



Electric Automation
Automation specialists

Reference: AF38-30-11-14
Code: 1SBL297001R1411

AF38-30-11-14 250-500V50/60HZ-DC
Contactor

Buy it at Electric Automation Network



AF38 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 U_c min. ... U_c max. 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 2-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles with a non-removable front-mounted 1 N.O. + 1 N.C. auxiliary contact block, side-mounted add-on auxiliary contact blocks (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 including the "Mechanically Linked" symbol on the contactor side. 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: 2-stack contactors available in some countries: please consult your ABB representative.

Ordering

| | |
|-------------------------|---------------|
| EAN: | 3471523111646 |
| Minimum Order Quantity: | 1 piece |
| Customs Tariff Number: | 85369085 |

Dimensions

| | |
|---------------------|----------|
| Product Net Width: | 45 mm |
| Product Net Depth: | 111.5 mm |
| Product Net Height: | 86 mm |
| Product Net Weight: | 0.390 kg |

Container Information

| | |
|-------------------------------|---------------|
| Package Level 1 Units: | 1 piece |
| Package Level 1 Width: | 87 mm |
| Package Level 1 Length: | 121 mm |
| Package Level 1 Height: | 47 mm |
| Package Level 1 Gross Weight: | 0.39 kg |
| Package Level 1 EAN: | 3471523111646 |
| Package Level 2 Units: | 36 piece |
| Package Level 2 Width: | 250 mm |
| Package Level 2 Length: | 300 mm |
| Package Level 2 Height: | 315 mm |
| Package Level 3 Units: | 864 piece |

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 |
| 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 Main Circuit 690 V |
| Rated Frequency (f): | Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz |
| Conventional Free-air Thermal Current (I_{th}): | acc. to IEC 60947-4-1, Open Contactors $q = 40\text{ °C}$ 50 A acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A |
| Rated Operational Current AC-1 (I_e): | (690 V) 40 °C 50 A (690 V) 60 °C 42 A (690 V) 70 °C 37 A |
| Rated Operational Current AC-3 (I_e): | (220 / 230 / 240 V) 60 °C 40 A (380 / 400 V) 60 °C 38 A (415 V) 60 °C 38 A (440 V) 60 °C 38 A (500 V) 60 °C 33 A (690 V) 60 °C 24 A |

| | |
|--|---|
| Rated Operational Power AC-3 (P_e): | (220 / 230 / 240 V) 11 kW (380 / 400 V) 18.5 kW (415 V) 18.5 kW (440 V) 22 kW (500 V) 22 kW (690 V) 22 kW |
| Rated Operational Current AC-15 (I_e): | (220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A |
| Rated Short-time Withstand Current (I_{cw}): | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 50 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A for 0.1 s 140 A for 1 s 100 A |
| Maximum Breaking Capacity: | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 200 A |
| Maximum Electrical Switching Frequency: | AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 150 cycles per hour AC-3 1200 cycles per hour DC-13 900 cycles per hour |
| Rated Operational Current DC-13 (I_e): | (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (48 V) 2.8 A / 134 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W (72 V) 1 A / 72 W |
| Rated Insulation Voltage (U_i): | acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V |
| Rated Impulse Withstand Voltage (U_{imp}): | 6 kV |
| Maximum Mechanical Switching Frequency: | 3600 cycles per hour |
| Rated Control Circuit Voltage (U_c): | 50 Hz 250 ... 500 V 60 Hz 250 ... 500 V DC Operation 250 ... 500 V |
| Operate Time: | Between Coil De-energization and NC Contact Closing 13...98 ms Between Coil De-energization and NO Contact Opening 11...95 ms Between Coil Energization and NC Contact Opening 38...90 ms Between Coil Energization and NO Contact Closing 40...95 ms |

| | |
|--|---|
| Connecting Capacity-Main Circuit: | Flexible with Insulated Ferrule 1x 1.5...10 mm ² Flexible with Insulated Ferrule 2x 1.5...4 mm ² Flexible with Ferrule 1/2x 1.5...10 mm ² Rigid 1/2x 2.5...10 mm ² |
| Connecting Capacity-Auxiliary Circuit: | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Rigid 1/2x 1...2.5 mm ² |
| Connecting Capacity-Control Circuit: | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75...2.5 mm ² Flexible with Insulated Ferrule 2x 0.75...1.5 mm ² Rigid 1/2x 1...2.5 mm ² |
| Wire Stripping Length: | Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 14 mm |
| Degree of Protection: | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20 |
| Terminal Type: | Screw Terminals |

Environmental

| | |
|---|--|
| Ambient Air Temperature: | Close to Contactor for Storage -60...+80 °C Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C Close to Contactor without Thermal O/L Relay -40 ... +70 °C |
| Maximum Operating Altitude Permissible: | 3000 m |
| Resistance to Shock acc. to IEC 60068-2-27: | Closed, Shock Direction: B1 25 g Open, Shock Direction: B1 5 g Shock Direction: A 30 g Shock Direction: B2 15 g Shock Direction: C1 25 g Shock Direction: C2 25 g |
| Resistance to Vibrations acc. to IEC 60068-2-6: | 5...300 Hz 4 g closed position / 2 g open position |
| RoHS Status: | Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1 |

Technical UL/CSA

| | |
|----------------------------|--|
| General Use Rating UL/CSA: | (600 V AC) 50 A |
| Horsepower Rating UL/CSA: | (120 V AC) Single Phase 2 Hp (240 V AC) Single Phase 5 Hp (200 ... 208 V AC) Three Phase 10 Hp (220 ... 240 V AC) Three Phase 10 Hp (440 ... 480 V AC) Three Phase 25 Hp (550 ... 600 V AC) Three Phase 30 Hp |
| Tightening Torque UL/CSA: | Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 22 in·lb |

Certificates and Declarations (Document Number)

| | |
|---------------------------------|-------------------------------|
| ABS Certificate: | ABS_15-GE1349500-PDA_90682247 |
| CB Certificate: | CB_SE_70856M1 |
| CCC Certificate: | CCC_2010010304445623 |
| cUL Certificate: | UL_20091124-E312527-7-1 |
| Declaration of Conformity - CE: | 1SBD250165C1000 |
| DNV Certificate: | DNV-GL_E13871 |
| EAC Certificate: | EAC_RU C-FR ME77 B01010 |
| GL Certificate: | DNV-GL_E13871 |
| GOST Certificate: | GOST_POCCFR.ME77.B07175.pdf |
| LR Certificate: | LRS_1300087E1 |
| RINA Certificate: | RINA_ELE084013XG |
| RMRS Certificate: | RMRS_1400682124 |
| RoHS Information: | 1SBD251012E1000 |

Classifications

| | |
|---------|---|
| ETIM 5: | EC000066 - Magnet contactor, AC-switching |
| UNSPSC: | 39121529 |