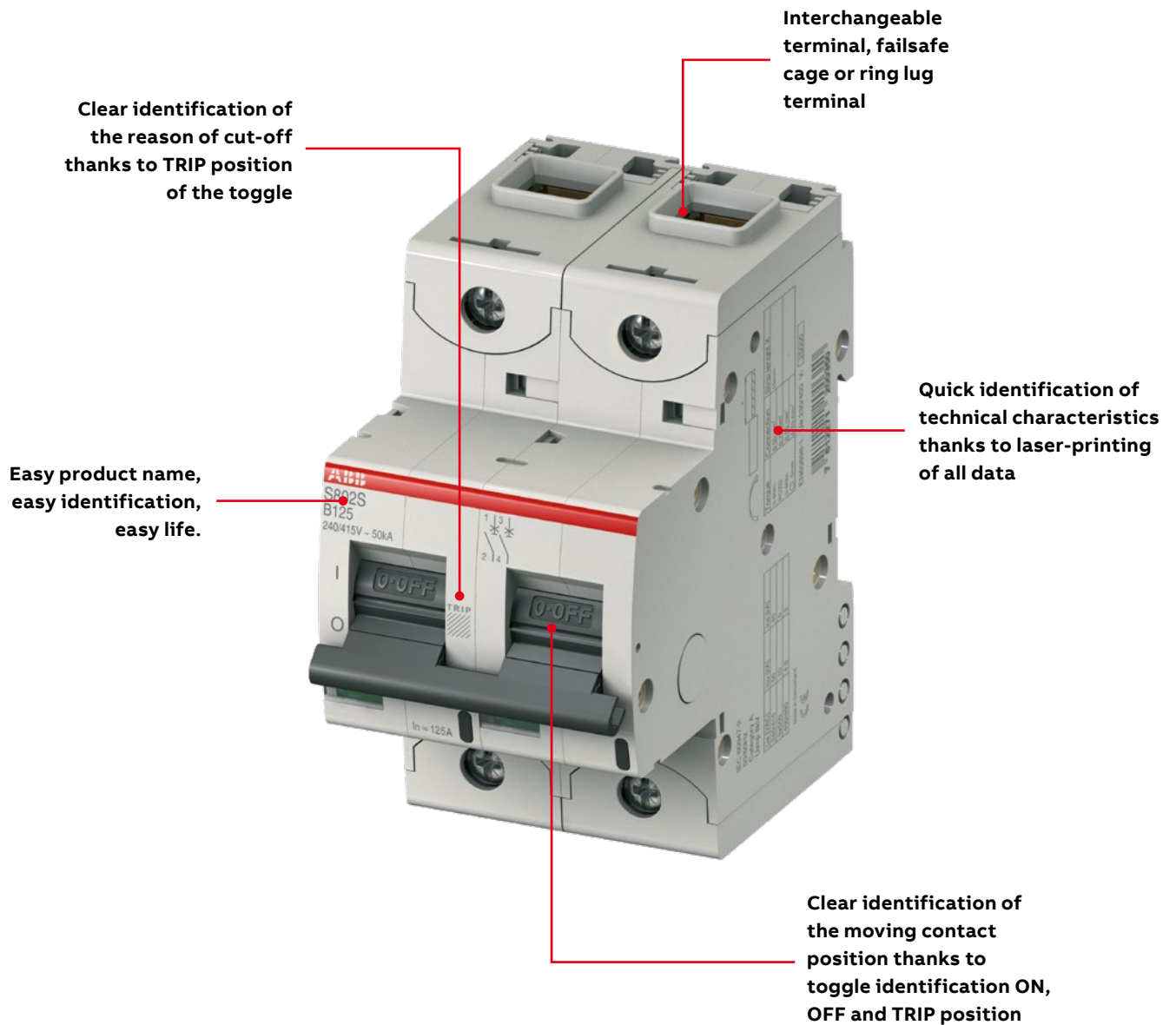


# High Performance MCB S800

Incomparable performances





### Housing materials

In the S800 range of MCBs for traction, specific materials are used that are classified with a hazard level R26/HL3 according to EN 45545-2. Plastic materials are also classified I2-F3 according to 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 flammability requirements, rail applications have specific demands that have to be fulfilled 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 device, 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

## S800N series technical features

S800N		
<b>General Data</b>		
Tripping characteristics		B, C, D
Standards		IEC/EN 60947-2, EN 60898-1
Poles		1 ... 4
Rated current $I_n$	A	6 ... 125
Rated frequency f	Hz	50/60
Rated insulation voltage $U_i$ acc. to IEC/EN 60664-1	V	AC 690
Rated impulse withstand voltage $U_{imp}$ (1.2/50 $\mu$ s)	kV	8
Overvoltage category		IV
Pollution degree		3
Suitability for isolation		yes
<b>Data acc. to IEC/EN 60898-1</b>		
Rated operational voltage $U_e$	V	AC 230/400
Min. operating voltage	V	AC 12
Rated short-circuit capacity $I_{cn}$	kA	AC 230/400V (10 ... 80A) = 20kA
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	230/400V (10 ... 80A) = 10kA
<b>Data acc. to IEC/EN 60947-2</b>		
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)
Min. operating voltage	V	AC 12
Rated ultimate short-circuit capacity $I_{cu}$	kA	AC 240/415 V = 36 kA AC 254/440 V = 20 kA AC 289/500 V = 10 kA AC 400/690 V = 4.5 kA DC 125 V (1-pole) = 20 kA DC 250 V (2-pole) = 20 kA DC 375 V (3-pole) = 20 kA DC 500 V (4-pole) = 20 kA
Rated service short-circuit capacity $I_{cs}$	kA	AC 240/415 V = 30 kA AC 254/440 V (up to 63 A) = 15 kA AC 254/440 V (80 ... 125 A) = 10 kA AC 289/500 V (up to 80 A) = 8 kA AC 289/500 V (100 ... 125) = 5 kA AC 400/690 V = 3 kA DC 125 V (1-pole) = 20 kA DC 250 V (2-pole) = 20 kA DC 375 V (3-pole) = 20 kA DC 500 V (4-pole) = 20 kA
Reference temperature for tripping characteristics	°C	30°C
Electrical and Mechanical Endurance	ops.	6 ... 32 A: 10000 electrical/10000 mechanical 40 ... 100A: 6000 electrical/10000 mechanical 125 A: 4000 electrical/8000 mechanical
<b>Mechanical Data</b>		
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 60068-2-30		IEC 61373 Cat. 1 Class B, 5g / 30ms acc. To IEC 60068-27 Test Ea
Vibration resistance acc. to IEC/EN 60068-2-6		IEC 60068-2-6 Test Fc; 2-13.2 Hz/1 mm 13.2-100 Hz/0.7 g with load 100% x $I_n$
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

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## Summary

A brief overview and more useful information

### S800N-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

**Icn=**20 kA (10 ... 80 A)

**Icu=**36 kA

### S800N-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

**Icn=**20 kA (10 ... 80 A)

**Icu=**36 kA

### S800N-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

**Icn=**20 kA (10 ... 80 A)

**Icu=**36 kA

## Order Codes

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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