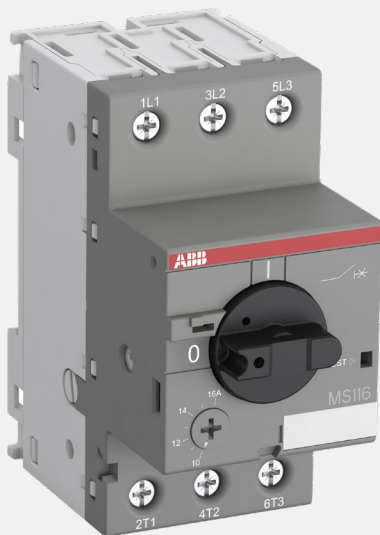


# Manual motor starters

## MS116



ABB's MS116 manual motor starters are electromechanical protection devices for the main circuit. They are mainly used to provide fuseless protection of motors against short-circuits, overloads and phase failures. In addition, they are used to switch motors ON/OFF manually. Starter combinations are setup together with contactors.

MS116 manual motor starters are available up to 32 A (15 kW at 400 V AC) in a compact size of 45 mm width. This product range offers short-circuit service breaking capacities (Ics) up to 50 kA. Furthermore, it incorporates a disconnection function and temperature compensation up to 55 °C. Due to various approvals and certifications, MS116 can be used worldwide for a variety of applications. Along with the main devices ABB offers a wide range of accessories (auxiliary contacts, signal contacts, undervoltage releases, enclosures, etc.) that are harmonized for the complete MS1xx and MO1xx family.

### Product conformity & compliance

#### **REACH (Regulation EC 1907/2006)**

MS116 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 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 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). ABB publishes the data about the products that are having a part with SVHC in the SCIP database.

#### **RoHS II**

MS116 and related accessories are within the scope of directive 2011/65/EU (RoHS II) and amendment 2015/863, starting from July 22 2019.

#### **WEEE**

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) is the European Community directive 2012/19/EU on waste electrical and electronic equipment (WEEE) which, together with the RoHS Directive, became European law in February 2003.

### Product safety

Compliance with essential health and safety requirements has been assured by compliance with the applicable product and safety standards.

The validation according to the product and safety standards is carried out by third party tests laboratory (STIEE / TL030) in respect of the EN ISO/IEC 17025 European standard, according to IECCE CB scheme. CB certificate has been issued.

### Standard:

- IEC/EN 60947-1
- IEC/EN 60947-2
- IEC/EN 60947-4-1

- UL 60947-1
- UL 60947-4-1
- UL 60947-5-1

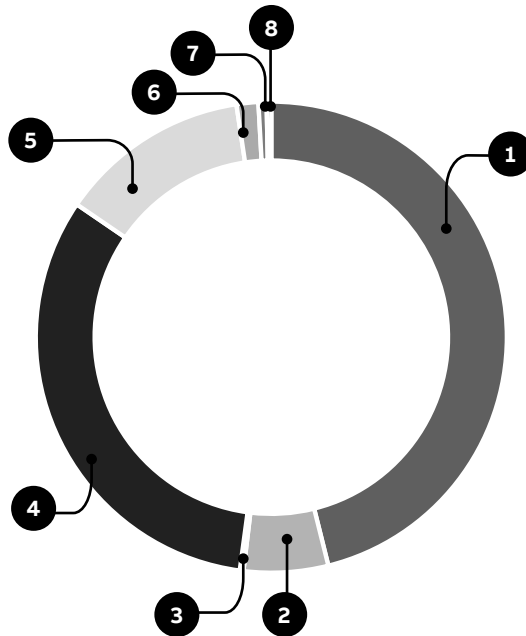
### Directives:

- EC "Low Voltage Directive" (LVD) 2014/35/EU

## Material declaration

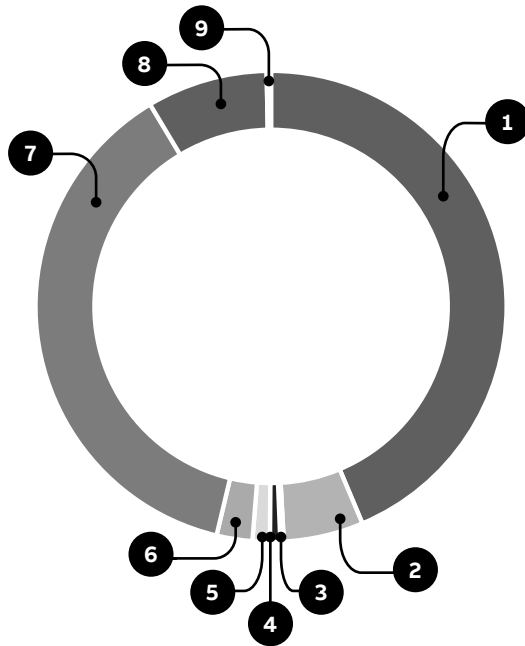
This section outlines the material composition of two representative products of the MS116 range. MS116-16 for products below and equal 16 A and MS116-32 for products above 16 A. The constituent materials are distributed as follows.

**MS116 16 A with thermal-magnetic release.**  
The total weight of the product is 265 gr.



Material	% wt
1 PA	46.1 %
2 PBT	5.8 %
3 Other thermoplastic	0.3 %
4 Stainless steel	32.4 %
5 Steel	13.1 %
6 Copper	1.5 %
7 Silver alloys	0.6%
8 Other	0.3 %
TOTAL	100.0 %

**MS116 32 A with thermal-magnetic release.**  
**The total weight of the product is 310 gr.**



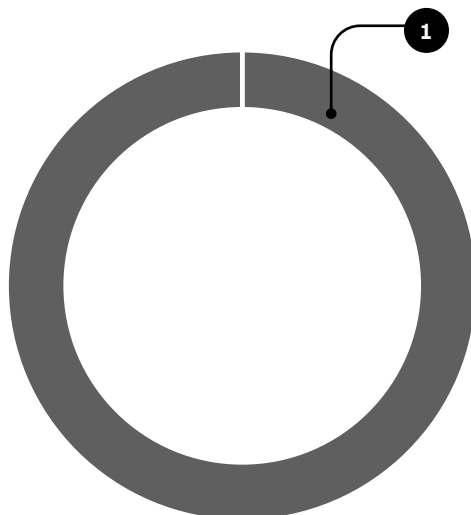
Material	% wt
① Plastics PA- Polyamid	43.7 %
② Plastics PBT- Polybutylenterephthalat	5.5 %
③ PEI, PPS, POM, PPS	0.2 %
④ Silver alloys	0.7 %
⑤ Copper	1.2 %
⑥ Stainless steel- Face centered	2.5 %
⑦ Steel	37.7 %
⑧ Copper alloys	8.3 %
⑨ Other	0.3 %
<b>TOTAL</b>	<b>100.0 %</b>

## Packaging

The tables below provide information for each packaging material used. The card box used for the product packaging material is made of recycled fibers and 100 % recyclables.

### MS116 16 A

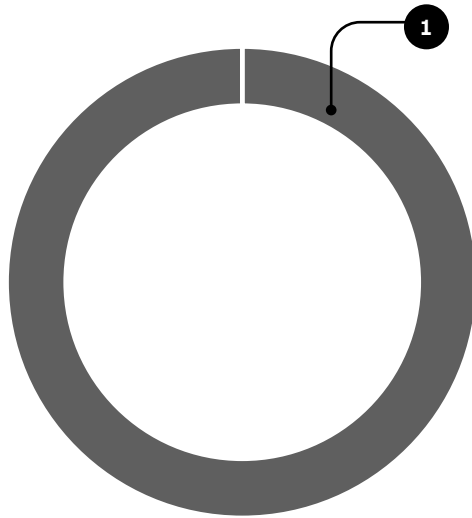
**Packaging material composition: total weight 15.94 gr.**



Material	% wt
① Cardbox	100 %
<b>TOTAL</b>	<b>100 %</b>

## MS116 32 A

Packaging material composition: total weight 23.28 gr.



Material	% wt
1 Cardbox	100 %
TOTAL	100 %

## Product use



### Energy

Power losses for MS116 are indicated in the following table.

Type	Power loss (W/device)
MS116-0.16	5.1
MS116-0.25	4.8
MS116-0.4	5.0
MS116-0.63	5.2
MS116-1.0	4.8
MS116-1.6	5.0
MS116-2.5	5.5
MS116-4.0	5.5
MS116-6.3	5.5
MS116-10.0	7.1
MS116-12.0	6.8
MS116-16.0	8.3
MS116-20	6.9
MS116-25	8.5
MS116-32	9.4

## End-of-life

At the end of operating life, constituent components of MS116 manual motor starters have been optimized in order to reduce waste amount and increase recovery of the material. Metals and polymers contained in MS116 manual motor starters are characterized by high recycling rates. Most plastic parts are marked for easy sorting.

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