

Low voltage circuit breaker

SACE Emax X1



SACE Emax X1 is a highly advanced low voltage air circuit-breaker with unparalleled versatility of use and able to solve all installation problems brilliantly and respond successfully to all plant engineering requirements, from standard ones to the most technologically advanced ones.

SACE Emax X1 can be found in the three-pole and four-pole, fixed and withdrawable versions, fitted with the very latest generation electronic trip units, with the possibility of interchangeability. SACE Emax X1 set up a new technological standard and leave you free to think up and build installations with extraordinary performances.

The present document applies to products made in Italy and manufactured in Frosinone plant. This manufacturing site is certified according to ISO 9001, IRIS, ISO 14001, OHSAS 18001 and SA 8000.

Product Conformity & Compliance

REACH (Regulation EC 1907/2006)

SACE Emax X1 and related accessories were classified as Articles and, during normal and reasonably foreseeable conditions of use, do not intentionally release any substance or preparation.

ABB SACE continuously undertakes communications throughout its supply chain in order to collect information about suppliers' compliance with REACH regulation.

SVHC (Regulation EC 1907/2006 REACH)

ABB SACE continuously assesses its products for content of Substances of Very High Concern (SVHC), as included in the "Candidate List" by the European Chemicals Agency (ECHA).

RoHS II

SACE Emax X1 and related accessories are within the scope of Directive 2011/65/EU (RoHS II) starting from July 2019. However, according to our best knowledge, SACE Emax X1 and related accessories do not contain any of the restricted substances listed into RoHS II directive.

WEEE

SACE Emax X1 and related accessories are included in the scope of Directive 2012/19/EU starting from August 15th 2018.

Product Safety

Certification of conformity with the product Standards is carried out in the ABB SACE tests laboratory (accredited by ACCREDIA) in respect of UNI CEI EN ISO /IEC 17025 Standard, by the Italian certification body ACAE (Association for Certification of Electrical Apparatus), member of the European LOVAG organization (Low Voltage Agreement Group) and by the Swedish certification body Intertek Semko, belonging to the international IECEE organization.

Standard:

- IEC 60947-2.

Directives:

- EC "Low Voltage Directive (LVD) 2014/35/EC.
- EC "Electromagnetic Compatibility Directive" (EMC) 2014/30/EC.

Naval Registers:

Lloyd's Register of Shipping, Germanischer Lloyd, Bureau Veritas, Rina, Det Norske Veritas, Russian Maritime Register of Shipping, ABS.

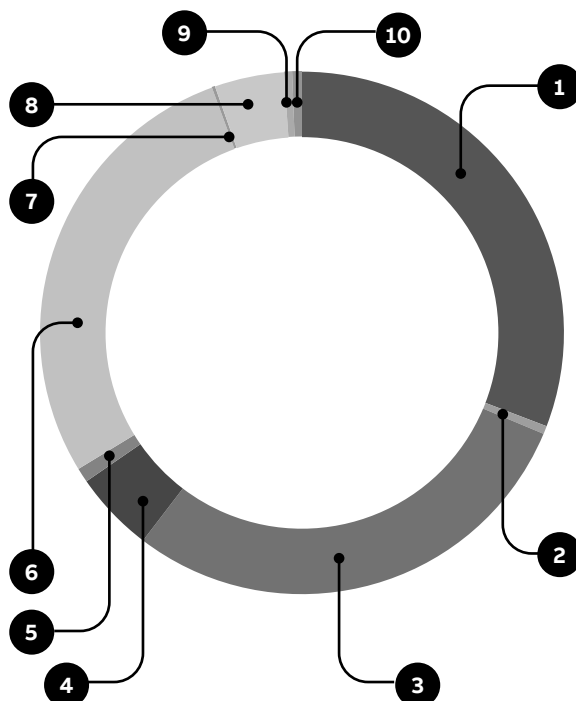
Certifications and awards



Material declaration

The charts below show the constituents of Emax X1 3-poles. The constituent materials are distributed as follows.

The total weight of the product is 12.809 gr.



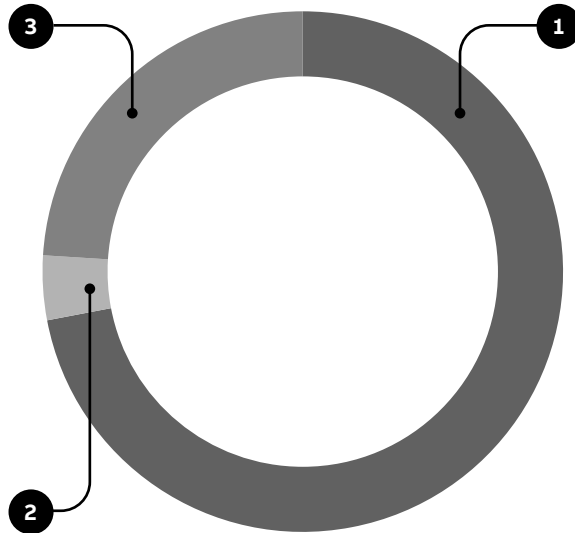
Material	% wt
1 Copper-copper alloys	30,8%
2 Stainless steel	0,5%
3 Steel	29,1%
4 Other	5,0%
5 Electronic board	0,9%
6 BMC	28,1%
7 PET	0,2%
8 PC	4,3%
9 PA	0,5%
10 Precious metals	0,6%
TOTAL	100,0%

Packaging

The total weight for Emax X1 packaging material is 1250 grams. The chart provides information for each packaging material used.

The polymer films used are marked with the proper identification code and are recyclable.

Emax X1 packing material composition



Material	%
1 Cardbox	72%
2 Plastic	4%
3 Wood	24%
TOTAL	100%

Product Use



Energy

Power loss for Emax X1 is equal to 68 W per pole. These values represent about 0.01% of the total power flowing through Emax X1 breaker. The energy consumption during the use of Emax X1 has been estimated assuming 20 years of continual operation with a 30% load rate and 100% operation time.

Energy consumption=3217 KWh.

End-of-life

At the end of operating life, constituent components of Emax X1 have been optimized in order to reduce waste amount and increase recovery of the material.

Metals and polymers contained into SACE Emax X1 are characterized by high recycling rates. Most plastic parts are marked for easy sorting.

The recyclability potential of the product has been evaluated using IEC / TR 62635. According to this standard, the potential recyclability ratio is 80%.

ABB SACE
Electrification Products Division
Protection & Connection
5, Via Pescaria
I-24123, Bergamo - Italy
Phone: +39 035 395.111

www.abb.com

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