

# AF185-30-11-70



AF185-30-11 100-250V 50/60Hz / 100-250V DC Contactor

## General Information

|                       |                                                                                                                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF185-30-11-70                                                                                                                                                                                            |
| Product ID            | 1SFL497001R7011                                                                                                                                                                                           |
| EAN                   | 7320500220238                                                                                                                                                                                             |
| Catalog Description   | AF185-30-11 100-250V 50/60Hz / 100-250V DC Contactor                                                                                                                                                      |
| Long Description      | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, By-pass and Distribution application up to max 1000 V. Operated with wide control voltage range 100-250 V, AC/DC |

## Ordering

|                              |                 |
|------------------------------|-----------------|
| Minimum Order Quantity       | 1 piece         |
| Customs Tariff Number        | 85364900        |
| Replacement Product ID (NEW) | 1SFL487002R1311 |

## Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100122C0202 |
| Instructions and Manuals          | 1SFC380003-89   |
| Dimension Diagram                 | 53540923-7      |

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 111.5 mm |
| Product Net Depth / Length | 160.0 mm |
| Product Net Height         | 196.0 mm |
| Product Net Weight         | 3.500 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 ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 275 A<br>(690 V) 55 °C 250 A |

|                                                    |                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 40 °C 275 A<br>(1000 V) 40 °C 200 A<br>(1000 V) 55 °C 200 A<br>(690 V) 70 °C 180 A<br>(1000 V) 70 °C 180 A                                                                                                                                                                                                                                                       |
| Rated Operational Current AC-3 ( $I_e$ )           | (1000 V) 55 °C 95 A<br>(220 / 230 / 240 V) 55 °C 185 A<br>(415 V) 55 °C 185 A<br>(690 V) 55 °C 170 A<br>(440 V) 55 °C 185 A<br>(380 / 400 V) 55 °C 185 A<br>(500 V) 55 °C 170 A                                                                                                                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ )             | (220 / 230 / 240 V) 55 kW<br>(380 / 400 V) 90 kW<br>(415 V) 90 kW<br>(440 V) 90 kW<br>(500 V) 110 kW<br>(690 V) 132 kW<br>(1000 V) 132 kW                                                                                                                                                                                                                                |
| Rated Breaking Capacity AC-3 acc. to IEC 60947-4-1 | 8 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                                           |
| Rated Making Capacity AC-3 acc. to IEC 60947-4-1   | 10 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                                          |
| Short-Circuit Protective Devices                   | gG Type Fuses 355 A                                                                                                                                                                                                                                                                                                                                                      |
| Rated Short-time Withstand Current ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1500 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 320 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 2000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 800 A                    |
| Maximum Breaking Capacity                          | $\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 440 V 2000 A<br>$\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 690 V 1600 A                                                                                                                                                                                                                         |
| Maximum Electrical Switching Frequency             | AC-3 300 cycles per hour<br>AC-1 300 cycles per hour<br>AC-2 / AC-4 150 cycles per hour                                                                                                                                                                                                                                                                                  |
| Rated Operational Current DC-1 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 275 A<br>(220 V) 3 Poles in Series, 40 °C 275 A                                                                                                                                                                                                                                                                                         |
| Rated Operational Current DC-3 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 275 A<br>(220 V) 3 Poles in Series, 40 °C 275 A                                                                                                                                                                                                                                                                                         |
| Rated Operational Current DC-5 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 275 A<br>(220 V) 3 Poles in Series, 40 °C 275 A                                                                                                                                                                                                                                                                                         |
| Rated Insulation Voltage ( $U_i$ )                 | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 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) °C                                                                                                                                                                                                                                                                               |
| Rated Control Circuit Voltage ( $U_c$ )            | 60 Hz 100 ... 250 V<br>50 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V                                                                                                                                                                                                                                                                                                 |
| Coil Consumption                                   | Pull-in at Max. Rated Control Circuit Voltage 60 Hz 430 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 2 W<br>Holding at Max. Rated Control Circuit Voltage 50 Hz 12 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 500 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 430 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 12 V·A |
| Operate Time                                       | Between Coil Energization and NO Contact Closing 50 ... 90 ms<br>Between Coil De-energization and NO Contact Opening 43 ... 53 ms<br>Between Coil De-energization and NC Contact Closing 40 ... 50 ms<br>Between Coil Energization and NC Contact Opening 45 ... 85 ms                                                                                                   |
| Connecting Capacity Main Circuit                   | Rigid Al-Cable 25 ... 150 mm <sup>2</sup><br>Bar 24 mm<br>Rigid Cu-Cable 6 ... 185 mm <sup>2</sup>                                                                                                                                                                                                                                                                       |
| Connecting Capacity Auxiliary Circuit              | Solid 2 x 1 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2 x 0.75 ... 2.5 mm <sup>2</sup><br>Stranded 1 x 1 ... 4 mm <sup>2</sup><br>Flexible 2x0.75 ... 2.5 mm <sup>2</sup>                                                                                                                                                                                 |

Flexible with Ferrule 2 x 0.75 ... 2.5 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        | Main Circuit: Bars                                                                                                           |

## 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     | 3000 m                                                                                                                                                                                                              |
| Resistance to Shock acc. to IEC 60068-2-27 | Shock Direction: A 5 g<br>Shock Direction: C2 5 g<br>Shock Direction: B2 5 g<br>Shock Direction: C1 5 g<br>Shock Direction: B1 5 g                                                                                  |
| RoHS Status                                | Following EU Directive 2002/95/EC August 18, 2005 and amendment                                                                                                                                                     |

## Technical UL/CSA

|                                  |                                                                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                     |
| General Use Rating UL/CSA        | (600 V AC) 250 A                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (208 V AC) Three Phase 50 Hp<br>(440 ... 480 V AC) Three Phase 125 Hp<br>(550 ... 600 V AC) Three Phase 150 Hp<br>(220 ... 240 V AC) Three Phase 60 Hp<br>(200 V AC) Three Phase 50 Hp |

## Certificates and Declarations (Document Number)

|                                |                      |
|--------------------------------|----------------------|
| BV Certificate                 | 13409/C0 BV          |
| CB Certificate                 | SE-69479             |
| CCC Certificate                | CQC_2007010304256685 |
| Declaration of Conformity - CE | 1SFA1-61             |
| Environmental Information      | 1SFC101007D0201      |
| GL Certificate                 | GL_20261-04HH        |
| Instructions and Manuals       | 1SFC380003-89        |
| LOVAG Certificate              | SE-0115106           |
| LR Certificate                 | LR_04-00015-E1       |
| RINA Certificate               | ELE060313XG/002      |
| RMRS Certificate               | RMRS_12-03683-315    |
| RoHS Information               | 1SFC101055D0202      |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | 1 piece       |
| Package Level 1 Width          | 170 mm        |
| Package Level 1 Depth / Length | 180 mm        |
| Package Level 1 Height         | 245 mm        |
| Package Level 1 Gross Weight   | 3.5 kg        |
| Package Level 1 EAN            | 7320500220238 |

Classifications

|                            |                                           |
|----------------------------|-------------------------------------------|
| Object Classification Code | Q                                         |
| E-nummer                   | 3228296                                   |
| ETIM 4                     | EC000066 - Magnet contactor, AC-switching |
| ETIM 5                     | EC000066 - Magnet contactor, AC-switching |
| ETIM 6                     | EC000066 - Power contactor, AC switching  |
| UNSPSC                     | 39121529                                  |

Categories

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

