

PRODUCT-DETAILS

# AF16-30-10-11

## AF16-30-10-11 24-60V50/60HZ 20-60VDC

### Contactor



#### General Information

|                       |  |
|-----------------------|--|
| Extended Product Type | AF16-30-10-11                                  |
| Product ID            | 1SBL177001R1110                                |
| EAN                   | 3471523110618                                  |
| Catalog Description   | AF16-30-10-11 24-60V50/60HZ 20-60VDC Contactor |

|                  |  |
|------------------|--|
| Long Description | <p>AF16 contactors are used for controlling power circuits up to 690 V AC and 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads. AF... contactors include an electronic coil interface accepting a wide control voltage <math>U_c \text{ min.} \dots U_c \text{ max.}</math> Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC. AF contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF contactors have built-in surge protection and do not require additional surge suppressors. The AF... series 1-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles, 1 built-in auxiliary contact, front and side-mounted add-on auxiliary contact blocks (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available. Note: AF..-30-..-11 not suitable for a direct control by PLC-output. AF..-30-..-11 contactor type available in some countries: please consult your ABB representative.</p> |
|------------------|--|

#### 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 |
| E-Number (Sweden) | 3211343                                  |

### Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 87 mm         |
| Package Level 1 Depth / Length | 79 mm         |
| Package Level 1 Height         | 47 mm         |
| Package Level 1 Gross Weight   | 0.27 kg       |
| Package Level 1 EAN            | 3471523110618 |
| Package Level 2 Units          | box 27 piece  |
| Package Level 2 Width          | 250 mm        |
| Package Level 2 Depth / Length | 300 mm        |
| Package Level 2 Height         | 315 mm        |
| Package Level 2 Gross Weight   | 7.29 kg       |
| Package Level 3 Units          | 1296 piece    |

### Certificates and Declarations (Document Number)

|                                |                               |
|--------------------------------|-------------------------------|
| ABS Certificate                | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate                 | BV_2634H24898B0               |
| CB Certificate                 | CB_SE-96551                   |
| CCC Certificate                | CCC_2010010304445624          |
| cUL Certificate                | UL_20180227_E312527_7_1       |
| Declaration of Conformity - CE | 1SBD250000U1000               |
| DNV Certificate                | DNV-GL_TAE00001AF-3           |
| DNV GL Certificate             | DNV-GL_TAE00001AF-3           |
| EAC Certificate                | EAC_RU C-FR ME77 B03597       |
| Environmental Information      | 1SBD250147E1000               |
| GL Certificate                 | DNV-GL_TAE00001AF-3           |
| GOST Certificate               | GOST_POCCFR.ME77.B07175.pdf   |
| Instructions and Manuals       | 1SBC101027M6801               |
| KC Certificate                 | KC_HW02016-15005A             |
| LR Certificate                 | LRS_1300087E1                 |
| RINA Certificate               | RINA_ELE240318XG              |
| RMRS Certificate               | RMRS_1802705280               |
| RoHS Information               | 1SBD250000U1000               |
| UL Certificate                 | UL_20140305-E312527_7_1       |
| UL Listing Card                | E312527                       |

### Technical UL/CSA

|                              |  |
|------------------------------|--|
| General Use Rating<br>UL/CSA | (600 V AC) 30 A  |
| Horsepower Rating<br>UL/CSA  | (220 ... 240 V AC) Three Phase 5 hp<br>(440 ... 480 V AC) Three Phase 10 hp<br>(550 ... 600 V AC) Three Phase 15 hp<br>(120 V AC) Single Phase 1-1/2 hp<br>(200 ... 208 V AC) Three Phase 5 hp<br>(240 V AC) Single Phase 3 hp |
| Tightening Torque            | Auxiliary Circuit 11 IA  |

UL/CSA

Control Circuit 11 IA  
Main Circuit 13 IA

**Environmental**

|  |  |
|--|--|
| Ambient Air Temperature                        | Close to Contactor for Storage -60 ... +80 °C<br>Close to Contactor without Thermal O/L Relay -40 ... +70 °C<br>Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C              |
| Climatic Withstand                             | Category B according to IEC 60947-1 Annex Q  |
| Maximum Operating Altitude Permissible         | 3000 m   |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5 ... 300 Hz 4 g closed position / 2 g open position   |
| Resistance to Shock acc. to IEC 60068-2-27     | Shock Direction: A 30 K40<br>Shock Direction: B2 15 K40<br>Shock Direction: C1 25 K40<br>Shock Direction: C2 25 K40<br>Closed, Shock Direction: B1 25 K40<br>Open, Shock Direction: B1 5 K40 |
| RoHS Status                                    | Following EU Directive 2011/65/EU  |

**Technical**

|  |  |
|--|--|
| Number of Main Contacts NO                               | 3  |
| Number of Main Contacts NC                               | 0  |
| Number of Auxiliary Contacts NO                          | 1  |
| Number of Auxiliary Contacts NC                          | 0  |
| Standards  | IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N° 14  |
| Rated Operational Voltage                                | Auxiliary Circuit 690 V<br>Main Circuit 690 V  |
| Rated Frequency (f)                                      | Auxiliary Circuit 50 / 60 Hz<br>Main Circuit 50 / 60 Hz  |
| Conventional Free-air Thermal Current (I <sub>th</sub> ) | acc. to IEC 60947-5-1, q = 40 °C 16 A<br>acc. to IEC 60947-4-1, Open Contactors q = 40 °C 35 A   |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 30 A<br>(690 V) 60 °C 30 A<br>(690 V) 70 °C 26 A   |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (220 / 230 / 240 V) 60 °C 18 A<br>(380 / 400 V) 60 °C 18 A<br>(415 V) 60 °C 18 A<br>(440 V) 60 °C 18 A<br>(500 V) 60 °C 15 A<br>(690 V) 60 °C 10.5 A   |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (220 / 230 / 240 V) 4 KWT<br>(380 / 400 V) 7.5 KWT<br>(415 V) 9 KWT<br>(440 V) 9 KWT<br>(500 V) 9 KWT<br>(690 V) 9 KWT<br>(400 V) 7.5 KWT  |
| Rated Operational Current AC-15 (I <sub>e</sub> )        | (220 / 240 V) 4 A<br>(24 / 127 V) 6 A<br>(500 V) 2 A<br>(690 V) 2 A<br>(400 / 440 V) 3 A   |
| Rated Short-time Withstand Current (I <sub>cw</sub> )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A<br>for 0.1 s 140 A |

|   |  | for 1 s 100 A |
|---|--|---------------|
| Maximum Breaking Capacity                           | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 250 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 106 A   |               |
| Maximum Electrical Switching Frequency              | AC-1 600 cycles per hour<br>AC-2 / AC-4 300 cycles per hour<br>AC-3 1200 cycles per hour<br>AC-15 1200 cycles per hour<br>DC-13 900 cycles per hour  |               |
| Rated Operational Current DC-13 (I <sub>e</sub> )   | (125 V) 0.55 A / 69 W<br>(24 V) 6 A / 144 W<br>(250 V) 0.27 A / 68 W<br>(48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W<br>(110 V) 0.55 A / 60 W<br>(220 V) 0.27 A / 60 W<br>(400 V) 0.15 A / 60 W<br>(500 V) 0.13 A / 65 W<br>(600 V) 0.1 A / 60 W                          |               |
| Rated Insulation Voltage (U <sub>i</sub> )          | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V   |               |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | 6 kV   |               |
| Maximum Mechanical Switching Frequency              | 3600 cycles per hour   |               |
| Rated Control Circuit Voltage (U <sub>c</sub> )     | 50 Hz 24 ... 60 V<br>50 Hz / 60 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 V  |               |
| Operate Time  | Between Coil De-energization and NC Contact Closing 13 ... 98 ms<br>Between Coil De-energization and NO Contact Opening 11 ... 95 ms<br>Between Coil Energization and NC Contact Opening 38 ... 90 ms<br>Between Coil Energization and NO Contact Closing 40 ... 95 ms |               |
| Connecting Capacity Main Circuit                    | Rigid 1/2x 1 ... 6 m <sup>2</sup><br>Flexible with Ferrule 1/2x 0.75 ... 6 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 4 m <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 m <sup>2</sup>  |               |
| Connecting Capacity Auxiliary Circuit               | Flexible with Ferrule 1/2x 0.75 ... 2.5<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5<br>Rigid 1/2x 1 ... 2.5 m <sup>2</sup>   |               |
| Connecting Capacity Control Circuit                 | Flexible with Ferrule 1/2x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 m <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 m <sup>2</sup>                                      |               |
| Wire Stripping Length                               | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm<br>Main Circuit 10 mm   |               |
| Degree of Protection                                | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20  |               |
| Terminal Type                                       | Screw Terminals  |               |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 45 mm   |
| Product Net Depth / Length | 77 mm   |
| Product Net Height         | 86 mm   |
| Product Net Weight         | 0.27 kg |

## Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101027M6801 |
|--------------------------|-----------------|

---

**Ordering**

---

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

---

---

**Categories**

---

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

