

PRODUCT-DETAILS

AF38Z-30-22-20

AF38Z-30-22-20 12-20VDC Contactor



General Information

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|-----------------------|-----------------------------------|
| Extended Product Type | AF38Z-30-22-20 |
| Product ID | 1SBL296001R2022 |
| EAN | 3471523114906 |
| Catalog Description | AF38Z-30-22-20 12-20VDC Contactor |

Long Description

The AF38Z-30-22-20 is a 3 pole - 690 V IEC or 600 UL contactor with pre-mounted auxiliary contacts and screw terminals, controlling motors up to 18.5 kW / 400 V AC (AC-3) or 25 hp / 480 V UL and switching power circuits up to 50 A (AC-1) or 50 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (12-20 V 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

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

Popular Downloads

| | |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101027M6801 |
|--------------------------|-----------------|

Dimensions

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| Product Net Width | 45 mm |
| Product Net Depth / Length | 119.5 mm |
| Product Net Height | 86 mm |
| Product Net Weight | 0.4 kg |

Technical

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| Number of Main Contacts NO | 3 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 2 |
| Number of Auxiliary Contacts NC | 2 |
| 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 50 A acc. to IEC 60947-5-1, q = 40 °C 16 A |
| Rated Operational Current AC-1 (I _e) | (690 V) 40 °C 50 (690 V) 60 °C 42 A (690 V) 70 °C 37 |
| Rated Operational Current AC-3 (I _e) | (415 V) 60 °C 38 A (440 V) 60 °C 38 A (500 V) 60 °C 33 A (690 V) 60 °C 24 A (380 / 400 V) 60 °C 38 A (220 / 230 / 240 V) 60 °C 40 A |
| Rated Operational Power AC-3 (P _e) | (400 V) 18.5 kW (415 V) 18.5 kW (440 V) 22 kW (500 V) 22 kW (690 V) 22 kW (380 / 400 V) 18.5 kW (220 / 230 / 240 V) 11 kW |
| Rated Operational Current AC-15 (I _e) | (500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A |
| Rated Short-time Withstand Current Low Voltage (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) | (24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (250 V) 0.27 A / 68 W |

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| | (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W |
| Rated Insulation Voltage (U _i) | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V acc. to UL/CSA 600 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 - 50 Hz / 60 Hz 100 ... 250 V 60 Hz - DC Operation 12 ... 20 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 Ferrule 1/2x 1.5 ... 10 mm ² Flexible with Insulated Ferrule 1x 1.5 ... 10 mm ² Flexible with Insulated Ferrule 2x 1.5 ... 4 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 2x 0.75 ... 1.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 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 |

Technical UL/CSA

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|---------------------------|--|
| General Use Rating UL/CSA | (600 V AC) 50 A |
| Horsepower Rating UL/CSA | (120 V AC) Single Phase 2 hp (200 ... 208 V AC) Three Phase 10 hp (220 ... 240 V AC) Three Phase 10 hp (240 V AC) Single Phase 5 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 |

Environmental

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| Ambient Air Temperature | Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C |
| Climatic Withstand | Category B according to IEC 60947-1 Annex Q |
| Maximum Operating Altitude Permissible | Without Derating 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

Following EU Directive 2011/65/EU

Certificates and Declarations (Document Number)

| | |
|------------------------------------|--|
| ABS Certificate | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate | BV_2634H24898B0 |
| CB Certificate | CB_SE-96552M1 |
| CCC Certificate | CCC_2010010304445623 |
| CQC Certificate | CQC2010010304445623 CQC2020010304294316 |
| cUL Certificate | UL_20180227_E312527_7_1 |
| Declaration of Conformity - CCC | 2020980304001254 2020980304001052 |
| Declaration of Conformity - CE | 1SBD250000U1000 |
| DNV Certificate | DNV-GL_TAE00001AF-3 |
| DNV GL Certificate | DNV-GL_TAE00001AF-3 |
| EAC Certificate | EAC_RU_FRME77B03447 |
| Environmental Information | 1SBD250150E1000 |
| GL Certificate | DNV-GL_TAE00001AF-3 |
| GOST Certificate | GOST_POCCFR.ME77.B07175.pdf |
| Instructions and Manuals | 1SBC101027M6801 |
| KC Certificate | KC_HW02016-15001C |
| LR Certificate | LRS_1300087E1 |
| RINA Certificate | RINA_ELE240318XG |
| RMRS Certificate | RMRS_1802705280 |
| RoHS Information | 1SBD250000U1000 |
| UL Certificate | UL_20140305-E312527_7_1 |
| UL Listing Card | E312527 |

Container Information

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|-----------------------------------|---------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 87 mm |
| Package Level 1 Depth / Length | 121 mm |
| Package Level 1 Height | 47 mm |
| Package Level 1 Gross Weight | 0.4 kg |
| Package Level 1 EAN | 3471523114906 |
| 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 | 14.4 kg |
| Package Level 3 Units | 864 piece |

Classifications

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| Object Classification Code | Q |
| ETIM 4 | EC000066 - Magnet contactor, AC-switching |

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|--------|---|
| ETIM 5 | EC000066 - Magnet contactor, AC-switching |
| ETIM 6 | EC000066 - Power contactor, AC switching |
| ETIM 7 | EC000066 - Power contactor, AC switching |
| eClass | V11.0 : 27371003 |
| UNSPSC | 39121529 |

Categories

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

