terminals are single-phase. In case of a combination of multiple terminals with installation side by side, e.g. for multipole or DC applications, the required creepage and air leakage distances must be considered and observed.	
	To ensure protection against electrical electric shock, the pin length of the feeder terminal must not exceed the depth of the contact area of the connected device. Irrespective of the current carrying capacity of the feeder terminal, the max. rated current of the devices terminal must not be exceeded.	

#### Order codes

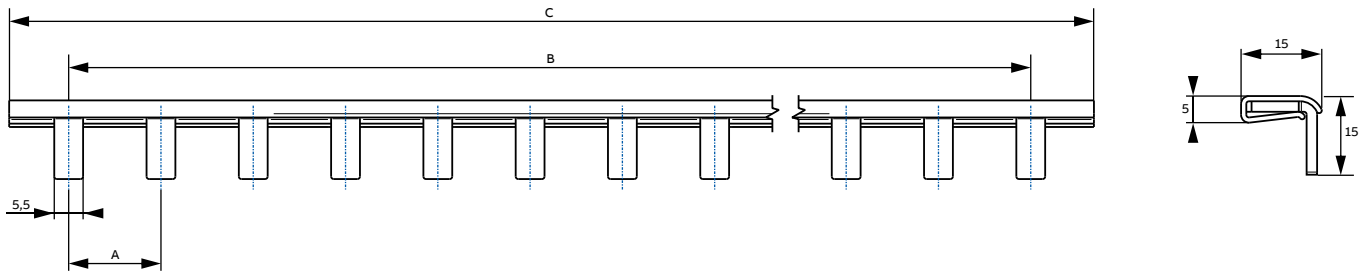
Feeder terminals with pin contact	Weight 1 piece	Pack unit	Cat. no.
	kg	pc.	
for use with MCB and 1-phase busbar	0.025	25	AST35/15-2CB
for use with MCB and 2-/3-phase busbar	0.032	10	AST35/38-2CB
for use with E90 and 2-/3-phase busbar	0.032	10	AST35/38-1CB
for use with E90 and 1-phase busbar	0.025	25	AST35/15-1CB



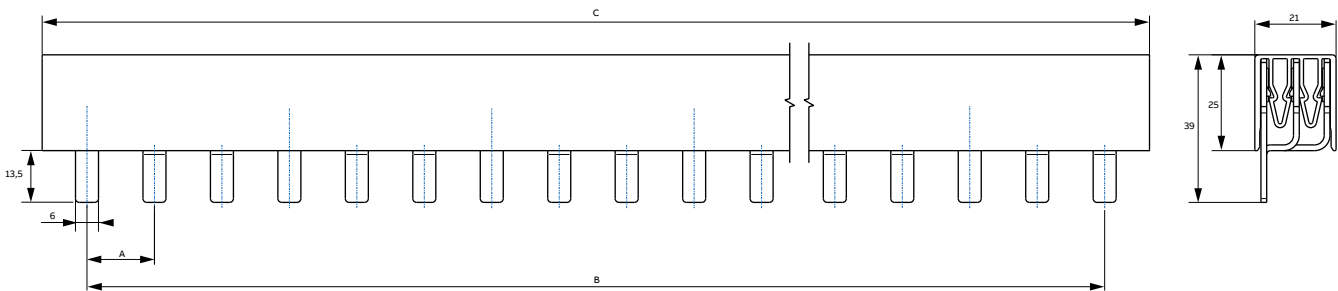
Busbars PS...CB and accessories according to UL 508

Overall dimensions

1-phase busbars



2-/3-phase busbars



Overall dimensions


Busbar	A mm	B mm	C mm
<b>1-phase busbars</b>			
PS1/57/18CB	17.6	986	1010
PS1/57/25CB	17.6	986	1010
PS1/37/18HCB	26.4	950	985
PS1/37/25HCB	26.4	950	985
<b>2-phase busbars</b>			
PS2/56/18CB	17.6	968	990
PS2/56/25CB	17.6	968	990
PS2/46/18HCB	17.6 / 26.4 *	968	1010
PS2/46/25HCB	17.6 / 26.4 *	968	990
<b>3-phase busbars</b>			
PS3/57/18CB	17.6	986	1010
PS3/57/25CB	17.6	986	1010
PS3/48/18HCB	17.6 / 26.4 *	924	982
PS3/48/25HCB	17.6 / 26.4 *	924	982
PS3/39/18HCB	26.4	1003	1040
PS3/39/25HCB	26.4	1003	1040

\* pin gap for auxiliary


## S800W-RSU Remote switching unit

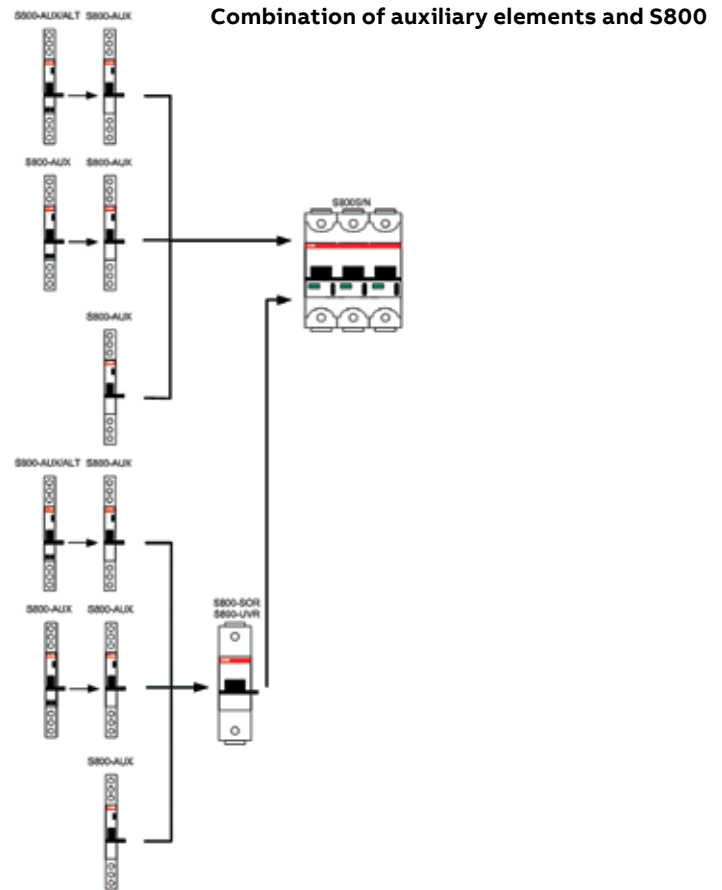
UL 489

### Remote switching unit

	Description	Cat. no.
	Remote switching unit (breaker is not included)	S800W-RSU

### S800-RSU cable including plug

	Description	Cat. no.
	3 meter cable 0.5 mm <sup>2</sup> (20 AWG) including 10- pole Micro-Fit 3.0™ plug	S800-RSU-CP



### Key features

- The remote switching unit S800W-RSU has a brushless high precision DC motor to ensure fast remote control operation
- Low power consumption
- Short switching times
- The S800W-RSU is mounted on any multi-pole S800 high-performance MCB
- Installation and wiring can be field installable
- The connection is done by a 10-pole Micro-Fit 3.0™ (not included in delivery)
- The S800W-RSU can be operated by a standard pushbutton or drive by a PLC

### Switching times

- OFF -> ON <<500 ms  
from signal to contact closing
- ON -> OFF <<250 ms  
from signal to contact opening
- TRIP -> OFF -> ON <<1500 ms  
from signal to contact closing

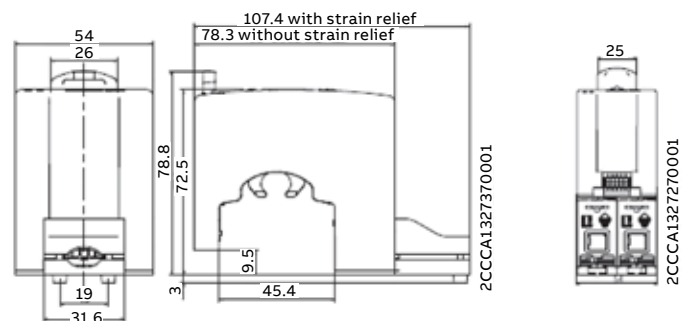
### Safety intelligence

- Inputs are deactivated when detecting manual use
- All outputs become active when spindle is rotated more than 360°
- S800W-RSU is locked for five minutes after three switching attempts leading to a trip
- Manual switch off possible for three- and four-pole devices

### Technical specifications

Operational voltage	24 V DC
Current consumption $I_{ms}$	2, 5
Standby current $I_{Standby}$	< 50 mA
Switching time OFF-ON	< 500 msec
Switching time ON-OFF	<250 msec
Ambient operation temperature	-25 °C to 70 °C
Number of switching operations	10.000
Maximum cable lengths (20 AWG/0.5 mm <sup>2</sup> )	10 m
Degree of protection (mounted)	IP2
Weight	0.661387 lb.
Connection	10-pole Micro-Fit 3.0™

### Diagrams



Approximate dimensions shown are in mm.




Accessories

S800U and S804U-UCZ


Shunt trip

For remote tripping of breaker, a shunt trip device can be added to the MCB. The device opens the breaker after control voltage is applied.

	Description (for field mounting, left side)	Cat. no.
	Shunt operation release 24 V AC/DC	S800-SOR24
	Shunt operation release 48–130 V AC/DC	S800-SOR130
	Shunt operation release 110–250 V AC/DC	S800-SOR250


Under-voltage release

When control voltage drops below approximately 50 percent of rated voltage, the UVR opens the breaker. The breaker cannot be operated unless proper control voltage is first applied to the UVR coil.

	Description	Cat. no.
	Under-voltage release 24–36 V AC/DC	S800-UVR36
	Under-voltage release 48–60 V AC/DC	S800-UVR60
	Under-voltage release 110–130 V AC/DC	S800-UVR130
	Under-voltage release 220–250 V AC/DC	S800-UVR250


Auxiliary contacts

The auxiliary contacts will signal whether the breaker is in the ON or OFF position.

	Description	Cat. no.
	Auxiliary contact	S800-AUX


Bell alarm

The bell alarm includes a set of contacts that will only signal when the breaker has tripped. Typically, the contacts would be connected to an alarm or bell to signal the operator that an overcurrent trip has occurred. The bell alarm also includes a test button for testing the alarm contacts without opening the breaker.

	Cat. no.
	S800-AUX/ALT



Ring tongue adapter

	Cat. no.
	S800-RT2125





## Accessories

S800U and S804U-UCZ


### Rotary operating mechanism


Allows “through-the-door” operation.


	Description	Cat. no.
	Handle mechanism	S800-RD

	Description	Cat. no.
	Gray rotary handle	S800-RHE-H

### UL locking device

	Description	Cat. no.
	Red rotary handle	S800-RHE-EM

	Description	Cat. no.
	Shaft extension	S800-RHE-S

	Description	Cat. no.
	Padlock not included	S800U-PLL

## Trip curves

Trip curves are essential for circuit protection by MCBs. With 5 different trip curves, MCBs from ABB provide the highest safety and protection for all types of applications and loads.

### Z Curve

- $2 \times I_n < I_{\text{Tripp}} < 3 \times I_n$  (AC)
- $2 \times I_n < I_{\text{Tripp}} < 4.5 \times I_n$  (DC)

### B Curve

- $3 \times I_n < I_{\text{Tripp}} < 5 \times I_n$  (AC)
- $4 \times I_n < I_{\text{Tripp}} < 7 \times I_n$  (DC)

### C Curve

- $5 \times I_n < I_{\text{Tripp}} < 10 \times I_n$  (AC)
- $7 \times I_n < I_{\text{Tripp}} < 15 \times I_n$  (DC)

### D Curve

- $10 \times I_n < I_{\text{Tripp}} < 20 \times I_n$  (AC)
- $10 \times I_n < I_{\text{Tripp}} < 21 \times I_n$  (DC)

### K Curve

- $10 \times I_n < I_{\text{Tripp}} < 14 \times I_n$  (AC)
- $10 \times I_n < I_{\text{Tripp}} < 22.4 \times I_n$  (DC)

