

High Performance MCB S800

Incomparable performances to meet the highest demand

Product marking

Clear and easy identification of product name and relevant characteristics

Interchangeable terminals

Possibility of having failsafe cage or ringlug terminal connections

QR code

Quick access to product main details and relevant documentation

Toggle position indication (TPI)

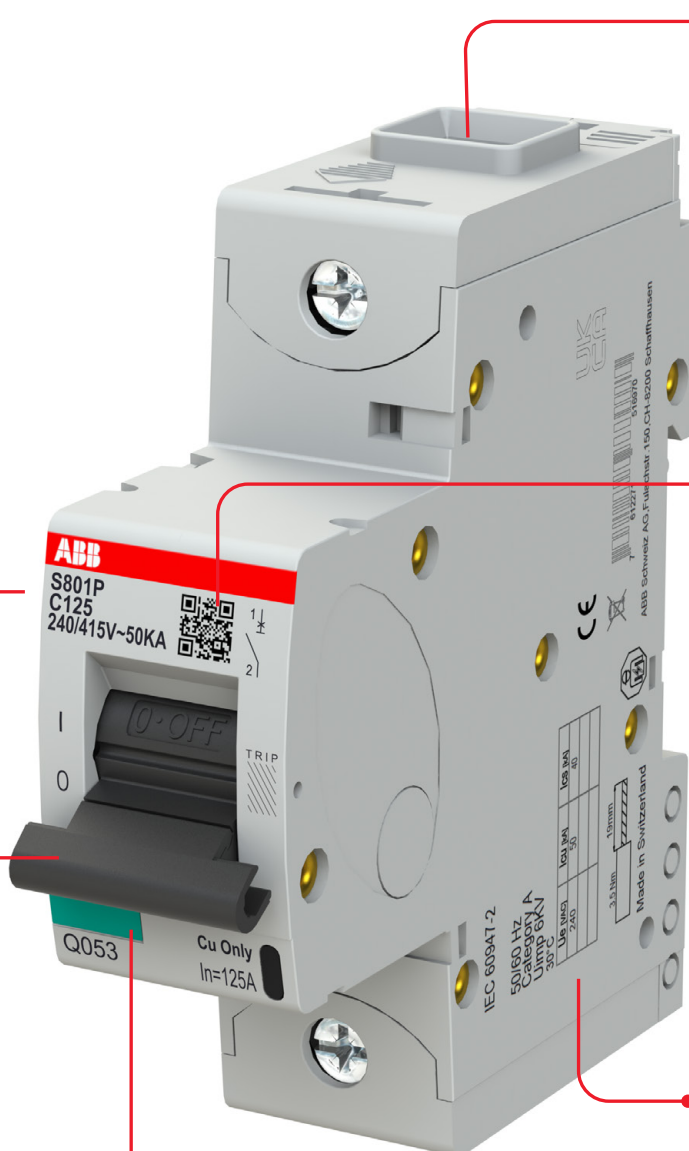
Clear identification of the moving contact (ON-OFF-TRIP)

Contact position indication (CPI)

Clear visualization of the device status

Suitable for upgrading your applications

Compatible with a wide range of accessories

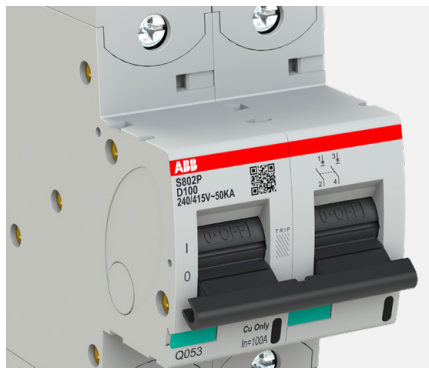




Housing materials

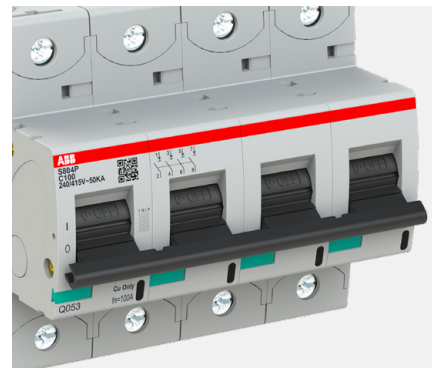
The S800 range is designed with specific plastic materials to satisfy fire and smoke requirements in traction applications.

Plastic material V0 according to UL94 and classified with Hazard level R26/HL3; R22/HL2 according to EN45545-2 standard.



Shock and vibration resistance

The S800 range is tested according to IEC 61373 for Rolling stock equipment – Shock and vibration tests, meeting the requirements Category 1 / Class B.



Play it safe: display the operational state

3 status of the device, clearly identified with toggle position: ON-OFF-TRIP.

The trip position in the middle, identifies if the devices has tripped due to overcurrent.

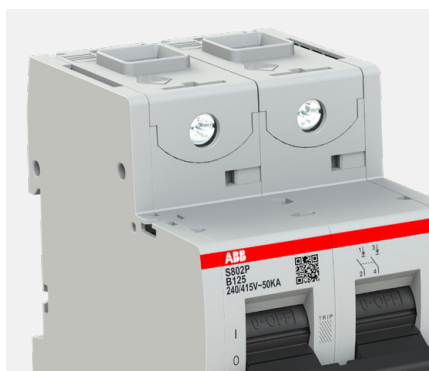
OFF position indicates manual tripping.

In both cases contacts are opened and CPI becomes green.



Cage and ringlug terminals

Interchangeable terminal adapter, makes easy to change from cage to ring terminals, guarantying easy installation with high level of flexibility. Fast and safe connection of the conductors is ensured by the “onboard terminal shutter” integrated into the body of the terminal, thereby preventing incorrect under-clamping of the connections.



Reliability at high performance

The S800 product series guarantees a complete safe electrical isolation of the circuit in compliance to IEC 60947-2. It offers high breaking capacity and high rated current to cover different applications.



Wide range of accessories

The S800 range is compatible with a wide range of accessories that extend the functions of the MCB. Functioning not only as a protection device, but also for remote control and monitoring of the installation.

The range of accessories include auxiliary contacts, aux/signal contacts, remote switching unit, short circuit limiter, shunt operation releases, undervoltage releases, RCD block and busbars.

MCBs technical details

S800 range features



Compact high performance MCB with unbeatable short circuit performances

- **Compact:** the S800 series are high performance MCBs with compact dimension in only **27mm width per pole (1.5 module per pole)**.
- **High short circuit capacity:** the series can reach high short circuit performance capacity **up to 50kA** thanks to a specially designed double arcing chamber system, with two arcing chambers per pole (except for S800B with only one).
- **Energy and current limiting:** this technology allows not only to reach high short circuit breaking capacity, but also to limit the specific let-through energy and I peak current during a short circuit event.
- **Selectivity and back-up:** selectivity with upstream overcurrent protection devices (fuses, MCCB). Very good back-up performances to downstream protection devices.
- **Compatible with a wide set of accessories** adding additional features to the product.
- **Wide range up to 125A** with different versions to cover several applications

Compliant to standard IEC/EN 60947-2

Standard ranges for whatever application where high performances are required as datacenter, industries, hospitals, telecommunication,

- **S800B:** Icu ultimate short-circuit breaking capacity up to **16kA**; rated current **32...63A**
- **S800C:** Icu ultimate short-circuit breaking capacity up to **25kA**; rated current **10...63A**
- **S800N:** Icu ultimate short-circuit breaking capacity up to **36kA**; rated current **6...63A**
- **S800S:** Icu ultimate short-circuit breaking capacity up to **50kA**; rated current **0.5...63A** (with dedicated codes available in ring terminal version and specific KM codes with only magnetic protection)
- **S800P:** Icu ultimate short-circuit breaking capacity up to 50kA; rated current 80, 100, 125 A (with dedicated codes available in Ring terminal version)

Specific ranges for direct current and high voltage applications

UC range non-polarized, for universal current application

- **S800S-UC:** Icu up to 50kA up to 1000 VDC; rated current 0,5...125A (with dedicated codes available in Ring terminal version)

PV range for DC applications and specific for photovoltaic

- **S800PV-SP:** Icu 5kA up to **1500 VDC**; rated current 5...125A, non-polarized
- **S800PV-SD:** **switch disconnecter** with Icw 1,5kA up to **1500 VDC**; rated current 32, 63, 125 A
- **S800PV-M-H:** **polarized switch disconnecter** with Icw 1,5kA up to **1000 VDC**; rated current 32, 63, 100 A

HV range for high voltage applications in AC as power conversion systems

- **S800HV:** Icu up to 4kA up to **1000 VAC**; rated current 0,5...125A

Compliant to standard UL489

- **S800U:** interrupting rating up to **50kA**; rated current **10...100A**
- **S800U-PV (Photovoltaic):** interrupting rating **3kA at 1000 VDC**, rated current **5A**
- **S800U-PVSP (Photovoltaic):** interrupting rating **3kA at 1500 VDC**, rated current **5A**
- **S800U-UC (universal current):** interrupting rating **10kA at 600 VDC**, rated current **10...80A**

Suitable for traction applications

- Plastic materials meeting fire and smoke requirements in traction applications. Plastic material V0 according to UL94 and classified with Hazard level R26/HL3; R22/HL2 according to EN45545-2 standard..
- Range tested according to **IEC 61373** for Rolling stock equipment – Shock and vibration tests, meeting the requirements **Category 1 / Class B**.

MCBs technical details

S800 range features



*Middle position of switch lever, see picture

Play it safe: display the operational state

3 status of the device, clearly identified with toggle position: ON-OFF-TRIP.

The trip position in the middle, identifies if the device has tripped due to overcurrent.

OFF position indicates manual tripping.

In both cases contacts are opened and CPI becomes green.

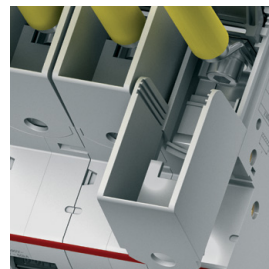
In OFF position (0 position), the device guarantees safe electrical isolation of the circuit according to IEC 60947-2 standard.

Cage and ring terminals

S800 series is available with cage terminals plus dedicated codes with ring terminals, meeting the different installation needs.

In addition, interchangeable terminal adapter, makes easy to change from cage to ring terminals, guarantying easy installation with high level of flexibility.

Fast and safe connection of the conductors is ensured by the “onboard terminal shutter” integrated into the body of the terminal, thereby preventing incorrect under-clamping of the connections.



High performance MCBs

S800PV-SP series technical features

S800PV-SP		
General Data		
Tripping characteristics		SP
Standards		IEC / EN 60947-2 and Annex P (specific for PV)
Number of poles		2 ... 4
Rated frequency I _e	A	5 ... 125
Rated frequency f	Hz	-
Rated insulation voltage U _i acc. to IEC/EN 60664-1	V	DC 1500
Rated impulse withstand voltage U _{imp} (1.2/50 μs)	kV	8
Dielectric test voltage at ind. freq. for 1 min.	kV	3
Overvoltage category		III*
Pollution degree		2
Suitability for isolation		yes
Grid distance	mm	50
Data acc. to IEC/EN 60947-2		
Rated operational voltage U _e	V	2-pole DC 800V: 5 ... 125 A 3-pole DC 1200V: 5 ... 125 A 4-pole DC 1500V: 5 ... 125 A
Min. operating voltage	V	-
Rated ultimate short-circuit capacity I _{cu}	kA	5 ... 16 A acc. IEC 60947-2 Annex P. I _{cu} = 5 kA 20 ... 125 A, acc. IEC 60947-2, I _{cu} = 5 kA 20 ... 125 A, acc. IEC 60947-2 Annex P. I _{cu} = 3 kA
Rated service short-circuit capacity I _{cs}	kA	I _{cu} = I _{cs}
Reference temperature for tripping characteristics	°C	40 °C
Electrical and Mechanical Endurance	cycle (OFF-ON-OFF)	acc. to Annex P: 5 ... 16 A: 300 electrical/9700 mechanical acc. to IEC 60947-2 (general part): 20 ... 100 A: 1500 electrical/8500 mechanical 125 A: 1000 electrical/9000 mechanical
Mechanical Data		
Housing type		Material group I, RAL 7035
Toggle type		black, lockable
Plastic classification acc. to UL94		V0
Protection degree acc. to EN 60529		IP20; IP40 (actuating end only)
Resistance to shock acc. to IEC/EN 60068-2-27		5g / 30ms, Test Ea
Shock resistance acc. To IEC/EN 61373		5g / 30ms, Cat 1 / Class B
Resistance to Vibrations acc. to IEC 60068-2-6		5 - 13.2Hz / 1 mm 13.2 - 100Hz / 0.7g with load 80% x I _e , Test Fc
Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30	°C/RH	2 cycles: 12h 55°C @98% rh; 12h 25°C @93% rh
Environmental condition (dry heat) acc. to IEC/EN 60068-2-2	°C/RH	16 hours 70°C
Environmental condition (low temp) acc. to IEC/EN 60068-2-1	°C/RH	16 hours -40°C
Ambient temperature (with daily average ≤ +35°C)	°C	-40...+70
Storage temperature	°C	-40 ... +70
Installation		
Terminal type		Failsafe cage or ringlug terminal
Connections (top/bottom) - C _u only	mm ²	1 ... 50 flexible 1 ... 70 solid (rigid or stranded)
Tightening torque	Nm	3.5
	in-lbs.	31
Wire stripping length	mm	19
Screwdriver		POZI 2
Mounting type		Any
Mounting position		Any
Supply from		Top and bottom
Dimensions and weight		
Pole dimensions (H x L x W)	mm	95 x 82.5 x 27**
Pole weight	g	240

*The pollution degree of the product, as defined in standard IEC 60947-1, is related to its micro environment, to which equipment is exposed. It may be different from that of the macro-environment. According to where the equipment is located, the pollution degree of the macro environment can be considered up to category IV if protection is offered by means of such as an adequate enclosure or internal heating to prevent absorption or condensation of moisture.

**On multi-pole versions, rated current 125A is equipped with a lateral cover of 4.5mm on each product side. Overall product width increases of 9mm

High performance MCBs

S800PV series with cage terminal, SP characteristic

S800PV-SP

Function: non polarized MCB for various direct current applications up to 1500 VDC.

Particularly suitable for protection and control of photovoltaic strings against overloads, short-circuits and reverse currents.

Applications: Industrial in direct current, photovoltaic systems.

Standard: IEC/EN 60947-2 and Annex P

5 ... 16A acc. IEC 60947-2 Annex P., I_{cu} 5 kA

20 ... 125A acc. IEC 60947-2, I_{cu} 5 kA

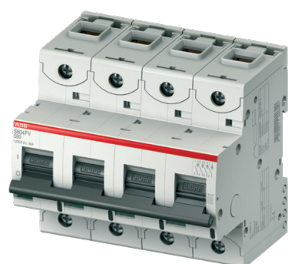
20 ... 125A acc. IEC 60947-2 Annex P., I_{cu} 3 kA



S802PV



S803PV



S804PV

Number of poles	Rated current [A]	GTIN EAN 7612271	Order details		Weight [kg]	Pack. unit
			Type Code	Order code		
2	5	471170	S802PV-SP5	2CCF019596R0001	0.49	1
	6	472115	S802PV-SP6	2CCF019643R0001	0.49	1
	8	472139	S802PV-SP8	2CCF019644R0001	0.49	1
	10	471194	S802PV-SP10	2CCF019597R0001	0.49	1
	13	471217	S802PV-SP13	2CCF019598R0001	0.49	1
	16	471231	S802PV-SP16	2CCF019599R0001	0.49	1
	20	471255	S802PV-SP20	2CCF019600R0001	0.49	1
	25	471279	S802PV-SP25	2CCF019601R0001	0.49	1
	32	471293	S802PV-SP32	2CCF019602R0001	0.49	1
	40	471316	S802PV-SP40	2CCF019603R0001	0.49	1
	50	471330	S802PV-SP50	2CCF019604R0001	0.49	1
	63	471354	S802PV-SP63	2CCF019605R0001	0.49	1
	80	471378	S802PV-SP80	2CCF019606R0001	0.49	1
	100	471392	S802PV-SP100	2CCF019607R0001	0.49	1
	125	520700	S802PV-SP125	2CCG001601R0001	0.515	1
3	5	471439	S803PV-SP5	2CCF019609R0001	0.74	1
	6	472153	S803PV-SP6	2CCF019645R0001	0.74	1
	8	472177	S803PV-SP8	2CCF019646R0001	0.74	1
	10	471453	S803PV-SP10	2CCF019610R0001	0.74	1
	13	471477	S803PV-SP13	2CCF019611R0001	0.74	1
	16	471491	S803PV-SP16	2CCF019612R0001	0.74	1
	20	471514	S803PV-SP20	2CCF019613R0001	0.74	1
	25	471538	S803PV-SP25	2CCF019614R0001	0.74	1
	32	471552	S803PV-SP32	2CCF019615R0001	0.74	1
	40	471576	S803PV-SP40	2CCF019616R0001	0.74	1
	50	471590	S803PV-SP50	2CCF019617R0001	0.74	1
	63	471613	S803PV-SP63	2CCF019618R0001	0.74	1
	80	471637	S803PV-SP80	2CCF019619R0001	0.74	1
	100	471651	S803PV-SP100	2CCF019620R0001	0.74	1
	125	520717	S803PV-SP125	2CCG001602R0001	0.765	1
4	5	452124	S804PV-SP5	2CCF019586R0001	0.98	1
	6	472191	S804PV-SP6	2CCF019647R0001	0.98	1
	8	472214	S804PV-SP8	2CCF019648R0001	0.98	1
	10	471699	S804PV-SP10	2CCF019622R0001	0.98	1
	13	471712	S804PV-SP13	2CCF019623R0001	0.98	1
	16	471736	S804PV-SP16	2CCF019624R0001	0.98	1
	20	471750	S804PV-SP20	2CCF019625R0001	0.98	1
	25	471774	S804PV-SP25	2CCF019626R0001	0.98	1
	32	471798	S804PV-SP32	2CCF019627R0001	0.98	1
	40	471811	S804PV-SP40	2CCF019628R0001	0.98	1
	50	471835	S804PV-SP50	2CCF019629R0001	0.98	1
	63	471859	S804PV-SP63	2CCF019630R0001	0.98	1
	80	471873	S804PV-SP80	2CCF019631R0001	0.98	1
	100	471897	S804PV-SP100	2CCF019632R0001	0.98	1
	125	520724	S804PV-SP125	2CCG001603R0001	1.005	1