

General Information

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| Extended Product Type: | AF09-40-00-11 |
| Product ID: | 1SBL137201R1100 |
| EAN: | 3471523115019 |
| Catalog Description: | AF09-40-00-11 24-60V/50/60HZ 20-60VDC Contactor |
| Long Description: | AF09 4-pole contactors are used for controlling power circuits up to 690 V AC and 440 V DC. They are mainly used for controlling non-inductive or slightly inductive loads (i.e. resistance furnaces...). 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 4-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 4 N.O. main poles, 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...-11 not suitable for a direct control by PLC-output. - AF...-11 type available in some countries: please consult your ABB representative. |

Categories

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

Ordering

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| Minimum Order Quantity: | 1 piece |
| Customs Tariff Number: | 85369085 |
| EAN: | 3471523115019 |

Dimensions

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| Product Net Depth: | 77 mm |
| Product Net Height: | 86 mm |
| Product Net Weight: | 0.270 kg |
| Product Net Width: | 45 mm |

Container Information

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| Package Level 1 Width: | 87 mm |
| Package Level 1 Length: | 79 mm |
| Package Level 1 Height: | 47 mm |
| Package Level 1 Gross Weight: | 0.27 kg |
| Package Level 1 EAN: | 3471523115019 |
| 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 |
| Package Level 1 Units: | 1 piece |

Technical

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| Number of Main Contacts NC: | 0 |
| Number of Auxiliary Contacts NO: | 0 |
| 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: | 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 35 A |
| Rated Operational Current AC-1 (I_e): | (690 V) 40 °C 25 A (690 V) 60 °C 25 A (690 V) 70 °C 22 A |
| Rated Operational Current AC-3 (I_e): | (220 / 230 / 240 V) 60 °C 9 A (380 / 400 V) 60 °C 9 A (415 V) 60 °C 9 A (440 V) 60 °C 9 A (500 V) 60 °C 9.5 A (690 V) 60 °C 7 A |

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| Rated Operational Power AC-3 (P_e): | (220 / 230 / 240 V) 2.2 kW (380 / 400 V) 4 kW (400 V) 4 kW (415 V) 4 kW (440 V) 4 kW (500 V) 5.5 kW (690 V) 5.5 kW |
| 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 |
| 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 |
| 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 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 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 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: | Control Circuit 10 mm Main Circuit 10 mm |
| Degree of Protection: | 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 |
| Number of Main Contacts NO: | 4 |

Environmental

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| 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: | 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 |
| RoHS Status: | Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1 |
| Ambient Air Temperature: | Close to Contactor for Storage -60...+80 °C Near Contactor for Operation in Free Air -40 ... +70 °C |

Technical UL/CSA

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| General Use Rating UL/CSA: | (600 V AC) 25 A |
| Tightening Torque UL/CSA: | Control Circuit 11 in·lb Main Circuit 13 in·lb |

Certificates and Declarations (Document Number)

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| Instructions and Manuals: | 1SBC101027M6801 |
| ABS Certificate: | ABS_15-GE1349500-PDA_90682247 |
| CB Certificate: | CB_SE_70857M1 |
| CCC Certificate: | CCC_2010010304445624 |
| Data Sheet, Technical Information: | 1SBC101419D0201 |
| Declaration of Conformity - CE: | 1SBD250001U1000 |

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| 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: | 1SBD251011E1000 |
| UL Certificate: | UL_20100802-E319322-3-1 |

Classifications

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| E-nummer: | 3211405 |
| ETIM 4: | EC000066 - Magnet contactor, AC-switching |
| ETIM 5: | EC000066 - Magnet contactor, AC-switching |
| ETIM 6: | EC000066 - Power contactor, AC switching |
| Object Classification Code: | Q |

