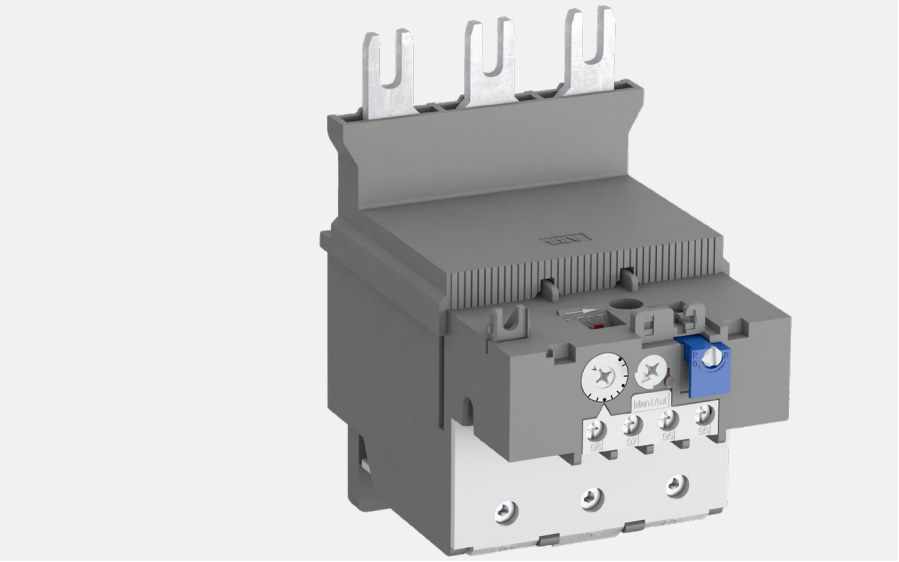
PRODUCT ENVIRONMENTAL INFORMATION

Thermal overload relays
TF140DU, TF140DU-V1000



ABB's TF140DU thermal overload relays are economic electromechanical protection devices for the main circuit. They are used mainly to protect motors against overload and phase failures. Starter combinations are setup together with contactors.

TF140DU thermal overload relays are available up to 142 A in a compact size of 89 mm width. It offers reliable and fast protection for motors in the event of overload or phase failure. The device has trip class 10. Further features are the temperature compensation from -25 up to 55 °C, trip contact (NC), signal contact (NO), automatic- or manual reset selectable, trip-free mechanism, STOP function and a trip indication. The thermal overload relays are connected directly to the AF block contactors.

Product conformity & compliance

REACH (Regulation EC 1907/2006)
TF140DU/TF140DU-V1000 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
TF140DU/TF140DU-V1000 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 IECEE CB scheme. CB certificate has been issued.

Standards:
- IEC/EN 60947-1
- IEC/EN 60947-4-1
- IEC/EN 60947-5-1
- IEC/EN 60079-1 *
- IEC/EN 60079-7 *
- IEC/EN 60079-14 *
- IEC/EN 60079-31 *
- UL 60947-1
- UL 60947-4-1
- UL 60947-5-1

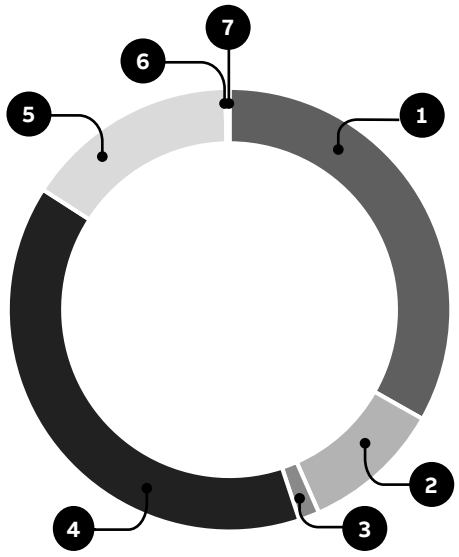
Directives:
- EC “Low Voltage Directive” (LVD) 2014/35/EU
- EC “ATEX Directive” 2014/34/EU *

* V1000 only

Material declaration

This section outlines the material composition of TF140DU-142 as representative products for the TF140 range. The constituent materials are distributed as follows.

TF140DU-142. The total weight of the product is 828 gr.

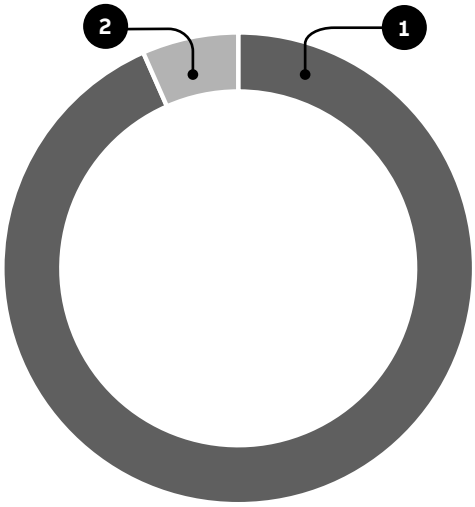


Material		% wt
1	BMC/SMC	33.2 %
2	PA	10.2 %
3	PC	1.5 %
4	Copper	39.2 %
5	Steel	15.6 %
6	Copper alloys	0.2 %
7	Other metal	0.1 %
	TOTAL	100 %

Packaging

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

TF140DU packaging material composition: total weight 116 gr.



Material		% wt
1	Cardbox	93.4 %
2	Paper	6.6 %
	TOTAL	100 %

Product use

Energy

Power losses for TF140DU are indicated in the following table.

Type	Power loss (W/device)
TF140DU-90	13.12
TF140DU-110	13.72
TF140DU-135	17.39
TF140DU-142	15.43
TF140DU-90-V1000	13.12
TF140DU-110-V1000	13.72
TF140DU-135-V1000	17.39
TF140DU-142-V1000	15.43

End-of-life

At the end of operating life, constituent components of TF140DU thermal overload relays have been optimized in order to reduce waste amount and increase recovery of the material. Metals and polymers contained into TF140DU thermal overload relays are characterized by high recycling rates. Most plastic parts are marked for easy sorting.

ABB STOTZ-KONTAKT GmbH
Eppelheimer Strasse 82
69123 Heidelberg, Germany

abb.com/lowvoltage

Document number 1SAC200090H0009 Rev. B (10/2022)