



PRODUCT-DETAILS

# AF38-30-11-11

## AF38-30-11-11 24-60V50/60HZ 20-60VDC

### Contactors



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF38-30-11-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product ID            | 1SBL297001R1111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| EAN                   | 3471523111615                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Catalog Description   | AF38-30-11-11 24-60V50/60HZ 20-60VDC Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Long Description      | The AF38-30-11-11 is a 3 pole - 690 V IEC or 600 UL contactor with pre-mounted auxiliary contacts and screw terminals, controlling motors up to 18.5 kW / 400 V AC (AC-3) or 25 hp / 480 V UL and switching power circuits up to 50 A (AC-1) or 50 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 V 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 |

| Popular Downloads                 |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100214C0202 |
| Instructions and Manuals          | 1SBC101027M6801 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |

| Dimensions                 |          |
|----------------------------|----------|
| Product Net Width          | 45 mm    |
| Product Net Depth / Length | 111.5 mm |
| Product Net Height         | 86 mm    |
| Product Net Weight         | 0.35 kg  |

| Technical                                                |                                                                                                                                                        |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                               | 3                                                                                                                                                      |
| Number of Main Contacts NC                               | 0                                                                                                                                                      |
| Number of Auxiliary Contacts NO                          | 1                                                                                                                                                      |
| Number of Auxiliary Contacts NC                          | 1                                                                                                                                                      |
| Standards                                                | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1                                                                                |
| Rated Operational Voltage                                | Auxiliary Circuit 690 V<br>Main Circuit 690 V                                                                                                          |
| Rated Frequency (f)                                      | Auxiliary Circuit 50 / 60 Hz<br>Control Circuit 50 / 60 Hz<br>Main Circuit 50 / 60 Hz                                                                  |
| Conventional Free-air Thermal Current (I <sub>th</sub> ) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 50 A<br>acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 50 A<br>(690 V) 60 °C 42 A<br>(690 V) 70 °C 37 A                                                                                         |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 60 °C 38 A<br>(440 V) 60 °C 38 A<br>(500 V) 60 °C 33 A<br>(690 V) 60 °C 24 A<br>(380 / 400 V) 60 °C 38 A<br>(220 / 230 / 240 V) 60 °C 40 A     |
| Rated Operational Current AC-3e (I <sub>e</sub> )        | (415 V) 60 °C 38 A<br>(440 V) 60 °C 38 A<br>(500 V) 60 °C 33 A<br>(690 V) 60 °C 24 A<br>(380 / 400 V) 60 °C 38 A<br>(220 / 230 / 240 V) 60 °C 40 A     |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (400 V) 18.5 kW<br>(415 V) 18.5 kW<br>(440 V) 22 kW<br>(500 V) 22 kW<br>(690 V) 22 kW<br>(380 / 400 V) 18.5 kW<br>(220 / 230 / 240 V) 11 kW            |
| Rated Operational Power AC-3e (P <sub>e</sub> )          | (415 V) 18.5 kW<br>(440 V) 22 kW<br>(500 V) 22 kW<br>(690 V) 22 kW<br>(380 / 400 V) 18.5 kW                                                            |

|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             | (220 / 230 / 240 V) 11 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Rated Operational Current AC-15 ( $I_e$ )                   | (500 V) 2 A<br>(690 V) 2 A<br>(24 / 127 V) 6 A<br>(220 / 240 V) 4 A<br>(400 / 440 V) 3 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Short-time Withstand Current Low Voltage ( $I_{cw}$ ) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 50 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A<br>for 0.1 s 140 A<br>for 1 s 100 A                                                                                                                                                                                                                                                                                                                                |
| Maximum Breaking Capacity                                   | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 500 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 200 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum Electrical Switching Frequency                      | (AC-1) 600 cycles per hour<br>(AC-15) 1200 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 1200 cycles per hour<br>(DC-13) 900 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Operational Current DC-1 ( $I_e$ )                    | (110 V) 2 Poles in Series, 40 °C 50 A<br>(110 V) 2 Poles in Series, 60 °C 42 A<br>(110 V) 2 Poles in Series, 70 °C 37 A<br>(110 V) 3 Poles in Series, 40 °C 50 A<br>(110 V) 3 Poles in Series, 60 °C 42 A<br>(110 V) 3 Poles in Series, 70 °C 37 A<br>(220 V) 3 Poles in Series, 40 °C 50 A<br>(220 V) 3 Poles in Series, 60 °C 42 A<br>(220 V) 3 Poles in Series, 70 °C 37 A<br>(72 V) 1-Pole, 40 °C 50 A<br>(72 V) 1-Pole, 60 °C 42 A<br>(72 V) 1-Pole, 70 °C 37 A<br>(72 V) 2 Poles in Series, 40 °C 50 A<br>(72 V) 2 Poles in Series, 60 °C 42 A<br>(72 V) 2 Poles in Series, 70 °C 37 A<br>(72 V) 3 Poles in Series, 40 °C 50 A<br>(72 V) 3 Poles in Series, 60 °C 42 A<br>(72 V) 3 Poles in Series, 70 °C 37 A |
| Rated Operational Current DC-3 ( $I_e$ )                    | (110 V) 2 Poles in Series, 40 °C 50 A<br>(110 V) 2 Poles in Series, 60 °C 42 A<br>(110 V) 2 Poles in Series, 70 °C 37 A<br>(110 V) 3 Poles in Series, 40 °C 50 A<br>(110 V) 3 Poles in Series, 60 °C 42 A<br>(110 V) 3 Poles in Series, 70 °C 37 A<br>(220 V) 3 Poles in Series, 40 °C 50 A<br>(220 V) 3 Poles in Series, 60 °C 42 A<br>(220 V) 3 Poles in Series, 70 °C 37 A<br>(72 V) 1-Pole, 40 °C 50 A<br>(72 V) 1-Pole, 60 °C 42 A<br>(72 V) 1-Pole, 70 °C 37 A<br>(72 V) 2 Poles in Series, 40 °C 50 A<br>(72 V) 2 Poles in Series, 60 °C 42 A<br>(72 V) 2 Poles in Series, 70 °C 37 A<br>(72 V) 3 Poles in Series, 40 °C 50 A<br>(72 V) 3 Poles in Series, 60 °C 42 A<br>(72 V) 3 Poles in Series, 70 °C 37 A |
| Rated Operational Current DC-5 ( $I_e$ )                    | (110 V) 2 Poles in Series, 40 °C 50 A<br>(110 V) 2 Poles in Series, 60 °C 42 A<br>(110 V) 2 Poles in Series, 70 °C 37 A<br>(110 V) 3 Poles in Series, 40 °C 50 A<br>(110 V) 3 Poles in Series, 60 °C 42 A<br>(110 V) 3 Poles in Series, 70 °C 37 A<br>(220 V) 3 Poles in Series, 40 °C 25 A<br>(220 V) 3 Poles in Series, 60 °C 25 A<br>(220 V) 3 Poles in Series, 70 °C 25 A<br>(72 V) 1-Pole, 40 °C 25 A<br>(72 V) 1-Pole, 60 °C 25 A<br>(72 V) 1-Pole, 70 °C 25 A<br>(72 V) 2 Poles in Series, 40 °C 50 A                                                                                                                                                                                                         |

|                                                           |                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                           | (72 V) 2 Poles in Series, 60 °C 42 A<br>(72 V) 2 Poles in Series, 70 °C 37 A<br>(72 V) 3 Poles in Series, 40 °C 50 A<br>(72 V) 3 Poles in Series, 60 °C 42 A<br>(72 V) 3 Poles in Series, 70 °C 37 A                                                                                         |
| Rated Operational<br>Current DC-13 (I <sub>e</sub> )      | (24 V) 6 A / 144 W<br>(48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W<br>(110 V) 1.1 A / 121 W<br>(125 V) 0.55 A / 69 W<br>(220 V) 0.27 A / 60 W<br>(250 V) 0.27 A / 68 W<br>(400 V) 0.15 A / 60 W<br>(500 V) 0.13 A / 65 W<br>(600 V) 0.1 A / 60 W                                                |
| Rated Insulation Voltage<br>(U <sub>i</sub> )             | acc. to IEC 60947-4-1 690 V<br>acc. to IEC 60947-5-1 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                           |
| Rated Impulse<br>Withstand Voltage (U <sub>imp</sub><br>) | 6 kV                                                                                                                                                                                                                                                                                         |
| Maximum Mechanical<br>Switching Frequency                 | 3600 cycles per hour                                                                                                                                                                                                                                                                         |
| Rated Control Circuit<br>Voltage (U <sub>c</sub> )        | 50 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 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<br>supplied)                      | 2 x M4 screws placed diagonally                                                                                                                                                                                                                                                              |
| Connecting Capacity<br>Main Circuit                       | Flexible with Ferrule 1/2x 1.5 ... 10 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 1.5 ... 10 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 1.5 ... 4 mm <sup>2</sup><br>Rigid Solid 1/2x 2.5 ... 4 mm <sup>2</sup><br>Rigid Stranded 1/2x 2.5 ... 10 mm <sup>2</sup>       |
| Connecting Capacity<br>Auxiliary 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> |
| Connecting Capacity<br>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                                     | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm<br>Main Circuit 14 mm                                                                                                                                                                                                                       |
| Degree of Protection                                      | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20<br>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<br>Voltage UL/CSA | Main Circuit 600 V           |
| General Use Rating<br>UL/CSA        | (600 V AC) 50 A              |
| Horsepower Rating                   | (120 V AC) Single Phase 2 hp |

|                                                 |                                                                                                                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UL/CSA                                          | (200 ... 208 V AC) Three Phase 10 hp<br>(220 ... 240 V AC) Three Phase 10 hp<br>(240 V AC) Single Phase 5 hp<br>(440 ... 480 V AC) Three Phase 25 hp<br>(550 ... 600 V AC) Three Phase 30 hp |
| Connecting Capacity<br>Main Circuit UL/CSA      | Rigid Solid 1/2x 14-10 AWG<br>Rigid Stranded 1/2x 14-8 AWG                                                                                                                                   |
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG                                                                                                                                  |
| Connecting Capacity<br>Control Circuit UL/CSA   | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG                                                                                                                                  |
| Tightening Torque<br>UL/CSA                     | Auxiliary Circuit 11 in-lb<br>Control Circuit 11 in-lb<br>Main Circuit 22 in-lb                                                                                                              |

Environmental

|                                               |                                                                                                                                                                                  |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                    | Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °C<br>Close to Contactor without Thermal O/L Relay -40 ... 70 °C<br>Close to Contactor for Storage -60 ... +80 °C    |
| Climatic Withstand                            | Category B according to IEC 60947-1 Annex Q                                                                                                                                      |
| Maximum Operating<br>Altitude Permissible     | Without Derating 3000 m                                                                                                                                                          |
| Resistance to Shock acc.<br>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<br>Reporting Template<br>(CMRT) | 9AKK108467A5658                                                        |
| REACH Declaration                                 | 2CMT2021-006202                                                        |
| RoHS Information                                  | 2CMT2021-006277                                                        |
| RoHS Status                                       | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| Toxic Substances<br>Control Act - TSCA            | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                                    | Business To Business                                                   |
| WEEE Category                                     | 5. Small Equipment (No External Dimension More Than 50 cm)             |

ABB EcoSolutions

|                                              |                           |
|----------------------------------------------|---------------------------|
| Environmental Product<br>Declaration - EPD   | 1SBD250584E4000           |
| Sustainable Material<br>Content              | Recycled Metal - 28 %     |
| Sustainable Material<br>Content in Packaging | Recycled Cardboard - 86 % |
| End of Life Instructions                     | 1SBC101080M6801           |

Certificates and Declarations

|                 |                    |
|-----------------|--------------------|
| ABS Certificate | ABS_20-2060694-PDA |
| BV Certificate  | BV_2634H24898C0    |

|                                     |                                            |
|-------------------------------------|--------------------------------------------|
| CB Certificate                      | CB_SE-112316                               |
| CCC Certificate                     | CCC_2010010304445623                       |
| CQC Certificate                     | CQC2010010304445623<br>CQC2020010304294316 |
| Declaration of<br>Conformity - CCC  | 2020980304001254<br>2020980304001052       |
| Declaration of<br>Conformity - CE   | 1SBD250000U1000                            |
| Declaration of<br>Conformity - UKCA | 1SBD250031U1000                            |
| DNV Certificate                     | DNV_TAE00001AF-4                           |
| GOST Certificate                    | GOST_POCCFR.ME77.B07175.pdf                |
| KC Certificate                      | KC_HW02016-15001C                          |
| LR Certificate                      | LRS_LR23403517TA-02                        |
| RINA Certificate                    | RINA_ELE142224XG                           |
| RMRS Certificate                    | RMRS_1802705280                            |
| UL Certificate                      | UL-US-2150887-5<br>UL-CA-2142658-5         |
| UL Listing Card                     | E312527                                    |

Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | box 1 piece   |
| Package Level 1 Width             | 87 mm         |
| Package Level 1 Depth /<br>Length | 121 mm        |
| Package Level 1 Height            | 47 mm         |
| Package Level 1 Gross<br>Weight   | 0.35 kg       |
| Package Level 1 EAN               | 3471523111615 |
| Package Level 2 Units             | box 18 piece  |
| Package Level 2 Width             | 250 mm        |
| Package Level 2 Depth /<br>Length | 300 mm        |
| Package Level 2 Height            | 315 mm        |
| Package Level 2 Gross<br>Weight   | 12.6 kg       |
| Package Level 3 Units             | 864 piece     |

Classifications

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| Object Classification<br>Code         | Q                                        |
| ETIM 7                                | EC000066 - Power contactor, AC switching |
| ETIM 8                                | EC000066 - Power contactor, AC switching |
| ETIM 9                                | EC000066 - Power contactor, AC switching |
| eClass                                | V11.0 : 27371003                         |
| UNSPSC                                | 39121529                                 |
| IDEA Granular Category<br>Code (IGCC) | 4758 >> lec Contactors                   |

---

## Categories

---

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

