



PRODUCT-DETAILS

# AF38-40-00-12

## AF38-40-00-12 48-130V50/60HZ-DC Contactor



General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF38-40-00-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product ID            | 1SBL297201R1200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| EAN                   | 3471523115323                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Catalog Description   | AF38-40-00-12 48-130V50/60HZ-DC Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Long Description      | The AF38-40-00-12 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 11 kW / 400 V AC (AC-3) and switching power circuits up to 55 A (AC-1) or 55 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (48-130 V 50/60 Hz and DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. |

Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85364900 |

Popular Downloads

|                            |                 |
|----------------------------|-----------------|
| Instructions and Manuals   | 1SBC101027M6801 |
| CAD Dimensional<br>Drawing | 2CDC001079B0201 |

Dimensions

|                               |         |
|-------------------------------|---------|
| Product Net Width             | 45 mm   |
| Product Net Depth /<br>Length | 101 mm  |
| Product Net Height            | 86 mm   |
| Product Net Weight            | 0.36 kg |

Technical

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts<br>NO                                     | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of Main Contacts<br>NC                                     | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of Auxiliary<br>Contacts NO                                | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of Auxiliary<br>Contacts NC                                | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Standards                                                         | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, CAN/CSA<br>C22.2 No.60947-1, CAN/CSA C22.2 No.60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Operational Voltage                                         | Main Circuit 690 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Rated Frequency (f)                                               | Control Circuit 50 / 60 Hz<br>Main Circuit 50 / 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Conventional Free-air<br>Thermal Current ( $I_{th}$ )             | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 55 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Operational Current<br>AC-1 ( $I_e$ )                       | (690 V) 40 $^{\circ}\text{C}$ 55 A<br>(690 V) 60 $^{\circ}\text{C}$ 45 A<br>(690 V) 70 $^{\circ}\text{C}$ 37 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Operational Current<br>AC-3 ( $I_e$ )                       | (415 V) 60 $^{\circ}\text{C}$ 21.2 A<br>(440 V) 60 $^{\circ}\text{C}$ 20 A<br>(500 V) 60 $^{\circ}\text{C}$ 17.6 A<br>(690 V) 60 $^{\circ}\text{C}$ 10.5 A<br>(380 / 400 V) 60 $^{\circ}\text{C}$ 22 A<br>(220 / 230 / 240 V) 60 $^{\circ}\text{C}$ 23.2 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Rated Operational Power<br>AC-3 ( $P_e$ )                         | (400 V) 11 kW<br>(415 V) 11 kW<br>(440 V) 11 kW<br>(500 V) 11 kW<br>(690 V) 9 kW<br>(220 / 230 / 240 V) 5.5 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Short-time<br>Withstand Current Low<br>Voltage ( $I_{cw}$ ) | at 40 $^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 10 s 300 A<br>at 40 $^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 15 min 55 A<br>at 40 $^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 min 150 A<br>at 40 $^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 s 450 A<br>at 40 $^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 30 s 225 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Maximum Electrical<br>Switching Frequency                         | (AC-1) 600 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Rated Operational Current<br>DC-1 ( $I_e$ )                       | (110 V) 2 Poles in Series, 40 $^{\circ}\text{C}$ 55 A<br>(110 V) 2 Poles in Series, 60 $^{\circ}\text{C}$ 45 A<br>(110 V) 2 Poles in Series, 70 $^{\circ}\text{C}$ 37 A<br>(110 V) 3 Poles in Series, 40 $^{\circ}\text{C}$ 55 A<br>(110 V) 3 Poles in Series, 60 $^{\circ}\text{C}$ 45 A<br>(110 V) 3 Poles in Series, 70 $^{\circ}\text{C}$ 37 A<br>(110 V) 4 Poles in Series, 40 $^{\circ}\text{C}$ 55 A<br>(110 V) 4 Poles in Series, 60 $^{\circ}\text{C}$ 45 A<br>(110 V) 4 Poles in Series, 70 $^{\circ}\text{C}$ 37 A<br>(220 V) 3 Poles in Series, 40 $^{\circ}\text{C}$ 55 A<br>(220 V) 3 Poles in Series, 60 $^{\circ}\text{C}$ 45 A<br>(220 V) 3 Poles in Series, 70 $^{\circ}\text{C}$ 37 A<br>(220 V) 4 Poles in Series, 40 $^{\circ}\text{C}$ 55 A<br>(220 V) 4 Poles in Series, 60 $^{\circ}\text{C}$ 45 A<br>(220 V) 4 Poles in Series, 70 $^{\circ}\text{C}$ 37 A<br>(72 V) 1-Pole, 40 $^{\circ}\text{C}$ 55 A<br>(72 V) 1-Pole, 60 $^{\circ}\text{C}$ 45 A<br>(72 V) 1-Pole, 70 $^{\circ}\text{C}$ 37 A |

|                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                     | (72 V) 2 Poles in Series, 40 °C 55 A<br>(72 V) 2 Poles in Series, 60 °C 45 A<br>(72 V) 2 Poles in Series, 70 °C 37 A<br>(72 V) 3 Poles in Series, 40 °C 55 A<br>(72 V) 3 Poles in Series, 60 °C 45 A<br>(72 V) 3 Poles in Series, 70 °C 37 A<br>(72 V) 4 Poles in Series, 40 °C 55 A<br>(72 V) 4 Poles in Series, 60 °C 45 A<br>(72 V) 4 Poles in Series, 70 °C 37 A |
| Rated Insulation Voltage (U <sub>i</sub> )          | acc. to IEC 60947-4-1 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                                  |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | 6 kV                                                                                                                                                                                                                                                                                                                                                                 |
| Maximum Mechanical Switching Frequency              | 3600 cycles per hour                                                                                                                                                                                                                                                                                                                                                 |
| Rated Control Circuit Voltage (U <sub>c</sub> )     | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 V                                                                                                                                                                                                                                                                                                |
| Operate Time                                        | Between Coil De-energization and NC Contact Closing 13 ... 98 ms<br>Between Coil De-energization and NO Contact Opening 11 ... 95 ms<br>Between Coil Energization and NC Contact Opening 38 ... 90 ms<br>Between Coil Energization and NO Contact Closing 40 ... 95 ms                                                                                               |
| 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                                                                                                                                                                                                                                                       |
| Mounting by Screws (not supplied)                   | 2 x M4 screws placed diagonally                                                                                                                                                                                                                                                                                                                                      |
| Connecting Capacity Main Circuit                    | Flexible with Ferrule 1/2x 1.5 ... 16 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 1.5 ... 16 mm <sup>2</sup><br>Rigid Solid 1/2x 1.5 ... 4 mm <sup>2</sup><br>Rigid Stranded 1/2x 1.5 ... 16 mm <sup>2</sup>                                                                                                                                             |
| Connecting Capacity Control Circuit                 | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid Stranded 1/2x 1 ... 2.5 mm <sup>2</sup>                                                                         |
| Wire Stripping Length                               | Control Circuit 10 mm<br>Main Circuit 12 mm                                                                                                                                                                                                                                                                                                                          |
| Degree of Protection                                | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20                                                                                                                                                                                                                                         |
| Terminal Type                                       | Screw Terminals                                                                                                                                                                                                                                                                                                                                                      |

## Technical UL/CSA

|                                            |                                                             |
|--------------------------------------------|-------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA           | Main Circuit 600 V                                          |
| General Use Rating UL/CSA                  | (600 V AC) 55 A                                             |
| Connecting Capacity Main Circuit UL/CSA    | Rigid Solid 1/2x 16-10 AWG<br>Rigid Stranded 1/2x 16-6 AWG  |
| Connecting Capacity Control Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG |
| Tightening Torque UL/CSA                   | Control Circuit 11 in-lb<br>Main Circuit 22 in-lb           |

## Environmental

|                                            |                                                                                                                                                                                  |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                    | Close to Contactor for Storage -60 ... +80 °C<br>Near Contactor for Operation in Free Air -40 ... 70 °C                                                                          |
| Climatic Withstand                         | Category B according to IEC 60947-1 Annex Q                                                                                                                                      |
| Maximum Operating Altitude Permissible     | Without Derating 3000 m                                                                                                                                                          |
| Resistance to Shock acc. to IEC 60068-2-27 | Closed, Shock Direction: B1 25 g<br>Open, Shock Direction: B1 5 g<br>Shock Direction: A 30 g<br>Shock Direction: B2 15 g<br>Shock Direction: C1 25 g<br>Shock Direction: C2 25 g |
| Resistance to Vibrations                   | 4g Closed Position & 2g Open position 5 ... 300 Hz                                                                                                                               |

## Material Compliance

|                                             |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658                                            |
| REACH Declaration                           | 2CMT2021-006202                                            |
| RoHS Information                            | 2CMT2021-006277                                            |
| RoHS Status                                 | Following EU Directive 2011/65/EU                          |
| Toxic Substances Control Act - TSCA         | 2CMT2023-006525                                            |
| WEEE B2C / B2B                              | Business To Business                                       |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm) |

## Certificates and Declarations

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| ABS Certificate                  | ABS_20-2060694-PDA                                         |
| BV Certificate                   | BV_2634H24898C0                                            |
| CB Certificate                   | CB_SE-96553M1                                              |
| CCC Certificate                  | CCC_2010010304445623                                       |
| CQC Certificate                  | CQC2010010304445623<br>CQC2020010304294316                 |
| Declaration of Conformity - CCC  | 2020980304001254<br>2020980304001052                       |
| Declaration of Conformity - CE   | 1SBD250001U1000                                            |
| Declaration of Conformity - UKCA | 1SBD250032U1000                                            |
| DNV Certificate                  | DNV_TAE00001AF-4                                           |
| EAC Certificate                  | EAC_RU_FRME77B03447                                        |
| GOST Certificate                 | GOST_POCCFR.ME77.B07175.pdf                                |
| KC Certificate                   | KC_HW02016-15002C                                          |
| LR Certificate                   | LRS_LR23403517TA-02                                        |
| RINA Certificate                 | RINA_ELE240318XG                                           |
| RMRS Certificate                 | RMRS_1802705280                                            |
| UL Certificate                   | UL-US-L319322-13-72119002-5<br>UL-CA-L319322-43-72119002-6 |
| UL Listing Card                  | UL_E319322                                                 |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 87 mm         |
| Package Level 1 Depth / Length | 103 mm        |
| Package Level 1 Height         | 47 mm         |
| Package Level 1 Gross Weight   | 0.36 kg       |
| Package Level 1 EAN            | 3471523115323 |
| Package Level 2 Units          | box 18 piece  |
| Package Level 2 Width          | 250 mm        |
| Package Level 2 Depth / Length | 300 mm        |
| Package Level 2 Height         | 315 mm        |
| Package Level 2 Gross Weight   | 12.96 kg      |
| Package Level 3 Units          | 864 piece     |

| Classifications                    |                                           |   |
|------------------------------------|-------------------------------------------|---|
| Object Classification Code         |                                           | Q |
| ETIM 4                             | EC000066 - Magnet contactor, AC-switching |   |
| ETIM 5                             | EC000066 - Magnet contactor, AC-switching |   |
| ETIM 6                             | EC000066 - Power contactor, AC switching  |   |
| ETIM 7                             | EC000066 - Power contactor, AC switching  |   |
| ETIM 8                             | EC000066 - Power contactor, AC switching  |   |
| eClass                             | V11.0 : 27371003                          |   |
| UNSPSC                             | 39121529                                  |   |
| IDEA Granular Category Code (IGCC) | 4758 >> lec Contactors                    |   |
| E-Number (Finland)                 | 3705837                                   |   |
| E-Number (Sweden)                  | 3211519                                   |   |

## Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF38

