



Representative Image

## Alternate Catalog No. ESB40-20N-06 Catalog No. 1SAE341111R0620

**Description:** ESB40-20N-06 Installation Contactor

**UPC No** 4013614518478

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The ESB40..N installation contactors are used to control single and three-phase loads up to 40 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environments. The following benefits are provided: Hum-free operation, low power consumption and integrated overvoltage protection. Various contact combinations and accessories are available.

### Descriptors

|          |               |
|----------|---------------|
| Category | AF Contactors |
|----------|---------------|

### Specifications

|                                                    |                                                                                                                                                              |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Type                                       | Installation Contactors (4-poles)                                                                                                                            |
| General Use Rating UL/CSA                          | (acc. to UL 240 V) 40 ampere<br>(acc. to UL 480 V) 40 ampere                                                                                                 |
| Object Classification Code                         | Q                                                                                                                                                            |
| Rated Control Circuit Voltage                      | 230 V                                                                                                                                                        |
| Number of Main Contacts NO                         | 2                                                                                                                                                            |
| Number of Main Contacts NC                         | 0                                                                                                                                                            |
| Maximum Operating Voltage UL/CSA                   | Main Circuit 480 V AC                                                                                                                                        |
| Connecting Capacity Main Circuit UL/CSA            | Solid 16-4 american wire gauge<br>Stranded 16-4 american wire gauge                                                                                          |
| Connecting Capacity Main Circuit UL/CSA            | Solid 16-4 american wire gauge<br>Stranded 16-4 american wire gauge                                                                                          |
| RoHS Status                                        | Following EU Directive 2011/65/EU                                                                                                                            |
| Reference Ambient Air Temperature                  | Operation -25 ... +55 °C                                                                                                                                     |
| Rated Operational Voltage                          | Main Circuit 220 V DC<br>Main Circuit 400 V AC                                                                                                               |
| Resistance to Shock acc. to IEC 60068-2-27         | 11 ms Pulse 15g                                                                                                                                              |
| Tightening Torque UL/CSA                           | Control Circuit 8 in-lb (pound inch)<br>Main Circuit 20 in-lb (pound inch)                                                                                   |
| Rated Operational Current AC-1                     | (NO) 40 A                                                                                                                                                    |
| Standards                                          | IEC/EN 60947-1<br>IEC/EN 60947-4-1<br>IEC/EN 61095<br>UL 60947-1<br>UL 60947-4-1                                                                             |
| Rated Operational Power AC-3                       | (230 V) Single Phase, NO 3.7 kW                                                                                                                              |
| Rated Breaking Capacity AC-3 acc. to IEC 60947-4-1 | 8 x Ie / AC-3                                                                                                                                                |
| Horsepower Rating UL/CSA                           | (220 ... 240 V AC) Single Phase, NO 3 hp<br>(440 ... 480 V AC) Single Phase, NO 7.5 hp                                                                       |
| Rated Frequency                                    | Control Circuit 400 Hz<br>Control Circuit 50 Hz<br>Control Circuit 60 Hz<br>Control Circuit DC<br>Main Circuit 50Hz<br>Main Circuit 60 Hz<br>Main Circuit DC |
| Rated Short-time Withstand Current                 | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 176 A                                                                                             |

**by ABB**

## Specifications

|                                                  |                                                                                                                                                                                                                                                                               |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational Current AC-3                   | (230 V) Single Phase, NO 22 A                                                                                                                                                                                                                                                 |
| Rated Making Capacity AC-3 acc. to IEC 60947-4-1 | 10 x I <sub>e</sub> / AC-3                                                                                                                                                                                                                                                    |
| Maximum Electrical Switching Frequency           | AC-1 cycles per hour<br>AC-3 cycles per hour<br>AC-7a cycles per hour<br>AC-7b cycles per hour                                                                                                                                                                                |
| Short-Circuit Protective Devices                 | gG Type Fuses 63 A                                                                                                                                                                                                                                                            |
| Rated Insulation Voltage                         | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 500 V                                                                                                                                                                                                                              |
| Mechanical Durability                            | 1000000 cycle                                                                                                                                                                                                                                                                 |
| Coil Operating Limits                            | (acc. to IEC 60947-4-1) 0.85 ... 1.1 x U <sub>c</sub> (at $\theta \leq 55^\circ\text{C}$ )                                                                                                                                                                                    |
| Secondary Rated Impulse Withstand Voltage        | 6 kV                                                                                                                                                                                                                                                                          |
| Connecting Capacity Main Circuit                 | Flexible with Ferrule 1x 1.5 ... 16/2x 1.5 ... 10 square mm/square mm<br>Flexible with Insulated Ferrule 1x 1.5 ... 16/2x 1.5 ... 10 square mm/square mm<br>Flexible 1x 1.5 ... 16/2x 1.5 ... 10 square mm/square mm<br>Rigid 1x 1.5 ... 25/2x 1.5 ... 10 square mm/square mm |
| Connecting Capacity Control Circuit              | Flexible with Ferrule 1x 1 ... 2.5/2x 0.75 ... 1.5 square mm/square mm<br>Flexible with Insulated Ferrule 1x 1 ... 2.5/2x 0.75 ... 1 square mm/square mm<br>Flexible 1x 1 ... 2.5/2x 1 ... 1.5 square mm/square mm<br>Rigid 1x 1 ... 4/2x 1 ... 2.5 square mm/square mm       |
| Coil Consumption                                 | Average Holding Value 50 / 60 Hz 4.5 V - A<br>Average Pull-in Value 50 Hz 4.5 V - A<br>Average Pull-in Value 60 Hz 4.5 V - A<br>Average Holding Value DC 5 W<br>Average Pull-in Value DC 5 W                                                                                  |
| Mounting on DIN Rail                             | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715                                                                                                                                                                |
| Wire Stripping Length                            | Control Circuit 7 mm<br>Main Circuit 13 mm                                                                                                                                                                                                                                    |

## Classifications

|          |                                                          |
|----------|----------------------------------------------------------|
| ETIM 6.0 | EC001653 - Installation contactor for distribution board |
| ETIM 7   | EC001653 - Installation contactor for distribution board |
| ETIM 5.0 | EC001653 - Installation contactor for distribution board |
| eClass   | 7.0 27142308                                             |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Weight         | 0.37 kg |
| Product Net Depth / Length | 65 mm   |
| Product Net Width          | 54 mm   |
| Product Net Height         | 85 mm   |

## Package Information

|                                |         |
|--------------------------------|---------|
| Package Level 1 Width          | 57 mm   |
| Package Level 1 Height         | 92 mm   |
| Package Level 1 Depth / Length | 69.5 mm |
| Package Level 1 Units          | 1 piece |
| Package Level 2 Width          | 280 mm  |
| Package Level 2 Height         | 210 mm  |
| Package Level 1 Gross Weight   | 0.37 kg |
| Package Level 2 Depth / Length | 395 mm  |

### Package Information

|                     |               |
|---------------------|---------------|
| Package Level 2 EAN | 4013614539176 |
|---------------------|---------------|

### Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1        |
| Customs Tariff Number  | 85365080 |