



 PRODUCT-DETAILS

AF38ZB-40-00-22

AF38ZB-40-00-22 48-130V50/60HZ-DC Contactor



General Information

| | |
|-----------------------|---|
| Extended Product Type | AF38ZB-40-00-22 |
| Product ID | 1SBL296261R2200 |
| EAN | 3471523124721 |
| Catalog Description | AF38ZB-40-00-22 48-130V50/60HZ-DC Contactor |
| Long Description | The AF38ZB-40-00-22 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 11 kW / 400 V AC (AC-3) and switching power circuits up to 55 A (AC-1) or 55 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (48-130 V 50/60 Hz and DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. |

Ordering

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

Popular Downloads

| | |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100220C0201 |
| Instructions and Manuals | 1SBC101027M6801 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

Dimensions

| | |
|----------------------------|---------|
| Product Net Width | 45 mm |
| Product Net Depth / Length | 101 mm |
| Product Net Height | 86 mm |
| Product Net Weight | 0.41 kg |

Technical

| | |
|--|--|
| Number of Main Contacts NO | 4 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 0 |
| Number of Auxiliary Contacts NC | 0 |
| Number of Poles | 4P |
| Standards | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60335-2-40 LZGH2 A2L, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60335-2-40 LZGH2 A2L, CSA C22.2 No. 60947-1, CSA C22.2 No. 60947-4-1, IEC 60077-1 (applicable parts), IEC 60077-2 (applicable parts), EN 50155 (applicable parts), TR CU 001/2011, IEC 61373, For compliance confirmation on applicable parts based on your application and combination, please consult your ABB sales representatives. |
| Rated Operational Voltage | Main Circuit 690 V |
| Rated Frequency (f) | Control Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz |
| Conventional Free-air Thermal Current (I _{th}) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40^\circ\text{C}$ 55 A |
| Rated Operational Current AC-1 (I _e) | (690 V) 40 °C 55 A (690 V) 60 °C 45 A (690 V) 70 °C 37 A |
| Rated Operational Current AC-3 (I _e) | (415 V) 60 °C 21.2 A (440 V) 60 °C 20 A (500 V) 60 °C 17.6 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 22 A (220 / 230 / 240 V) 60 °C 23.2 A |
| Rated Operational Current DC-1 (I _e) | (110 V) 2 Poles in Series, 40 °C 55 A (110 V) 2 Poles in Series, 60 °C 45 A (110 V) 2 Poles in Series, 70 °C 37 A (110 V) 3 Poles in Series, 40 °C 55 A (110 V) 3 Poles in Series, 60 °C 45 A (110 V) 3 Poles in Series, 70 °C 37 A (110 V) 4 Poles in Series, 40 °C 55 A (110 V) 4 Poles in Series, 60 °C 45 A (110 V) 4 Poles in Series, 70 °C 37 A (220 V) 3 Poles in Series, 40 °C 55 A (220 V) 3 Poles in Series, 60 °C 45 A (220 V) 3 Poles in Series, 70 °C 37 A |

| | |
|---|--|
| | (220 V) 4 Poles in Series, 40 °C 55 A (220 V) 4 Poles in Series, 60 °C 45 A (220 V) 4 Poles in Series, 70 °C 37 A (72 V) 1-Pole, 40 °C 55 A (72 V) 1-Pole, 60 °C 45 A (72 V) 1-Pole, 70 °C 37 A (72 V) 2 Poles in Series, 40 °C 55 A (72 V) 2 Poles in Series, 60 °C 45 A (72 V) 2 Poles in Series, 70 °C 37 A (72 V) 3 Poles in Series, 40 °C 55 A (72 V) 3 Poles in Series, 60 °C 45 A (72 V) 3 Poles in Series, 70 °C 37 A (72 V) 4 Poles in Series, 40 °C 55 A (72 V) 4 Poles in Series, 60 °C 45 A (72 V) 4 Poles in Series, 70 °C 37 A |
| Rated Operational Power AC-3 (P _e) | (400 V) 11 kW (415 V) 11 kW (440 V) 11 kW (500 V) 11 kW (690 V) 9 kW (220 / 230 / 240 V) 5.5 kW |
| Rated Short-time Withstand Current Low Voltage (I _{cw}) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 55 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 450 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A |
| Rated Insulation Voltage (U _i) | acc. to IEC 60947-4-1 690 V acc. to UL/CSA 600 V |
| Rated Impulse Withstand Voltage (U _{imp}) | 6 kV |
| Maximum Electrical Switching Frequency | (AC-1) 600 cycles per hour |
| Maximum Mechanical Switching Frequency | 3600 cycles per hour |
| Rated Control Circuit Voltage (U _c) | 50 Hz 48 ... 130 V 60 Hz 48 ... 130 V DC Operation 48 ... 130 V |
| Power Loss | at Rated Operating Conditions AC-1 per Pole 2.3 W at Rated Operating Conditions AC-3 per Pole 0.42 W |
| 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 |
| Mounting on DIN Rail | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715 |
| Mounting by Screws (not supplied) | 2 x M4 screws placed diagonally |
| Connecting Capacity Main Circuit | Flexible with Ferrule 1/2x 1.5 ... 16 mm ² Flexible with Insulated Ferrule 1/2x 1.5 ... 16 mm ² Rigid Solid 1/2x 1.5 ... 4 mm ² Rigid Stranded 1/2x 1.5 ... 16 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 Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ² |
| Wire Stripping Length | Control Circuit 10 mm Main Circuit 12 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 |
| Tightening Torque | Control Circuit 1.2 N·m Main Circuit 2.5 N·m |
| Terminal Type | Screw Terminals |
| Product Name | Block Contactor |

Technical UL/CSA

| | |
|--|---|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (600 V AC) 55 A |
| Connecting Capacity Main Circuit UL/CSA | Rigid Solid 1/2x 16-10 AWG Rigid Stranded 1/2x 16-6 AWG |
| Connecting Capacity Control Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG |
| Tightening Torque UL/CSA | Control Circuit 11 in-lb Main Circuit 22 in-lb |

Environmental

| | |
|---|---|
| Ambient Air Temperature | Close to Contactor for Storage -60 ... +80 °C Near Contactor for Operation in Free Air -40 ... 70 °C |
| Climatic Withstand | Category B according to IEC 60947-1 Annex Q |
| Maximum Operating Altitude Permissible | Without Derating 3000 m |
| Shock and Vibration Withstand acc. to IEC 61373 | Category 1, Class B |
| Pollution Degree | 3 |

Material Compliance

| | |
|---|--|
| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658 |
| REACH Declaration | 2CMT2021-006202 |
| RoHS Information | 2CMT2021-006277 |
| RoHS Status | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| Toxic Substances Control Act - TSCA | 2CMT2023-006525 |
| WEEE B2C / B2B | Business To Business |
| WEEE Category | 5. Small Equipment (No External Dimension More Than 50 cm) |

ABB EcoSolutions

| | |
|---|---------------------------|
| End Of Life Disassembling Instructions | 1SBC101080M6801 |
| Environmental Product Declaration - EPD | 1SBD250584E4000 |
| Sustainable Material Content in Packaging (wt. %) | Recycled Cardboard - 86 % |
| Sustainable Material Content in Product (wt. %) | Recycled Metal - 28 % |

Certificates and Declarations

| | |
|----------------------|---------------------------------|
| A2L Certificate – UL | 9AKK108469A4875;9AKK108469A4879 |
| CB Certificate | CB_SE-96553 |

| | |
|----------------------------------|--|
| CCC Certificate | CCC_2010010304445623 |
| CQC Certificate | CQC2010010304445623 |
| Declaration of Conformity - CCC | 2020980304001254 |
| Declaration of Conformity - CE | 1SBD250002U1000 |
| Declaration of Conformity - UKCA | 1SBD250033U1000 |
| GOST Certificate | GOST_POCCFR.ME77.B07175.pdf |
| KC Certificate | KC_HW02016-15002C |
| UL Certificate | UL-US-L319322-13-72119002-5 UL-CA-L319322-43-72119002-6 |
| UL Listing Card | UL_E319322 |

Container Information

| | |
|--------------------------------|---------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 87 mm |
| Package Level 1 Depth / Length | 103 mm |
| Package Level 1 Height | 47 mm |
| Package Level 1 Gross Weight | 0.41 kg |
| Package Level 1 EAN | 3471523124721 |
| Package Level 2 Units | box 18 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 | 14.76 kg |
| Package Level 3 Units | 864 piece |

External Classifications and Standards

| | |
|------------------------------------|--|
| Object Classification Code | Q |
| ETIM 7 | EC000066 - Power contactor, AC switching |
| ETIM 8 | EC000066 - Power contactor, AC switching |
| ETIM 9 | EC000066 - Power contactor, AC switching |
| eClass | V11.0 : 27371003 |
| UNSPSC | 39121529 |
| IDEA Granular Category Code (IGCC) | 4758 >> Iec Contactors |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF38

