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 PRODUCT-DETAILS

# AF116-30-11-13

## AF116-30-11-13 Contactor




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**General Information**

|                       |                          |
|-----------------------|--------------------------|
| Extended Product Type | AF116-30-11-13           |
| Product ID            | 1SFL427001R1311          |
| EAN                   | 7320500476376            |
| Catalog Description   | AF116-30-11-13 Contactor |

|                  |  |
|------------------|--|
| Long Description | <p>The AF116-30-11-13 is a 3 pole - 690 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and double clamp, controlling motors up to 55 kW / 400 V AC (AC-3) or 75 hp / 480 V UL and switching power circuits up to 160 A (AC-1) or 160 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> |
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**Ordering**

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

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC100003M0201 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 1SFB535001G1051 |

### Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 90 mm   |
| Product Net Depth / Length | 126 mm  |
| Product Net Height         | 150 mm  |
| Product Net Weight         | 1.55 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 690 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 $\Theta = 40\text{ °C}$ 160 A  |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 160 A<br>(690 V) 60 °C 145 A<br>(690 V) 70 °C 130 A   |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 55 °C 116 A<br>(440 V) 55 °C 116 A<br>(500 V) 55 °C 110 A<br>(690 V) 55 °C 65 A<br>(380 / 400 V) 55 °C 116 A<br>(220 / 230 / 240 V) 55 °C 116 A |
| Rated Operational Current AC-3e (I <sub>e</sub> )        | (415 V) 60 °C 116 A<br>(440 V) 60 °C 116 A<br>(500 V) 60 °C 110 A<br>(690 V) 60 °C 65 A<br>(380 / 400 V) 60 °C 116 A<br>(220 / 230 / 240 V) 60 °C 116 A |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (415 V) 55 kW<br>(440 V) 75 kW<br>(500 V) 75 kW<br>(690 V) 55 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                    |
| Rated Operational Power AC-3e (P <sub>e</sub> )          | (415 V) 55 kW<br>(440 V) 75 kW<br>(500 V) 75 kW<br>(690 V) 55 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                    |
| Rated Breaking Capacity                                  | 8 x I <sub>e</sub> AC-3   |

|   |  |
|---|--|
| AC-3  |  |
| Rated Breaking Capacity AC-3e                                     | 8.5 x I <sub>e</sub> AC-3e   |
| Rated Making Capacity AC-3  | 10 x I <sub>e</sub> AC-3   |
| Rated Making Capacity AC-3e                                       | 12 x I <sub>e</sub> AC-3e  |
| Short-Circuit Protective Devices                                  | gG Type Fuses 250 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 928 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 160 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 379 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1160 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 536 A                    |
| Maximum Breaking Capacity   | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 2000 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 1000 A   |
| Maximum Electrical Switching Frequency                            | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 300 cycles per hour  |
| Rated Operational Current DC-1 (I <sub>e</sub> )                  | (110 V) 2 Poles in Series, 40 °C 145 A<br>(220 V) 3 Poles in Series, 40 °C 145 A   |
| Rated Operational Current DC-3 (I <sub>e</sub> )                  | (110 V) 2 Poles in Series, 40 °C 145 A<br>(220 V) 3 Poles in Series, 40 °C 145 A   |
| Rated Operational Current DC-5 (I <sub>e</sub> )                  | (110 V) 2 Poles in Series, 40 °C 145 A<br>(220 V) 3 Poles in Series, 40 °C 145 A   |
| Rated Insulation Voltage (U <sub>i</sub> )                        | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V  |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> )               | Main Circuit 8 kV  |
| Mechanical Durability   | 5 million  |
| Maximum Mechanical Switching Frequency                            | 300 cycles per hour  |
| Coil Operating Limits   | (acc. to IEC 60947-4-1) 0.85 x U <sub>c</sub> Min. ... 1.1 x U <sub>c</sub> Max. (at θ ≤ 70 °C)  |
| Rated Control Circuit Voltage (U <sub>c</sub> )                   | 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 6 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 6 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 3 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 130 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 130 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 135 W |
| Operate Time  | Between Coil De-energization and NO Contact Opening 37 ... 47 ms<br>Between Coil Energization and NO Contact Closing 25 ... 55 ms  |
| Connecting Capacity Main Circuit                                  | Flexible 2 x 10 ... 70 mm <sup>2</sup><br>Rigid Cu-Cable 2 x 10 ... 95 mm <sup>2</sup>   |
| Connecting Capacity Auxiliary Circuit                             | Flexible with Ferrule 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 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   | Double Clamp   |

**Technical UL/CSA**

|                                  |                    |
|----------------------------------|--------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA        | (600 V AC) 160 A   |

|                   |   |
|-------------------|---|
| Horsepower Rating | (200 V AC) Three Phase 30 hp  |
| UL/CSA            | (208 V AC) Three Phase 30 hp<br>(220 ... 240 V AC) Three Phase 40 hp<br>(440 ... 480 V AC) Three Phase 75 hp<br>(550 ... 600 V AC) Three Phase 100 hp |

**Environmental**

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

**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 Recyclability Rate | Design for Closing Resource Loops - Standard EN45555 - 87.8 %   |
| End of Life Instructions                      | 1SFC100112M0001   |
| 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 requires less energy to operate 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 | 1SFC100092D0201 |
|---|-----------------|

**Certificates and Declarations**

|                 |                     |
|-----------------|---------------------|
| ABS Certificate | 14-LD1092198-PDA    |
| BV Certificate  | BV_36353_AOBV       |
| CB Certificate  | SEMKO_SE-70479M1    |
| CCS Certificate | GB14T00030          |
| CQC Certificate | CQC2013010304604055 |
| Declaration of  | 2020980304001304    |

|                                  |                   |
|----------------------------------|-------------------|
| Conformity - CCC                 |                   |
| Declaration of Conformity - CE   | 2CMT2015-005439   |
| Declaration of Conformity - UKCA | 2CMT2020-006118   |
| DNV Certificate                  | DNV_E-14043       |
| EAC Certificate                  | 9AKK107046A8618   |
| LR Certificate                   | LR_14_70011(E1)   |
| PRS Certificate                  | TE_2092_880423_16 |
| RINA Certificate                 | ELE060313XG_002   |
| RMRS Certificate                 | 9AKK107045A6978   |
| UL Certificate                   | 20120925-E36588   |
| UL Listing Card                  | UL_E36588         |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 207 mm        |
| Package Level 1 Depth / Length | 216 mm        |
| Package Level 1 Height         | 150 mm        |
| Package Level 1 Gross Weight   | 1.75 kg       |
| Package Level 1 EAN            | 7320500476376 |

## 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 >> Iec Contactors                    |
| E-Number (Finland)                 | 3706167                                   |
| E-Number (Norway)                  | 4117610                                   |
| E-Number (Sweden)                  | 3210068                                   |

## Accessories

| Identifier      | Description                         | Type       | Quantity | Unit Of Measure |
|-----------------|-------------------------------------|------------|----------|-----------------|
| 1SFN034403R1000 | VM140/190 Mechanical Interlock Unit | VM140/190  | 1        | piece           |
| 1SFN074203R1000 | LY140 Connecting Strip              | LY140      | 1        | piece           |
| 1SFN074207R1000 | LW140 Terminal Enlargement          | LW140      | 1        | piece           |
| 1SFN074208R1000 | LD146-30 Connection Module          | LD146-30   | 1        | piece           |
| 1SFN074210R1000 | LX140 Terminal Extension            | LX140      | 1        | piece           |
| 1SFN074211R1000 | LL146-30 Connection Socket          | LL146-30   | 1        | piece           |
| 1SFN084206R1000 | BEA140/XT2 Connection Set           | BEA140/XT2 | 1        | piece           |
| 1SFN084206R1001 | BEA140/XT4 Connection Set           | BEA140/XT4 | 1        | piece           |
| 1SFN084206R1002 | BEA140/XT3 Connection Set           | BEA140/XT3 | 1        | piece           |
| 1SFN084211R1000 | BER140-4 Connection Set             | BER140-4   | 1        | piece           |
| 1SFN084214R1000 | BEP140-30 Connection Set            | BEP140-30  | 1        | piece           |
| 1SFN084413R1000 | BEY140-4 Connection Set             | BEY140-4   | 1        | piece           |
| 1SFN094200R1000 | PR146-1 Adapter Plate               | PR146-1    | 1        | piece           |
| 1SFN124203R1000 | LT140-30L Terminal Shroud           | LT140-30L  | 1        | piece           |
| 1SFN074208R2000 | LD146-40 Connection Module          | LD146-40   | 1        | piece           |
| 1SFN074211R2000 | LL146-40 Connection Socket          | LL146-40   | 1        | piece           |
| 1SFN084214R2000 | BEP140-40 Connection Set            | BEP140-40  | 1        | piece           |
| 1SFN124203R2000 | LT140-40L Terminal Shroud           | LT140-40L  | 1        | piece           |

### Where Used (as part of "kit")

| Identifier     | Description    | Type |
|----------------|----------------|------|
| 3HAC059249-001 | Contacteur set | Kit  |

### Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF116  
 Robotics → Controllers → IRC5 → IRC5 Process Module

