



PRODUCT-DETAILS

# AF460-30-11-70

## AF460-30-11 100-250V 50/60Hz / 100-250V DC Contactor



General Information

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| Extended Product Type | AF460-30-11-70                                       |
| Product ID            | 1SFL597001R7011                                      |
| EAN                   | 7320500217658                                        |
| Catalog Description   | AF460-30-11 100-250V 50/60Hz / 100-250V DC Contactor |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long Description | <p>The AF460-30-11-70 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and Main Circuit Bars, controlling motors up to 250 kW / 400 V AC (AC-3) or 400 hp / 480 V UL and switching power circuits up to 700 A (AC-1) or 650 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 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.</p> |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ordering

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

Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC380023-en   |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 53540919-59     |

Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 186 mm  |
| Product Net Depth / Length | 216 mm  |
| Product Net Height         | 278 mm  |
| Product Net Weight         | 10.6 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                                                                                                                                                                                                                                                                                                                                                      |
| Rated Operational Voltage                                         | Main Circuit 1000 V                                                                                                                                                                                                                                                                                                                                    |
| Rated Frequency (f)                                               | Main Circuit 50 / 60 Hz                                                                                                                                                                                                                                                                                                                                |
| Conventional Free-air Thermal Current (I <sub>th</sub> )          | acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 700 A                                                                                                                                                                                                                                                                                                 |
| Rated Operational Current AC-1 (I <sub>e</sub> )                  | (1000 V) 40 °C 700 A<br>(1000 V) 55 °C 600 A<br>(1000 V) 60 °C 600 A<br>(1000 V) 70 °C 480 A<br>(690 V) 40 °C 700 A<br>(690 V) 55 °C 600 A<br>(690 V) 70 °C 480 A                                                                                                                                                                                      |
| Rated Operational Current AC-3 (I <sub>e</sub> )                  | (415 V) 55 °C 460 A<br>(440 V) 55 °C 460 A<br>(500 V) 55 °C 460 A<br>(690 V) 55 °C 400 A<br>(1000 V) 55 °C 200 A<br>(380 / 400 V) 55 °C 460 A<br>(220 / 230 / 240 V) 55 °C 460 A                                                                                                                                                                       |
| Rated Operational Power AC-3 (P <sub>e</sub> )                    | (415 V) 250 kW<br>(440 V) 250 kW<br>(500 V) 315 kW<br>(690 V) 355 kW<br>(1000 V) 280 kW<br>(380 / 400 V) 250 kW<br>(220 / 230 / 240 V) 132 kW                                                                                                                                                                                                          |
| Rated Breaking Capacity AC-3                                      | 8 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                |
| Rated Making Capacity AC-3                                        | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                               |
| Short-Circuit Protective Devices                                  | gG Type Fuses 800 A                                                                                                                                                                                                                                                                                                                                    |
| Rated Short-time Withstand Current Low Voltage (I <sub>cw</sub> ) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 4400 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 840 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 2500 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 4600 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 3100 A |
| Maximum Breaking Capacity                                         | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 5000 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 4500 A                                                                                                                                                                                                       |
| Maximum Electrical Switching Frequency                            | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 60 cycles per hour<br>(AC-3) 300 cycles per hour                                                                                                                                                                                                                                                           |
| Rated Operational Current                                         | (110 V) 1-Pole, 40 °C 700 A                                                                                                                                                                                                                                                                                                                            |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC-1 ( $I_e$ )                                   | (110 V) 2 Poles in Series, 40 °C 700 A<br>(220 V) 3 Poles in Series, 40 °C 700 A<br>(600 V) 3 Poles in Series, 40 °C 700 A                                                                                                                                                                                                                                                   |
| Rated Operational Current<br>DC-3 ( $I_e$ )      | (110 V) 1-Pole, 40 °C 700 A<br>(110 V) 2 Poles in Series, 40 °C 700 A<br>(220 V) 3 Poles in Series, 40 °C 700 A<br>(600 V) 3 Poles in Series, 40 °C 700 A                                                                                                                                                                                                                    |
| Rated Operational Current<br>DC-5 ( $I_e$ )      | (110 V) 1-Pole, 40 °C 700 A<br>(110 V) 2 Poles in Series, 40 °C 700 A<br>(220 V) 3 Poles in Series, 40 °C 700 A<br>(600 V) 3 Poles in Series, 40 °C 700 A                                                                                                                                                                                                                    |
| Rated Insulation Voltage<br>( $U_i$ )            | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                    |
| Rated Impulse Withstand<br>Voltage ( $U_{imp}$ ) | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                            |
| Mechanical Durability                            | 3 million                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum Mechanical<br>Switching Frequency        | 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                          |
| Coil Operating Limits                            | (acc. to IEC 60947-4-1) 0.85 x $U_c$ Min. ... 1.1 x $U_c$ Max. (at $\theta \leq 70$ °C)                                                                                                                                                                                                                                                                                      |
| Rated Control Circuit<br>Voltage ( $U_c$ )       | 50 Hz 100 ... 250 V<br>60 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V                                                                                                                                                                                                                                                                                                     |
| Coil Consumption                                 | Holding at Max. Rated Control Circuit Voltage 50 Hz 12 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 12 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 5 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 955 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 955 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 895 V·A |
| Operate Time                                     | Between Coil De-energization and NC Contact Closing 45 ... 55 ms<br>Between Coil De-energization and NO Contact Opening 48 ... 58 ms<br>Between Coil Energization and NC Contact Opening 45 ... 115 ms<br>Between Coil Energization and NO Contact Closing 50 ... 120 ms                                                                                                     |
| Connecting Capacity Main<br>Circuit              | Bar 47 mm <sup>2</sup><br>Rigid Al-Cable 2x240 mm <sup>2</sup><br>Rigid Cu-Cable 240 mm <sup>2</sup>                                                                                                                                                                                                                                                                         |
| Connecting Capacity<br>Auxiliary Circuit         | Flexible with Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 2x0.75 ... 2.5 mm <sup>2</sup><br>Solid 2 x 1 ... 4 mm <sup>2</sup><br>Stranded 2 x 1 ... 4 mm <sup>2</sup>                                                                                                                             |
| 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 IP00                                                                                                                                                                                                                                                 |
| Terminal Type                                    | Main Circuit: Bars                                                                                                                                                                                                                                                                                                                                                           |

## Technical UL/CSA

|                                     |                                                                                                                                                                                           |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEMA Size                           | 6                                                                                                                                                                                         |
| Horsepower Rating NEMA              | (200 V AC) Three Phase 150 Hp<br>(230 V AC) Three Phase 200 Hp<br>(460 V AC) Three Phase 400 Hp<br>(575 V AC) Three Phase 400 Hp                                                          |
| Maximum Operating<br>Voltage UL/CSA | Main Circuit 1000 V                                                                                                                                                                       |
| General Use Rating<br>UL/CSA        | (600 V AC) 650 A                                                                                                                                                                          |
| Horsepower Rating<br>UL/CSA         | (200 V AC) Three Phase 150 hp<br>(208 V AC) Three Phase 150 hp<br>(220 ... 240 V AC) Three Phase 200 hp<br>(440 ... 480 V AC) Three Phase 400 hp<br>(550 ... 600 V AC) Three Phase 500 hp |

## Environmental

|                                           |                                                                                                                                                                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                   | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 $U_c$ ) -25 ... 50 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 $U_c$ ) -40 ... 70 °C<br>Close to Contactor for Storage -40 ... 70 °C |
| Maximum Operating<br>Altitude Permissible | Without Derating 3000 m                                                                                                                                                                                                  |

Resistance to Shock acc.  
to IEC 60068-2-27

Shock Direction: A 5 g  
Shock Direction: B1 5 g  
Shock Direction: B2 5 g  
Shock Direction: C1 5 g  
Shock Direction: C2 5 g

## Material Compliance

|                                             |                                                                        |
|---------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals Reporting Template (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 Control Act - TSCA         | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                              | Business To Business                                                   |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm)             |

## Circular Value

|                                            |                                                                                                                                          |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| ABB EcoSolutions                           | Yes                                                                                                                                      |
| Circular Design Principles                 | Design for Closing Resource Loops - Standard EN45555 - 63.1 %                                                                            |
| Recyclability Rate                         |                                                                                                                                          |
| Group Waste to Landfill Target             | Non-hazardous waste is sent to a landfill, where there is no alternative option available within 100km of a facility                     |
| Improved Resource Efficiency for Customers | Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line |
| Sustainable Material Content               | Recycled Metal - 37 %                                                                                                                    |

## Eco Transparency

|                                         |                 |
|-----------------------------------------|-----------------|
| Environmental Product Declaration - EPD | 1SFC100105D0201 |
|-----------------------------------------|-----------------|

## Certificates and Declarations

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| ABS Certificate                  | 15-LD1408622-PDA                           |
| BV Certificate                   | BV_13409-C0BV                              |
| CB Certificate                   | SE-82316                                   |
| CCS Certificate                  | GB14T00030                                 |
| CQC Certificate                  | CQC2007010304256683<br>CQC2011010304514755 |
| CSA Certificate                  | 306711                                     |
| Declaration of Conformity - CCC  | 2020980304001300<br>2020980304001081       |
| Declaration of Conformity - CE   | 2CMT2019-005796                            |
| Declaration of Conformity - UKCA | 2CMT2020-006118                            |
| DNV Certificate                  | DNV_E-10966                                |
| DNV GL Certificate               | TAE00001W1                                 |
| EAC Certificate                  | 9AKK107046A8618                            |
| GL Certificate                   | GL_42988-02HH                              |
| LOVAG Certificate                | FI102                                      |
| LR Certificate                   | 16-20064                                   |
| PRS Certificate                  | TE_2092_880423_16                          |
| RINA Certificate                 | ELE060313XG_002                            |
| RMRS Certificate                 | 9AKK107045A6978                            |

|                 |                 |
|-----------------|-----------------|
| UL Certificate  | 20121207-E36588 |
| UL Listing Card | UL E36588       |

Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 280 mm        |
| Package Level 1 Depth / Length | 375 mm        |
| Package Level 1 Height         | 310 mm        |
| Package Level 1 Gross Weight   | 12 kg         |
| Package Level 1 EAN            | 7320500217658 |

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)                 | 3709333                                   |
| E-Number (Norway)                  | 4115292                                   |
| E-Number (Sweden)                  | 3228346                                   |

Accessories

| Identifier      | Description          | Type     | Quantity | Unit Of Measure |
|-----------------|----------------------|----------|----------|-----------------|
| 1SFN170801R1001 | RU19/120 LVRT-Module | RU19/120 | 1        | piece           |
| 1SFN170801R1002 | RU19/240 LVRT-Module | RU19/240 | 1        | piece           |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF460

