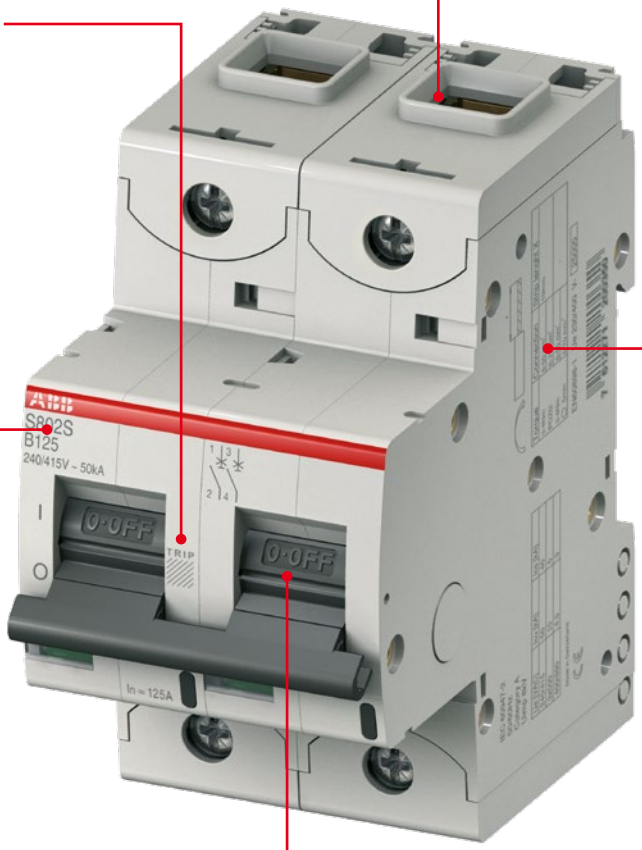
High Performance MCB S800

Incomparable performances



Interchangeable terminal, failsafe cage or ring lug terminal

Clear identification of the reason of cut-off thanks to TRIP position of the toggle

Quick identification of technical characteristics thanks to laser-printing of all data

Easy product name, easy identification, easy life.

Clear identification of the moving contact position thanks to toggle identification ON, OFF and TRIP position

Housing materials
In the S800 range of MCBs for traction, specific materials are used that are classified with an hazard level R26/HL3 according to EN 45545-2. Plastic materials are also classified I2-F3 according the NF F 16-101/102 (“Railway Rolling Stock Fire Behavior-Choice of Materials„ and “Railway Rolling Stock Fire Behavior- Choice of Materials, Application to Electrical Equipment„) thus responding to exigency 3.

Shock and vibration resistance
Additionally to the high quality standards and the fl ammability requirements, rail applications have specific demands that have to be to fulfi lled like resistance to shocks and vibrations. The resistance to vibrations and shocks of S800 has been positively tested according to: IEC 61373 – 2010 – 05 Edition 2.0 Rolling stock equipment – Shock and vibration tests considering Category 1, Class A and Class B.

Play it safe: display the operational state
The mechanical drive of the S800 high performance MCB is equipped with a trip-free release. The trip position display thereby always reliably displays the exact position of the moving contact. The trip position provides additional trip detection allowing to easily identify the reason for the cut-off. The switch lever moves to the middle position in case of thermal or magnetic tripping.

Cage and ring terminals
The S800 standard equipment with interchangeable terminal adapter for wires, cables and rigid conductors guarantees a high level of flexibility and comfort. Fast and safe connection of the conductors is ensured by the “onboard terminal shutter” integrated into the body of the terminal, thereby preventing incorrect underclamping of the connections.

Reliable: the disconnector properties In OFF position (0 position), the S800 high performance MCB guarantees safe electrical isolation of the circuit compliant to IEC 60947-2.

Wide range of accessories
S800 MCB range is completed with a wide range of accessories that enlarge the functions of the MCB not only as a protection devices, but even for control and monitor remotely the installation. The range of accessories include auxiliary contacts, aux/signal contacts, remote switching unit, short circuit limiter, shunt operation releases, undervoltage releases and busbars.

MCBs

S800S series technical features

		S800S	S803S-KM	S800S-UC
General Data				
Tripping characteristics		B, C, D, K,	KM	UCB, UCK
Standards		IEC/EN 60947-2, EN 60898-1, UL 1077	IEC/EN 60947-2	IEC/EN 60947-2
Poles		1 … 4	3	1 … 4
Rated current I_e	A	0.5 … 125	10 … 80	0.5 … 125
Rated frequency f	Hz	50/60	50/60	50/60
Rated insulation voltage U_i acc. to IEC/EN 60664-1	V	AC 690	AC 690	DC 1500
Rated impulse withstand voltage $U_{imp.}$ (1.2/50µs)	kV	8	8	8
Overvoltage category		IV	IV	III
Pollution degree		3	3	2
Suitability for isolation		yes	yes	yes
Data acc. to IEC/EN 60898-1				
Rated operational voltage U_e	V	AC 230/400	-	-
Min. operating voltage	V	AC 12	-	-
Rated short-circuit capacity I_{cn}	kA	Char. B, C, D: 230/400 V (10 … 80A) = 25 kA	-	-
Reference temperature for tripping characteristics	°C	30°C (Char. B, C, D)		
Electrical and Mechanical Endurance	ops	10...32 A: 10000 electrical / 10000 mechanical 40...80 A: 6000 electrical / 10000 mechanical	-	-
Service short-circuit capacity I_{cs}	kA	Char. B, C, D: 230/400 V (10 … 80 A) = 12.5 kA	-	-
Data acc. to IEC/EN 60947-2				
Rated operational voltage U_e	V	AC 400/690 DC 125 (1-pole) DC 250 (2-pole) DC 375 (3-pole) DC 500 (4-pole)	AC 690	DC 250 (1-pole) DC 500 (2-pole) DC 750 (3-pole) DC 750 (4-pole) (63 … 125 A) DC 1000 (4-pole) (up to 50 A)
Min. operating voltage	V	AC 12	AC 12	–
Rated ultimate short-circuit capacity I_{cu}	kA	AC 240/415 V = 50 kA AC 254/440 V = 30 kA AC 289/500 V (up to 80 A)= 15 kA AC 289/500 V (100 ... 125 A)= 10 kA AC 400/690 V (up to 80 A) = 6 kA AC 400/690 V (100 … 125 A) = 4.5 kA DC 125 V (1-pole) = 30 kA DC 250 V (2-pole) = 30 kA DC 375 V (3-pole) = 30 kA DC 500 V (4-pole) = 30 kA	AC 240/415 V = 50 kA AC 254/440 V = 30 kA AC 400/690 V = 6 kA DC 375 V = 30 kA	DC 250 V (1-pole) =50 kA DC 500 V (2-pole) =50 kA DC 750 V (3-pole) =50 kA DC 750 V (4-pole) (63...125A) =50 kA DC 1000V (4-pole)(up to 50A) = 50 kA
Rated service short-circuit capacity I_{cs}	kA	AC 240/415 V = 40 kA AC 254/440 V (up to 80 A) = 22.5 kA AC 254/440 V (100 … 125 A) = 15 kA AC 289/500 V (up to 80 A) = 11 kA AC 289/500 V (100 … 125 A) = 5 kA AC 400/690 V (up to 80 A) = 4 kA AC 400/690 V (100 … 125 A) = 3 kA DC 125 V (1-pole) = 30 kA DC 250 V (2-pole) = 30 kA DC 375 V (3-pole) = 30 kA DC 500 V (4-pole) = 30 kA	DC 375 V = 30 kA	DC 250 V (1-pole) =50 kA DC 500 V (2-pole) =50 kA DC 750 V (3-pole) =50 kA DC 750 V (4-pole) (63...125A) =50 kA DC 1000V (4-pole)(up to 50A) = 50 kA
Reference temperature for tripping characteristics	°C	B, C, D: 30°C K: 40°C	only magnetic release	UCB: 30°C UCK: 40°C
Electrical and Mechanical Endurance	ops.	0.5...32 A: 10000 electrical / 10000 mechanical 40...100 A: 6000 electrical / 10000 mechanical 125 A: 4000 electrical / 8000 mechanical	10 … 32 A: 10000 electrical/ 10000 mechanical 40 … 80 A: 6000 electrical/ 4000 mechanical	0.5...100 A: 1500 electrical / 10000 mechanical 125 A: 1000 electrical / 8000 mechanical
Data acc. to UL 1077/ C22.2 No 235, Supplementary Protector				
Alternating current: int. cap.		1 240: 30 (0.5…63A) 277: 14 (0.5…63A) 347: 6 (0.5…63A)		
		2,3,4 240: 30 (0.5...63A) 480 Y/277: 14 (0.5…63A) 600 Y/347: 6 (0.5…63A)		

MCBs

S800S series technical features

		S800S / S803S-KM / S800S-UC
Mechanical Data		
Housing		Material group I, RAL 7035
Toggle		black, lockable
Classification acc. to NF F 126-101, NF F 16-102		I3, F2
Protection degree acc. to EN 60529		IP20; IP40(actuating end only)
Shock resistance acc. to IEC/EN 60068-2-31		IEC 61373 Cat. 1 Class B, 5g / 30 ms acc. to IEC 60068-27 Test Ea
Vibration resistance acc. to IEC/EN 60068-2-6		IEC 60068-2-6 Test Fc; 2 - 13.2Hz /1 mm 13.2 - 100Hz / 0.7g with load 100% x I_e
Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30	°C/RH	12 + 12 cycle with 55 °C/90–96 % and 25 °C/95–100 %
Environmental conditions (dry heat) acc. to IEC/EN 60068-2-2 Test B	°C/RH	16 hours 55 °C / 2 hours 70 °C with damp heat 55 %
Ambient temperature	°C	–25 … +60
Storage temperature	°C	–40 … +70
Installation		
Terminal		Failsafe cage or ringlug terminal
Connections (top/bottom) – C_u only	mm^2 AWG (S800S only)	1 … 50 stranded 1 … 70 flexible 10 - 30 A: 14 AWG – 2 AWG 40 - 100 A: 14 AWG – 2 AWG
Tightening torque	Nm	3.5
	in-lbs.	31
Screwdriver		POZI 2
Mounting		EN 60715
Mounting position		any
Supply		any
Dimensions and weight		
Pole dimensions (H x L x W)	mm	82.5 x 95 x 26.5
Pole weight	g	ca. 240

Summary

A brief overview and more useful information

S800S-B characteristic
Function: protection and control of the circuits against overloads and short-circuits when a high breaking capacity is required; protection for people and big length cables in TN and IT systems; very useful when selectivity is needed vs an MCCB or back-up vs other MCBs wired downstream.
Applications: commercial and industrial.
Standard: IEC/EN 60898, IEC/EN 60947-2, UL 1077, supplementary protector
Icn=25kA (10 ... 80A)
Icu=50 kA

S800S-C characteristic
Function: protection and control of the circuits against overloads and short-circuits when a high breaking capacity is required; protection for resistive and inductive loads with low inrush current; very useful when selectivity is needed vs an MCCB or back-up vs other MCBs wired downstream.
Applications: commercial and industrial.
Standard: IEC/EN 60898, IEC/EN 60947-2, UL 1077, supplementary protector
Icn=25kA (10 ... 80A)
Icu=50 kA

S800S-D characteristic
Function: protection and control of the circuits against overloads and short-circuits when a high breaking capacity is required; protection for circuits which supply loads with high inrush current at the circuit closing (motors, LV / LV transformers, breakdown lamps); very useful when selectivity is needed vs an MCCB or back-up vs other MCBs wired downstream. Applications: commercial and industrial.
Standard: IEC/EN 60898, IEC/EN 60947-2, UL 1077, supplementary protector
Icn=25kA (10 ... 80A)
Icu=50 kA

S800S-K characteristic
Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits when a high breaking capacity is required; very useful when selectivity is needed vs an MCCB or back-up vs other MCBs wired downstream. Advantages: no nuisance tripping in the case of functional peak currents up to 10xIn, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.
Applications: commercial and industrial.
Standard: IEC/EN 60947-2, UL 1077, supplementary protector
Icu=50 kA

Order Code

A brief overview and more useful information

The link provided here will redirect you to the **detailed product catalog**, where you can find **more information about the products and the order codes**.
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