PRODUCT-DETAILS

# AF52-30-00-11

## AF52-30-00-11 24-60V50/60HZ 20-60VDC Contactor



### General Information

| | |
|---|---|
| Extended Product Type | AF52-30-00-11 |
| Product ID | 1SBL367001R1100 |
| EAN | 3471523132313 |
| Catalog Description | AF52-30-00-11 24-60V50/60HZ 20-60VDC Contactor |
| Long Description | The AF52-30-00-11 is a 3 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 22 kW / 400 V AC (AC-3) or 40 hp / 480 V UL and switching power circuits up to 100 A (AC-1) or 80 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 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 |

© 2024 ABB. All rights reserved.

## Popular Downloads

| | |
|---|---|
| Data Sheet, Technical Information | 1SBC100214C0202 |
| Instructions and Manuals | 1SBC101036M6801 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

## Dimensions

| | |
|---|---|
| Product Net Width | 55 mm |
| Product Net Depth / Length | 111 mm |
| Product Net Height | 125.5 mm |
| Product Net Weight | 0.97 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/EN 60947-1, IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60947-1:22, CSA C22.2 No. 60947-4-1:22 |
| Rated Operational Voltage | Main Circuit 690 V |
| Rated Frequency (f) | Control Circuit 50 / 60 Hz<br>Main Circuit 50 / 60 Hz |
| Conventional Free-air Thermal Current ($I_{th}$) | acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 105 A |
| Rated Operational Current AC-1 ($I_e$) | (690 V) 40 °C 100 A<br>(690 V) 60 °C 80 A<br>(690 V) 70 °C 70 A |
| Rated Operational Current AC-3 ($I_e$) | (415 V) 60 °C 53 A<br>(440 V) 60 °C 53 A<br>(500 V) 60 °C 45 A<br>(690 V) 60 °C 35 A<br>(380 / 400 V) 60 °C 53 A<br>(220 / 230 / 240 V) 60 °C 53 A |
| Rated Operational Current AC-3e ($I_e$) | (415 V) 60 °C 53 A<br>(440 V) 60 °C 53 A<br>(500 V) 60 °C 45 A<br>(690 V) 60 °C 35 A<br>(380 / 400 V) 60 °C 53 A<br>(220 / 230 / 240 V) 60 °C 53 A |
| Rated Operational Power AC-3 ($P_e$) | (400 V) 22 kW<br>(415 V) 30 kW<br>(440 V) 30 kW<br>(500 V) 30 kW<br>(690 V) 30 kW<br>(380 / 400 V) 22 kW<br>(220 / 230 / 240 V) 15 kW |
| Rated Operational Power AC-3e ($P_e$) | (415 V) 30 kW<br>(440 V) 30 kW<br>(500 V) 30 kW<br>(690 V) 30 kW<br>(380 / 400 V) 22 kW |

© 2024 ABB. All rights reserved.

| | |
|---|---|
| | (220 / 230 / 240 V) 15 kW |
| Rated Short-time Withstand Current Low Voltage ($I_{cw}$) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 600 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 110 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 350 A |
| Maximum Breaking Capacity | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 950 A<br>cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 600 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 Operational Current DC-1 ($I_e$) | (110 V) 2 Poles in Series, 40 °C 100 A<br>(110 V) 2 Poles in Series, 60 °C 80 A<br>(110 V) 2 Poles in Series, 70 °C 70 A<br>(110 V) 3 Poles in Series, 40 °C 100 A<br>(110 V) 3 Poles in Series, 60 °C 80 A<br>(110 V) 3 Poles in Series, 70 °C 70 A<br>(220 V) 3 Poles in Series, 40 °C 100 A<br>(220 V) 3 Poles in Series, 60 °C 80 A<br>(220 V) 3 Poles in Series, 70 °C 70 A<br>(72 V) 1-Pole, 40 °C 100 A<br>(72 V) 1-Pole, 60 °C 80 A<br>(72 V) 1-Pole, 70 °C 70 A<br>(72 V) 2 Poles in Series, 40 °C 100 A<br>(72 V) 2 Poles in Series, 60 °C 80 A<br>(72 V) 2 Poles in Series, 70 °C 70 A<br>(72 V) 3 Poles in Series, 40 °C 100 A<br>(72 V) 3 Poles in Series, 60 °C 80 A<br>(72 V) 3 Poles in Series, 70 °C 70 A |
| Rated Operational Current DC-3 ($I_e$) | (110 V) 2 Poles in Series, 40 °C 100 A<br>(110 V) 2 Poles in Series, 60 °C 80 A<br>(110 V) 2 Poles in Series, 70 °C 70 A<br>(110 V) 3 Poles in Series, 40 °C 100 A<br>(110 V) 3 Poles in Series, 60 °C 80 A<br>(110 V) 3 Poles in Series, 70 °C 70 A<br>(220 V) 3 Poles in Series, 40 °C 100 A<br>(220 V) 3 Poles in Series, 60 °C 80 A<br>(220 V) 3 Poles in Series, 70 °C 70 A<br>(72 V) 1-Pole, 40 °C 100 A<br>(72 V) 1-Pole, 60 °C 80 A<br>(72 V) 1-Pole, 70 °C 70 A<br>(72 V) 2 Poles in Series, 40 °C 100 A<br>(72 V) 2 Poles in Series, 60 °C 80 A<br>(72 V) 2 Poles in Series, 70 °C 70 A<br>(72 V) 3 Poles in Series, 40 °C 100 A<br>(72 V) 3 Poles in Series, 60 °C 80 A<br>(72 V) 3 Poles in Series, 70 °C 70 A |
| Rated Operational Current DC-5 ($I_e$) | (110 V) 2 Poles in Series, 40 °C 100 A<br>(110 V) 2 Poles in Series, 60 °C 80 A<br>(110 V) 2 Poles in Series, 70 °C 70 A<br>(110 V) 3 Poles in Series, 40 °C 100 A<br>(110 V) 3 Poles in Series, 60 °C 80 A<br>(110 V) 3 Poles in Series, 70 °C 70 A<br>(220 V) 3 Poles in Series, 40 °C 100 A<br>(220 V) 3 Poles in Series, 60 °C 80 A<br>(220 V) 3 Poles in Series, 70 °C 70 A<br>(72 V) 1-Pole, 40 °C 100 A<br>(72 V) 1-Pole, 60 °C 80 A<br>(72 V) 1-Pole, 70 °C 70 A<br>(72 V) 2 Poles in Series, 40 °C 100 A<br>(72 V) 2 Poles in Series, 60 °C 80 A<br>(72 V) 2 Poles in Series, 70 °C 70 A<br>(72 V) 3 Poles in Series, 40 °C 100 A<br>(72 V) 3 Poles in Series, 60 °C 80 A<br>(72 V) 3 Poles in Series, 70 °C 70 A |
| Rated Insulation Voltage ($U_i$) | acc. to IEC 60947-4-1 690 V<br>acc. to UL/CSA 600 V |
| Rated Impulse Withstand Voltage ($U_{imp}$ | 6 kV |

© 2024 ABB. All rights reserved.

)

| | |
|---|---|
| Maximum Mechanical Switching Frequency | 3600 cycles per hour |
| Rated Control Circuit Voltage ($U_c$) | 50 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 V |
| Coil Consumption | Average Holding Value 50 / 60 Hz 4 V·A<br>Average Holding Value 50 Hz 4 V·A<br>Average Holding Value 60 Hz 4 V·A<br>Average Holding Value DC 2 W<br>Average Holding Value, from Warm State 2 W |
| Operate Time | Between Coil De-energization and NC Contact Closing 19 ... 105 ms<br>Between Coil De-energization and NO Contact Opening 17 ... 100 ms<br>Between Coil Energization and NC Contact Opening 38 ... 95 ms<br>Between Coil Energization and NO Contact Closing 42 ... 100 ms |
| Mounting on DIN Rail | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715 |
| Mounting by Screws (not supplied) | 2 x M4 or 2 x M6 screws placed diagonally |
| Connecting Capacity Main Circuit | Flexible with Ferrule 1/2x 4 ... 35 mm²<br>Flexible with Insulated Ferrule 1/2x 4 ... 35 mm²<br>Rigid Stranded 1/2x 6 ... 35 mm² |
| Connecting Capacity Control Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²<br>Rigid Solid 1/2x 1 ... 2.5 mm²<br>Rigid Stranded 1/2x 1 ... 2.5 mm² |
| Wire Stripping Length | Control Circuit 10 mm<br>Main Circuit 16 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 IP10 |
| Terminal Type | Screw Terminals |

## Technical UL/CSA

| | |
|---|---|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (600 V AC) 80 A |
| Horsepower Rating UL/CSA | (120 V AC) Single Phase 3 hp<br>(200 ... 208 V AC) Three Phase 15 hp<br>(220 ... 240 V AC) Three Phase 20 hp<br>(240 V AC) Single Phase 10 hp<br>(440 ... 480 V AC) Three Phase 40 hp<br>(550 ... 600 V AC) Three Phase 50 hp |
| Connecting Capacity Main Circuit UL/CSA | Rigid Stranded 1/2x 10-2 AWG |
| Connecting Capacity Control Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG |
| Tightening Torque UL/CSA | Control Circuit 11 in·lb<br>Main Circuit 35 in·lb |

## Environmental

| | |
|---|---|
| Ambient Air Temperature | Close to Contactor Fitted with Thermal O/L Relay -40 ... 70 °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 Altitude Permissible | Without Derating 3000 m |
| Resistance to Shock acc. | Closed, Shock Direction: A 25 g |

© 2024 ABB. All rights reserved.

| | |
|---|---|
| to IEC 60068-2-27 | Closed, Shock Direction: B1 25 g<br>Closed, Shock Direction: B2 15 g<br>Closed, Shock Direction: C1 25 g<br>Closed, Shock Direction: C2 25 g<br>Open, Shock Direction: B1 5 g |
| Resistance to Vibrations | 3g Closed Position & 3g Open Position 5 ... 300 Hz |

## 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) |

## Circular Value

| | |
|---|---|
| End of Life Instructions | 1SBC101081M6801 |

## Eco Transparency

| | |
|---|---|
| Environmental Product Declaration - EPD | 2TFP200016A1001<br>1SBD250584E1000 |

## Certificates and Declarations

| | |
|---|---|
| ABS Certificate | ABS_20-2060694-PDA |
| BV Certificate | BV_2634H36994B1 |
| CB Certificate | CB_SE-113324 |
| CCC Certificate | CQC2015010304824714 |
| CQC Certificate | CQC2015010304824714<br>CQC2012010304589737 |
| Declaration of Conformity - CCC | 2020980304001256<br>2020980304001074 |
| Declaration of Conformity - CE | 1SBD250000U1000 |
| Declaration of Conformity - UKCA | 1SBD250031U1000 |
| DNV Certificate | DNV_TAE00001AF-4 |
| KC Certificate | KC_HW02016-15010C |
| LR Certificate | LRS_LR23403517TA-02 |
| RINA Certificate | RINA_ELE084013XG |
| RMRS Certificate | RMRS_1802705280 |
| UL Certificate | UL-US-L312527-1141-10303102-9<br>UL-CA-L312527-4141-10303102-9 |
| UL Listing Card | UL_E312527 |

## Container Information

© 2024 ABB. All rights reserved.

| | |
|---|---|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 150 mm |
| Package Level 1 Depth / Length | 150 mm |
| Package Level 1 Height | 97 mm |
| Package Level 1 Gross Weight | 1.07 kg |
| Package Level 1 EAN | 3471523132313 |
| Package Level 2 Units | box 10 piece |
| Package Level 2 Width | 250 mm |
| Package Level 2 Depth / Length | 300 mm |
| Package Level 2 Height | 300 mm |
| Package Level 2 Gross Weight | 10.7 kg |
| Package Level 3 Units | 240 piece |

## Classifications

| | |
|---|---|
| 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 |
| E-Number (Finland) | 3707014 |
| E-Number (Sweden) | 3210037 |

## Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF52

© 2024 ABB. All rights reserved.



© 2024 ABB. All rights reserved.