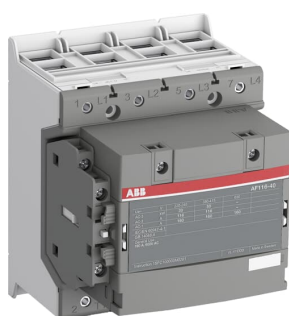


## PRODUCT-DETAILS

# AF116-40-22-12

## AF116-40-22-12 Contactor



### General Information

|                       |                          |
|-----------------------|--------------------------|
| Extended Product Type | AF116-40-22-12           |
| Product ID            | 1SFL427101R1222          |
| EAN                   | 7320500503973            |
| Catalog Description   | AF116-40-22-12 Contactor |

#### Long Description

The AF116-40-22-12 is a 4 pole - 690 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and double clamp, controlling motors up to 55 kW / 400 V AC (AC-3) / 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 (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 | 1SFC101065M0201 |
| 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                             | 2                                                                                                                                                                                                                                                                                                                                                   |
| Number of Auxiliary Contacts NC                             | 2                                                                                                                                                                                                                                                                                                                                                   |
| Rated Operational Voltage                                   | Main Circuit 690 V                                                                                                                                                                                                                                                                                                                                  |
| Rated Frequency (f)                                         | Main Circuit 50 Hz                                                                                                                                                                                                                                                                                                                                  |
| Conventional Free-air Thermal Current ( $I_{th}$ )          | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 160 A                                                                                                                                                                                                                                                                                              |
| Rated Operational Current AC-1 ( $I_e$ )                    | (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 ( $I_e$ )                    | (415 V) 55 °C 116 A<br>(440 V) 55 °C 116 A<br>(380 / 400 V) 55 °C 116 A<br>(220 / 230 / 240 V) 55 °C 116 A                                                                                                                                                                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ )                      | (415 V) 55 kW<br>(440 V) 75 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                                                                                                                                                                                                                                                  |
| Rated Breaking Capacity AC-3                                | 8 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                      |
| Rated Making Capacity AC-3                                  | 10 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                     |
| Short-Circuit Protective Devices                            | gG Type Fuses 200 A                                                                                                                                                                                                                                                                                                                                 |
| Rated Short-time Withstand Current Low Voltage ( $I_{cw}$ ) | 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 1300 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 $I_e > 100$ A) at 440 V 2000 A                                                                                                                                                                                                                                                                                       |
| Maximum Electrical Switching Frequency                      | (AC-1) 300 cycles per hour                                                                                                                                                                                                                                                                                                                          |
| 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 Uc Min. ... 1.1 x Uc Max. (at $\theta \leq 70^\circ\text{C}$ )                                                                                                                                                                                                                                                                            |
| Rated Control Circuit Voltage ( $U_c$ ) | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>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 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 1x 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 1 x 1 ... 4 mm <sup>2</sup><br>Stranded 1 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   |

## 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                                                                                                                                                                                           |
| RoHS Status                            | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019                                                                                                                                            |

## Certificates and Declarations (Document Number)

|                                  |                     |
|----------------------------------|---------------------|
| ABS Certificate                  | 14-LD1092198-PDA    |
| BV Certificate                   | BV_36353_A0BV       |
| CB Certificate                   | SEMKO_SE-70479M1    |
| CQC Certificate                  | CQC2013010304604055 |
| cUL Certificate                  | E73397_20140710     |
| Declaration of Conformity - CCC  | 2020980304001304    |
| Declaration of Conformity - CE   | 2CMT2015-005440     |
| Declaration of Conformity - UKCA | 2CMT2020-006118     |

|                          |                   |
|--------------------------|-------------------|
| DNV GL Certificate       | DNV_E-14043       |
| EAC Certificate          | 9AKK107046A8618   |
| Instructions and Manuals | 1SFC101065M0201   |
| KC Certificate           | 9AKK107046A9911   |
| LR Certificate           | LR_14_70011(E1)   |
| PRS Certificate          | TE_2092_880423_16 |
| RINA Certificate         | ELE060313XG_002   |
| RMRS Certificate         | 9AKK107045A6978   |
| RoHS Information         | 2CMT2015-005440   |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 147 mm        |
| Package Level 1 Depth / Length | 197 mm        |
| Package Level 1 Height         | 155 mm        |
| Package Level 1 Gross Weight   | 2.25 kg       |
| Package Level 1 EAN            | 7320500503973 |

## 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) | 4755 >> Contactors                        |
| E-Number (Finland)                 | 3706033                                   |

## Categories

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

