



PRODUCT-DETAILS

# AF140-30-11-11

## AF140-30-11-11 Contactor



General Information

|                       |                          |
|-----------------------|--------------------------|
| Extended Product Type | AF140-30-11-11           |
| Product ID            | 1SFL447001R1111          |
| EAN                   | 7320500477069            |
| Catalog Description   | AF140-30-11-11 Contactor |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long Description | The AF140-30-11-11 is a 3 pole - 690 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and double clamp, controlling motors up to 75 kW / 400 V AC (AC-3) or 100 hp / 480 V UL and switching power circuits up to 200 A (AC-1) or 200 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  |
| 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 Θ = 40 °C 200 A                                                                                                  |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 200 A<br>(690 V) 70 °C 160 A                                                                                                              |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 55 °C 140 A<br>(440 V) 55 °C 140 A<br>(500 V) 55 °C 130 A<br>(690 V) 55 °C 80 A<br>(380 / 400 V) 55 °C 140 A<br>(220 / 230 / 240 V) 55 °C 140 A |
| Rated Operational Current AC-3e (I <sub>e</sub> )        | (415 V) 60 °C 140 A<br>(440 V) 60 °C 140 A<br>(500 V) 60 °C 130 A<br>(690 V) 60 °C 80 A<br>(380 / 400 V) 60 °C 140 A<br>(220 / 230 / 240 V) 60 °C 140 A |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (415 V) 75 kW<br>(440 V) 90 kW<br>(500 V) 90 kW<br>(690 V) 75 kW<br>(380 / 400 V) 75 kW<br>(220 / 230 / 240 V) 37 kW                                    |
| Rated Operational Power AC-3e (P <sub>e</sub> )          | (415 V) 75 kW<br>(440 V) 90 kW<br>(500 V) 90 kW<br>(690 V) 75 kW<br>(380 / 400 V) 75 kW<br>(220 / 230 / 240 V) 37 kW                                    |
| Rated Breaking Capacity AC-3                             | 8 x I <sub>e</sub> 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 315 A                                                                                                                                     |
| Rated Short-time                                         | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1168 A                                                                                       |

|                                               |                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Withstand Current Low Voltage ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 200 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 477 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1460 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 674 A                                                                                              |
| Maximum Breaking Capacity                     | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 3000 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 1500 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 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 160 A<br>(220 V) 3 Poles in Series, 40 °C 160 A                                                                                                                                                                                                                                                                                             |
| Rated Operational Current DC-3 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 160 A<br>(220 V) 3 Poles in Series, 40 °C 160 A                                                                                                                                                                                                                                                                                             |
| Rated Operational Current DC-5 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 160 A<br>(220 V) 3 Poles in Series, 40 °C 160 A                                                                                                                                                                                                                                                                                             |
| Rated Insulation Voltage ( $U_i$ )            | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                    |
| Rated Impulse Withstand Voltage ( $U_{imp}$ ) | 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 $U_c$ Min. ... 1.1 x $U_c$ Max. (at $\theta \leq 70$ °C)                                                                                                                                                                                                                                                                                      |
| Rated Control Circuit Voltage ( $U_c$ )       | 50 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 V                                                                                                                                                                                                                                                                                                           |
| Coil Consumption                              | Holding at Max. Rated Control Circuit Voltage 50 Hz 5.5 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 5.5 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 2.5 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 225 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 225 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 210 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 1 x 10 ... 70 mm²<br>Rigid Cu-Cable 2 x 10 ... 95 mm²                                                                                                                                                                                                                                                                                                               |
| Connecting Capacity Auxiliary Circuit         | Flexible with Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm²<br>Flexible 1x0.75 ... 2.5 mm²<br>Solid 2 x 1 ... 4 mm²<br>Stranded 2 x 1 ... 4 mm²                                                                                                                                                                                         |
| 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

|                                  |                                                                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEMA Size                        | 4                                                                                                                                                                                      |
| Continuous Current Rating NEMA   | 135 A                                                                                                                                                                                  |
| Horsepower Rating NEMA           | (200 V AC) Three Phase 40 Hp<br>(230 V AC) Three Phase 50 Hp<br>(460 V AC) Three Phase 100 Hp<br>(575 V AC) Three Phase 100 Hp                                                         |
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                     |
| General Use Rating UL/CSA        | (600 V AC) 200 A                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (200 V AC) Three Phase 40 hp<br>(208 V AC) Three Phase 40 hp<br>(220 ... 240 V AC) Three Phase 50 hp<br>(440 ... 480 V AC) Three Phase 100 hp<br>(550 ... 600 V AC) Three Phase 125 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                 | Design for Closing Resource Loops - Standard EN45555 - 87.8 %                                                                           |
| Recyclability Rate                         |                                                                                                                                         |
| 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_A0BV       |
| CB Certificate                   | SEMKO_SE-70479M1    |
| CCS Certificate                  | GB14T00030          |
| CQC Certificate                  | CQC2013010304604055 |
| Declaration of Conformity - CCC  | 2020980304001304    |
| Declaration of Conformity - CE   | 2CMT2015-005439     |
| Declaration of Conformity - UKCA | 2CMT2020-006118     |
| DNV Certificate                  | DNV_E-14043         |
| DNV GL Certificate               | DNV_E-14043         |
| EAC Certificate                  | 9AKK107046A8618     |
| GL Certificate                   | DNV_E-14043         |
| LR Certificate                   | LR_14_70011(E1)     |
| PRS Certificate                  | TE_2092_880423_16   |
| RINA Certificate                 | ELE060313XG_002     |
| RMRS Certificate                 | 9AKK107045A6978     |
| UL Certificate                   | 20120925-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            | 7320500477069 |

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)                 | 3706186                                   |
| E-Number (Norway)                  | 4117620                                   |

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           |

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## Categories

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Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF140

