

## PRODUCT-DETAILS

# AF38Z-30-00-20

## AF38Z-30-00-20 12-20VDC Contactor



### General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF38Z-30-00-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Product ID            | 1SBL296001R2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EAN                   | 3471523114708                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Catalog Description   | AF38Z-30-00-20 12-20VDC Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Long Description      | The AF38Z-30-00-20 is a 3 pole - 690 V IEC or 600 UL contactor with 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

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

### Popular Downloads

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

### Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 45 mm   |
| Product Net Depth / Length | 86 mm   |
| Product Net Height         | 86 mm   |
| Product Net Weight         | 0.35 kg |

## Technical

|                                                          |                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                               | 3                                                                                                                                                                                                                                                                                                                                                                      |
| 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 <sub>th</sub> ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 50 A                                                                                                                                                                                                                                                                                                                  |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 50<br>(690 V) 60 °C 42 A<br>(690 V) 70 °C 37                                                                                                                                                                                                                                                                                                             |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 60 °C 38 A<br>(440 V) 60 °C 38 A<br>(500 V) 60 °C 33 A<br>(690 V) 60 °C 24 A<br>(380 / 400 V) 60 °C 38 A<br>(220 / 230 / 240 V) 60 °C 40 A                                                                                                                                                                                                                     |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (400 V) 18.5 kW<br>(415 V) 18.5 kW<br>(440 V) 22 kW<br>(500 V) 22 kW<br>(690 V) 22 kW<br>(380 / 400 V) 18.5 kW<br>(220 / 230 / 240 V) 11 kW                                                                                                                                                                                                                            |
| Rated Short-time Withstand Current (I <sub>cw</sub> )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 50 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 700 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A<br>for 1 s -empty- A |
| Maximum Breaking Capacity                                | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 500 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 200 A                                                                                                                                                                                                                         |
| Maximum Electrical Switching Frequency                   | (AC-1) 600 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 1200 cycles per hour                                                                                                                                                                                                                                                                         |
| Rated Insulation Voltage (U <sub>i</sub> )               | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                               |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> )      | 6 kV                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum Mechanical Switching Frequency                   | 3600 cycles per hour                                                                                                                                                                                                                                                                                                                                                   |
| Rated Control Circuit Voltage (U <sub>c</sub> )          | 50 Hz -<br>50 Hz / 60 Hz 100 ... 250 V<br>60 Hz -<br>DC Operation 12 ... 20 V                                                                                                                                                                                                                                                                                          |
| Operate Time                                             | 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                                                                                                 |
| Connecting Capacity                                      | Flexible with Ferrule 1/2x 1.5 ... 10 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                  |

|                                        |                                                                                                                                                                                                                                       |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main Circuit                           | Flexible with Insulated Ferrule 1x 1.5 ... 10 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 1.5 ... 4 mm <sup>2</sup><br>Rigid 1/2x 2.5 ... 10 mm <sup>2</sup>                                                                |
| Connecting Capacity<br>Control Circuit | 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> |
| Wire Stripping Length                  | Control Circuit 10 mm<br>Main Circuit 14 mm                                                                                                                                                                                           |
| Degree of Protection                   | 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                                                                                                          |
| Terminal Type                          | Screw Terminals                                                                                                                                                                                                                       |

## Technical UL/CSA

|                              |                                                                                                                                                                                                                              |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Use Rating<br>UL/CSA | (600 V AC) 50 A                                                                                                                                                                                                              |
| Horsepower Rating<br>UL/CSA  | (120 V AC) Single Phase 2 hp<br>(200 ... 208 V AC) Three Phase 10 hp<br>(220 ... 240 V AC) Three Phase 10 hp<br>(240 V AC) Single Phase 5 hp<br>(440 ... 480 V AC) Three Phase 25 hp<br>(550 ... 600 V AC) Three Phase 30 hp |
| Tightening Torque<br>UL/CSA  | Control Circuit 11 lA<br>Main Circuit 22 lA                                                                                                                                                                                  |

## Environmental

|                                                   |                                                                                                                                                                                              |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                        | Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C<br>Close to Contactor without Thermal O/L Relay -40 ... +70 °C<br>Close to Contactor for Storage -60 ... +80 °C              |
| Climatic Withstand                                | Category B according to IEC 60947-1 Annex Q                                                                                                                                                  |
| Maximum Operating<br>Altitude Permissible         | 3000 m                                                                                                                                                                                       |
| Resistance to Vibrations<br>acc. to IEC 60068-2-6 | 5 ... 300 Hz 4 g closed position / 2 g open position                                                                                                                                         |
| Resistance to Shock acc.<br>to IEC 60068-2-27     | Closed, Shock Direction: B1 25 K40<br>Open, Shock Direction: B1 5 K40<br>Shock Direction: A 30 K40<br>Shock Direction: B2 15 K40<br>Shock Direction: C1 25 K40<br>Shock Direction: C2 25 K40 |
| 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-96552                                |
| CCC Certificate                    | CCC_2010010304445623                       |
| CQC Certificate                    | CQC2010010304445623<br>CQC2020010304294316 |
| cUL Certificate                    | UL_20180227_E312527_7_1                    |
| Declaration of<br>Conformity - CCC | 2020980304001254<br>2020980304001052       |
| Declaration of<br>Conformity - CE  | 1SBD250000U1000                            |
| DNV Certificate                    | DNV-GL_TAE00001AF-3                        |
| DNV GL Certificate                 | DNV-GL_TAE00001AF-3                        |
| EAC Certificate                    | EAC_RU_FRME77B03447                        |
| Environmental<br>Information       | 1SBD250149E1000                            |

|                          |                             |
|--------------------------|-----------------------------|
| 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

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 87 mm         |
| Package Level 1 Depth / Length | 87 mm         |
| Package Level 1 Height         | 47 mm         |
| Package Level 1 Gross Weight   | 0.35 kg       |
| Package Level 1 EAN            | 3471523114708 |
| Package Level 2 Units          | box 21 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   | 15.75 kg      |
| Package Level 3 Units          | 1080 piece    |

## Classifications

|                            |                                           |
|----------------------------|-------------------------------------------|
| Object Classification Code | Q                                         |
| ETIM 4                     | EC000066 - Magnet contactor, AC-switching |
| 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                                  |
| E-Number (Finland)         | 3706317                                   |

## Categories

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

