



PRODUCT-DETAILS

# AF140-40-11-12

## AF140-40-11-12 Contactor



General Information

|                       |                          |
|-----------------------|--------------------------|
| Extended Product Type | AF140-40-11-12           |
| Product ID            | 1SFL447101R1211          |
| EAN                   | 7320500503751            |
| Catalog Description   | AF140-40-11-12 Contactor |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long Description | The AF140-40-11-12 is a 4 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) / and switching power circuits up to 200 A (AC-1) or 175 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (48-130 V 50/60 Hz and DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ordering

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

Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC100003M0201 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 1SFB535001G1121 |

Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 120 mm  |
| Product Net Depth / Length | 128 mm  |
| Product Net Height         | 150 mm  |
| Product Net Weight         | 2.05 kg |

Technical

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                                        | 4                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                             |
| Conventional Free-air Thermal Current (I <sub>th</sub> )          | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 200 A                                                                                                                                                                                                                                                                                                                                             |
| Rated Operational Current AC-1 (I <sub>e</sub> )                  | (690 V) 40 °C 200 A<br>(690 V) 60 °C 175 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>(380 / 400 V) 55 °C 140 A<br>(220 / 230 / 240 V) 55 °C 140 A                                                                                                                                                                                                                                                                                                                     |
| Rated Operational Power AC-3 (P <sub>e</sub> )                    | (415 V) 75 kW<br>(440 V) 90 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 Making Capacity AC-3                                        | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                                                                                       |
| 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 1168 A<br>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<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 3000 A |
| Maximum Breaking Capacity                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Maximum Electrical Switching Frequency                            | (AC-1) 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                     |
| 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 $\theta \leq 70\text{ }^{\circ}\text{C}$ )                                                                                                                                                                                                                                                                                                |
| Rated Control Circuit                                             | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V                                                                                                                                                                                                                                                                                                                                                                                       |

|                                       |                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage (U <sub>c</sub> )             | DC Operation 48 ... 130 V                                                                                                                                                                                                                                                                                                                                                |
| Coil Consumption                      | Holding at Max. Rated Control Circuit Voltage 50 Hz 4 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 4 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 180 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 180 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 150 W |
| Operate Time                          | Between Coil De-energization and NO Contact Opening 40 ... 70 ms<br>Between Coil Energization and NO Contact Closing 20 ... 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 2x 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 1 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                                                                                                                                                                                                                                                                                                                                                      |
| 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 ... 208 V AC) Three Phase 15 Hp<br>(200 V AC) Three Phase 40 hp<br>(208 V AC) Three Phase 40 hp<br>(220 ... 240 V AC) Three Phase 20 Hp<br>(220 ... 240 V AC) Three Phase 50 hp<br>(440 ... 480 V AC) Three Phase 40 Hp<br>(440 ... 480 V AC) Three Phase 100 hp<br>(550 ... 600 V AC) Three Phase 50 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 U <sub>c</sub> ) -25 ... 50 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 U <sub>c</sub> ) -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<br>Recyclability Rate | Design for Closing Resource Loops - Standard EN45555 - 87.8 %                                                                              |
| End of Life Instructions                         | 1SFC100112M0001                                                                                                                            |
| Group Waste to Landfill<br>Target                | Non-hazardous waste is sent to a landfill, where there is no alternative option<br>available within 100km of a facility                    |
| Improved Resource<br>Efficiency for Customers    | Product Efficiency - Product requires less energy to operate compared to<br>similar product on market or older products from the same line |
| Sustainable Material<br>Content                  | Recycled Metal - 37 %                                                                                                                      |

Eco Transparency

|                                            |                 |
|--------------------------------------------|-----------------|
| Environmental Product<br>Declaration - EPD | 1SFC100092D0201 |
|--------------------------------------------|-----------------|

Certificates and Declarations

|                                     |                     |
|-------------------------------------|---------------------|
| ABS Certificate                     | 14-LD1092198-PDA    |
| BV Certificate                      | BV 36353 A0BV       |
| CB Certificate                      | SEMKO_SE-70479M1    |
| CQC Certificate                     | CQC2013010304604055 |
| Declaration of Conformity<br>- CCC  | 2020980304001304    |
| Declaration of Conformity<br>- CE   | 2CMT2015-005440     |
| Declaration of Conformity<br>- UKCA | 2CMT2020-006118     |
| DNV GL Certificate                  | DNV_E-14043         |
| EAC Certificate                     | 9AKK107046A8618     |
| KC Certificate                      | 9AKK107046A9911     |
| LR Certificate                      | LR_14_70011(E1)     |
| PRS Certificate                     | TE_2092_880423_16   |
| RINA Certificate                    | ELE060313XG_002     |
| RMRS Certificate                    | 9AKK107045A6978     |
| UL Certificate                      | E73397_20140710     |

Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | box 1 piece   |
| Package Level 1 Width             | 147 mm        |
| Package Level 1 Depth /<br>Length | 197 mm        |
| Package Level 1 Height            | 155 mm        |
| Package Level 1 Gross<br>Weight   | 2.25 kg       |
| Package Level 1 EAN               | 7320500503751 |

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 | 4758 >> lec Contactors |
| Code (IGCC)            |                        |
| E-Number (Finland)     | 3706085                |

Accessories

| Identifier      | Description                       | Type      | Quantity | Unit Of Measure |
|-----------------|-----------------------------------|-----------|----------|-----------------|
| 1SFN010820R1011 | CAL19-11 Auxiliary Contact Block  | CAL19-11  | 1        | piece           |
| 1SFN010820R3311 | CAL19-11B Auxiliary Contact Block | CAL19-11B | 1        | piece           |
| 1SFN010832R1001 | CEL19-01 Auxiliary Contact Block  | CEL19-01  | 1        | piece           |
| 1SFN010832R1010 | CEL19-10 Auxiliary Contact Block  | CEL19-10  | 1        | piece           |
| 1SFN074208R2000 | LD146-40 Connection Module        | LD146-40  | 1        | piece           |
| 1SFN124203R2000 | LT140-40L Terminal Shroud         | LT140-40L | 1        | piece           |
| 1SFN124801R2000 | LT205-40C Terminal Shroud         | LT205-40C | 1        | piece           |
| 1SFN074807R2000 | LW205-40 Terminal Enlargement     | LW205-40  | 1        | piece           |
| 1SFN124803R2000 | LT205-40L Terminal Shroud         | LT205-40L | 1        | piece           |
| 1SFN075407R2000 | LW370-40 Terminal Enlargement     | LW370-40  | 1        | piece           |
| 1SFN125401R2000 | LT370-40C Terminal Shroud         | LT370-40C | 1        | piece           |
| 1SFN125403R2000 | LT370-40L Terminal Shroud         | LT370-40L | 1        | piece           |

Categories

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

