

## General Information

|                               |  |
|-------------------------------|--|
| <b>Extended Product Type:</b> | AF38-40-00-11  |
| <b>Product ID:</b>            | 1SBL297201R1100  |
| <b>EAN:</b>                   | 3471523115316  |
| <b>Catalog Description:</b>   | AF38-40-00-11 24-60V/50/60HZ 20-60VDC Contactor  |
| <b>Long Description:</b>      | AF38 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

|                                |               |
|--------------------------------|---------------|
| <b>Minimum Order Quantity:</b> | 1 piece       |
| <b>Customs Tariff Number:</b>  | 85369085      |
| <b>EAN:</b>                    | 3471523115316 |

## Dimensions

|                            |          |
|----------------------------|----------|
| <b>Product Net Depth:</b>  | 101 mm   |
| <b>Product Net Height:</b> | 86 mm    |
| <b>Product Net Weight:</b> | 0.360 kg |
| <b>Product Net Width:</b>  | 45 mm    |

## Container Information

|                                      |               |
|--------------------------------------|---------------|
| <b>Package Level 1 Width:</b>        | 87 mm         |
| <b>Package Level 1 Length:</b>       | 103 mm        |
| <b>Package Level 1 Height:</b>       | 47 mm         |
| <b>Package Level 1 Gross Weight:</b> | 0.36 kg       |
| <b>Package Level 1 EAN:</b>          | 3471523115316 |
| <b>Package Level 2 Units:</b>        | 36 piece      |
| <b>Package Level 2 Width:</b>        | 250 mm        |
| <b>Package Level 2 Length:</b>       | 300 mm        |
| <b>Package Level 2 Height:</b>       | 315 mm        |
| <b>Package Level 3 Units:</b>        | 864 piece     |
| <b>Package Level 1 Units:</b>        | 1 piece       |

## Technical

|   |  |
|---|--|
| <b>Number of Main Contacts NC:</b>                                  | 0  |
| <b>Number of Auxiliary Contacts NO:</b>                             | 0  |
| <b>Number of Auxiliary Contacts NC:</b>                             | 0  |
| <b>Standards:</b>   | IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14   |
| <b>Rated Operational Voltage:</b>                                   | Main Circuit 690 V   |
| <b>Rated Frequency (f):</b>   | Main Circuit 50 / 60 Hz  |
| <b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b> | acc. to IEC 60947-4-1, Open Contactors $q = 40$ °C 55 A  |
| <b>Rated Operational Current AC-1 (<math>I_e</math>):</b>           | (690 V) 40 °C 55 A<br>(690 V) 60 °C 45 A<br>(690 V) 70 °C 37 A   |
| <b>Rated Operational Current AC-3 (<math>I_e</math>):</b>           | (220 / 230 / 240 V) 60 °C 23.2 A<br>(380 / 400 V) 60 °C 22 A<br>(415 V) 60 °C 21.2 A<br>(440 V) 60 °C 20 A<br>(500 V) 60 °C 17.6 A<br>(690 V) 60 °C 10.5 A |

|   |   |
|---|---|
| <b>Rated Operational Power AC-3 (P<sub>e</sub>):</b>        | (220 / 230 / 240 V) 5.5 kW<br>(400 V) 11 kW<br>(415 V) 11 kW<br>(440 V) 11 kW<br>(500 V) 11 kW<br>(690 V) 9 kW  |
| <b>Rated Short-time Withstand Current (I<sub>cw</sub>):</b> | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 55 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 450 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A |
| <b>Maximum Electrical Switching Frequency:</b>              | AC-1 600 cycles per hour  |
| <b>Rated Insulation Voltage (U<sub>i</sub>):</b>            | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V  |
| <b>Rated Impulse Withstand Voltage (U<sub>imp</sub>):</b>   | 6 kV  |
| <b>Maximum Mechanical Switching Frequency:</b>              | 3600 cycles per hour  |
| <b>Rated Control Circuit Voltage (U<sub>c</sub>):</b>       | 50 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 V  |
| <b>Operate Time:</b>  | 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  |
| <b>Connecting Capacity Main Circuit:</b>                    | Flexible with Insulated Ferrule 1x 1.5...16 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 1.5...16 mm <sup>2</sup><br>Flexible with Ferrule 1/2x 1.5...16 mm <sup>2</sup><br>Rigid 1/2x 1.5...16 mm <sup>2</sup>  |
| <b>Connecting Capacity Control Circuit:</b>                 | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>   |
| <b>Wire Stripping Length:</b>                               | Control Circuit 10 mm<br>Main Circuit 12 mm   |
| <b>Degree of Protection:</b>                                | 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  |
| <b>Terminal Type:</b>                                       | Screw Terminals   |
| <b>Number of Main Contacts NO:</b>                          | 4   |

## Environmental

|  |  |
|--|--|
| <b>Climatic Withstand:</b>                             | Category B according to IEC 60947-1 Annex Q  |
| <b>Maximum Operating Altitude Permissible:</b>         | 3000 m   |
| <b>Resistance to Vibrations acc. to IEC 60068-2-6:</b> | 5 ... 300 Hz 4 g closed position / 2 g open position   |
| <b>Resistance to Shock acc. to IEC 60068-2-27:</b>     | Closed, Shock Direction: B1 25 g<br>Open, Shock Direction: B1 5 g<br>Shock Direction: A 30 g<br>Shock Direction: B2 15 g<br>Shock Direction: C1 25 g<br>Shock Direction: C2 25 g |
| <b>RoHS Status:</b>                                    | Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1  |
| <b>Ambient Air Temperature:</b>                        | Close to Contactor for Storage -60...+80 °C<br>Near Contactor for Operation in Free Air -40 ... +70 °C   |

## Technical UL/CSA

|                                   |   |
|-----------------------------------|---|
| <b>General Use Rating UL/CSA:</b> | (600 V AC) 55 A                                   |
| <b>Tightening Torque UL/CSA:</b>  | Control Circuit 11 in-lb<br>Main Circuit 22 in-lb |

## Certificates and Declarations (Document Number)

|   |                               |
|---|-------------------------------|
| <b>Instructions and Manuals:</b>          | 1SBC101027M6801               |
| <b>ABS Certificate:</b>                   | ABS_15-GE1349500-PDA_90682247 |
| <b>CB Certificate:</b>                    | CB_SE_70858M1                 |
| <b>CCC Certificate:</b>                   | CCC_2010010304445623          |
| <b>Data Sheet, Technical Information:</b> | 1SBC101424D0201               |
| <b>Declaration of Conformity - CE:</b>    | 1SBD250001U1000               |
| <b>DNV Certificate:</b>                   | DNV-GL_E13871                 |
| <b>EAC Certificate:</b>                   | EAC_RU C-FR ME77 B01010       |
| <b>GL Certificate:</b>                    | DNV-GL_E13871                 |

|                          |                             |
|--------------------------|-----------------------------|
| <b>GOST Certificate:</b> | GOST_POCCFR.ME77.B07175.pdf |
| <b>LR Certificate:</b>   | LRS_1300087E1               |
| <b>RINA Certificate:</b> | RINA_ELE084013XG            |
| <b>RMRS Certificate:</b> | RMRS_1400682124             |
| <b>RoHS Information:</b> | 1SBD251015E1000             |
| <b>UL Certificate:</b>   | UL_20120918-E319322-3-1     |
| <b>UL Listing Card:</b>  | UL_E319322                  |

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## Classifications

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|                                    |   |
|------------------------------------|---|
| <b>E-nummer:</b>                   | 3211518                                   |
| <b>ETIM 4:</b>                     | EC000066 - Magnet contactor, AC-switching |
| <b>ETIM 5:</b>                     | EC000066 - Magnet contactor, AC-switching |
| <b>ETIM 6:</b>                     | EC000066 - Power contactor, AC switching  |
| <b>Object Classification Code:</b> | Q   |

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