

# Installation contactors

## ESB40N, EN40N



ABB's ESB..N installation contactors are premium electromechanical switching devices widely used for controlling lighting, heating, ventilation, motors and pumps. The range covers ratings up to 100 A, includes various accessories and is fully compatible with other modular DIN-rail components.

ESB40N/EN40N installation contactors are used to control single-phase loads up to 40 A in household and industrial applications with a maximum ambient temperature of +55 °C. Thanks to a new coil technology, they can be operated by AC or DC voltages, are completely hum-free and has an integrate overvoltage protection for the control circuit. A bi-colored indicator on the front of the device shows clearly shows the status of the contactor. Several contact combinations are available as well as tool-free mountable accessories. Versions with combined automatic and manual control are also part of the offer.

### Product conformity & compliance

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

ESB40N/EN40N 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). According to our best knowledge, ESB40N/EN40N and related accessories do not contain SVHC substances exceeding 0.1 % w/w.

#### **RoHS II**

ESB40N/EN40N 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.

### Standards:

- IEC/EN 60947-1
- IEC/EN 60947-4-1
- IEC/EN 61095

- UL 60947-1

- UL 60947-4-1

### Directives:

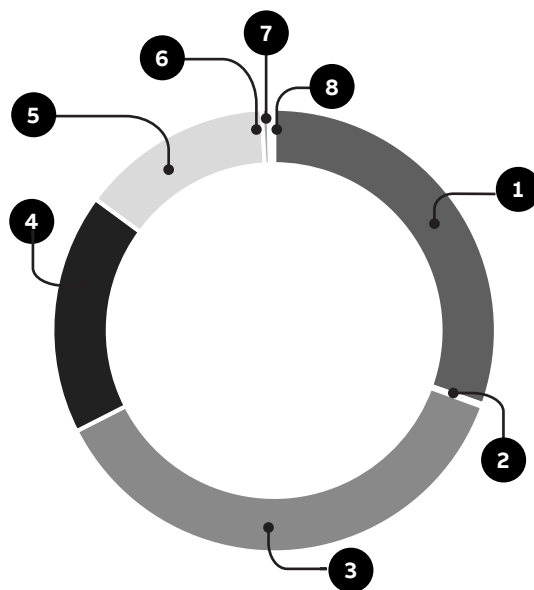
- EC "Low Voltage Directive" (LVD) 2014/35/EU

## Material declaration

This section outlines the material composition of ESB40-40N-06 as representative products for ESB40N/EN40N-06.

The constituent materials are distributed as follows.

**The total weight of ESB40-40N-06 is 405 gr.**

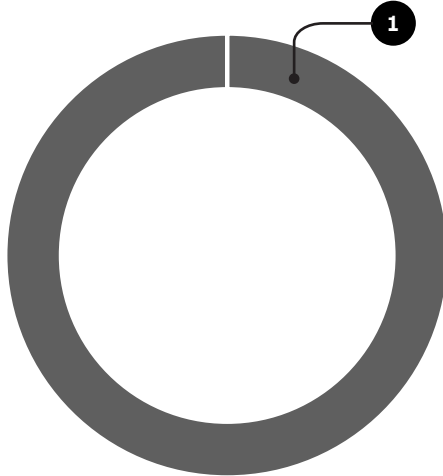


| Material                | % wt   |
|-------------------------|--------|
| 1 PA                    | 30.4 % |
| 2 Other thermoplastic   | 0.2 %  |
| 3 Steel                 | 36.9 % |
| 4 Copper                | 17.6 % |
| 5 Copper alloys         | 14.0 % |
| 6 Silver alloys         | 0.5 %  |
| 7 Stainless steel       | 0.1 %  |
| 8 Electronic components | 0.3 %  |
| 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.

**ESB40-40N Packaging material composition: total weight 25 gr.**



| Material  | % wt  |
|-----------|-------|
| 1 Cardbox | 100 % |
| TOTAL     | 100 % |

## Product use



### Energy

Power losses for ESB40N/EN40N installation contactors are indicated in the following table

| Type   |                  | Power loss (W/device) |
|--------|------------------|-----------------------|
| ESB40N | le / AC-1, AC-7a | 15.4                  |
|        | le / AC-3, AC-7b | 6.8                   |
|        | le / AC-3e       | 6.8                   |
| EN40N  | le / AC-1, AC-7a | 15.4                  |
|        | le / AC-3, AC-7b | 6.8                   |
|        | le / AC-3e       | 6.8                   |

## End-of-life

At the end of operating life, constituent components of ESB40N/EN40N installation contactors have been optimized in order to reduce waste amount and increase recovery of the material. Metals and polymers contained into ESB40N/EN40N installation contactors are characterized by high recycling rates. Most plastic parts are marked for easy sorting.

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