



PRODUCT-DETAILS

AF16ZB-22-00RT-23

AF16ZB-22-00RT-23 100-250V50/60HZ-DC Contactor



| General Information | |
|-----------------------|---|
| Extended Product Type | AF16ZB-22-00RT-23 |
| Product ID | 1SBL176560R2300 |
| EAN | 3471523129832 |
| Catalog Description | AF16ZB-22-00RT-23 100-250V50/60HZ-DC Contactor |
| Long Description | The AF16ZB-22-00RT-23 is a 4 pole - 690 V IEC or 600 UL contactor with Ring-Tongue Terminals, controlling motors up to 7.5 kW / 400 V AC (AC-3) and switching power circuits up to 30 A (AC-1) or 30 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 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 | 1SBC101035M6801 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

| Dimensions | |
|----------------------------|---------|
| Product Net Width | 45 mm |
| Product Net Depth / Length | 77 mm |
| Product Net Height | 86 mm |
| Product Net Weight | 0.32 kg |

| Technical | |
|---|---|
| Number of Main Contacts NO | 2 |
| Number of Main Contacts NC | 2 |
| 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 60947-4-1, 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 $\Theta = 40\text{ }^{\circ}\text{C}$ 35 A |
| Rated Operational Current AC-1 (I_e) | (690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A |
| Rated Operational Current AC-3 (I_e) | (415 V) 60 °C 18 A (440 V) 60 °C 18 A (500 V) 60 °C 15 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 18 A (220 / 230 / 240 V) 60 °C 18 A |
| Rated Operational Power AC-3 (P_e) | (400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW (380 / 400 V) 7.5 kW (220 / 230 / 240 V) 4 kW |
| Rated Short-time Withstand Current Low Voltage (I_{cw}) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A |
| Maximum Breaking | cos phi=0.45 (cos phi=0.35 for $I_e > 100\text{ A}$) at 440 V 250 A |

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| Capacity | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 106 A |
| Rated Insulation Voltage (Ui) | acc. to IEC 60947-4-1 690 V acc. to UL/CSA 600 V |
| Rated Impulse Withstand Voltage (Uimp) | 6 kV |
| Maximum Electrical Switching Frequency | (AC-1) 600 cycles per hour |
| Maximum Mechanical Switching Frequency | 3600 cycles per hour |
| Rated Control Circuit Voltage (Uc) | 50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V |
| Power Loss | at Rated Operating Conditions AC-1 per Pole 1.2 W at Rated Operating Conditions AC-3 per Pole 0.35 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 |
| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP10 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10 |
| Tightening Torque | Control Circuit 1.2 N-m Main Circuit 1.5 N-m |
| Terminal Type | Ring-Tongue Terminals |
| Product Name | Block Contactor |

Technical UL/CSA

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|----------------------------------|---|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (600 V AC) 30 A |
| Tightening Torque UL/CSA | Control Circuit 11 in-lb Main Circuit 13 in-lb |

Environmental

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|---|---|
| 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

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| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658 |
| REACH Declaration | 2CMT2021-006202 |
| RoHS Information | 2CMT2021-006277 |

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

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|---|------------------------------------|
| Environmental Product Declaration - EPD | 1SBD250584E3000 2TFP200035A1001 |
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Certificates and Declarations

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|----------------------------------|-------------------------|
| CB Certificate | CB_SE-113345 |
| CCC Certificate | CCC_2010010304445624 |
| CQC Certificate | CQC2010010304445624 |
| Declaration of Conformity - CCC | 2020980304001253 |
| Declaration of Conformity - CE | 1SBD250004U1000 |
| Declaration of Conformity - UKCA | 1SBD250035U1000 |
| UL Listing Card | UL_E319322 |
| UR Certificate | UL_20121126-E319322_4_1 |

Container Information

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|--------------------------------|---------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 87 mm |
| Package Level 1 Depth / Length | 79 mm |
| Package Level 1 Height | 47 mm |
| Package Level 1 Gross Weight | 0.32 kg |
| Package Level 1 EAN | 3471523129832 |
| Package Level 2 Units | box 27 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 | 17.28 kg |
| Package Level 3 Units | 1296 piece |

Classifications

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| 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 | 4758 >> lec Contactors |

Code (IGCC)

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF16

