

General Information

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| Extended Product Type: | AF16-30-10-14 |
| Product ID: | 1SBL177001R1410 |
| EAN: | 3471523110649 |
| Catalog Description: | AF16-30-10-14 250-500V50/60HZ-DC Contactor |
| Long Description: | 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 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 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. |

Categories

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

Ordering

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| EAN: | 3471523110649 |
| Minimum Order Quantity: | 1 piece |
| Customs Tariff Number: | 85369085 |

Dimensions

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| Product Net Width: | 45 mm |
| Product Net Depth: | 77 mm |
| Product Net Height: | 86 mm |
| Product Net Weight: | 0.310 kg |

Container Information

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| Package Level 1 Units: | 1 piece |
| Package Level 1 Width: | 87 mm |
| Package Level 1 Length: | 79 mm |
| Package Level 1 Height: | 47 mm |
| Package Level 1 Gross Weight: | 0.31 kg |
| Package Level 1 EAN: | 3471523110649 |
| Package Level 2 Units: | 54 piece |
| Package Level 2 Width: | 250 mm |
| Package Level 2 Length: | 300 mm |
| Package Level 2 Height: | 315 mm |
| Package Level 3 Units: | 1296 piece |

Technical

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| 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 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 $q = 40$ °C 35 A acc. to IEC 60947-5-1, $q = 40$ °C 16 A |
| Rated Operational Current AC-1 (I_e): | (690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A |
| Rated Operational Current AC-3 (I_e): | (220 / 230 / 240 V) 60 °C 18 A (380 / 400 V) 60 °C 18 A (415 V) 60 °C 18 A (440 V) 60 °C 18 A (500 V) 60 °C 15 A |

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| | (690 V) 60 °C 10.5 A |
| Rated Operational Power AC-3 (P_e): | (220 / 230 / 240 V) 4 kW (380 / 400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 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 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 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 250 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 106 A |
| Maximum Electrical Switching Frequency: | AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 300 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 0.75...4 mm ² Flexible with Insulated Ferrule 2x 0.75...2.5 mm ² Flexible with Ferrule 1/2x 0.75...6 mm ² Rigid 1/2x 1...6 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 10 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

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| 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 | Closed, Shock Direction: B1 25 g |

60068-2-27: 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) 30 A
Horsepower Rating UL/CSA: (120 V AC) Single Phase 1-1/2 Hp
(240 V AC) Single Phase 3 Hp
(200 ... 208 V AC) Three Phase 5 Hp
(220 ... 240 V AC) Three Phase 5 Hp
(440 ... 480 V AC) Three Phase 10 Hp
(550 ... 600 V AC) Three Phase 15 Hp
Tightening Torque UL/CSA: Auxiliary Circuit 11 in·lb
Control Circuit 11 in·lb
Main Circuit 13 in·lb

Certificates and Declarations (Document Number)

ABS Certificate: ABS_15-GE1349500-PDA_90682247
CB Certificate: CB_SE_70855M1
CCC Certificate: CCC_2010010304445624
cUL Certificate: UL_20091124-E312527-7-1
Declaration of Conformity - CE: 1SBD250164C3000
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: 1SBD251013E1000

Classifications

E-nummer: 3211374
ETIM 5: EC000066 - Magnet contactor, AC-switching
UNSPSC: 39121529

