

Alternate Catalog No. AF16Z-30-01-21 Catalog No. 1SBL176001R2101

Description: AF16Z-30-01-21 24-60V50/60HZ 20-60VDC Contactor

UPC No 3471523113916

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Representative Image

AF16Z contactors are used for controlling power circuits up to 690 V AC and 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads. AF..Z contactors include an electronic coil interface accepting a wide control voltage $U_c \text{ min.} \dots U_c \text{ max.}$ Only four coils cover control voltages between 24...250 V 50/60 Hz or 12...250 V DC. AF..Z contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF..Z contactors allow direct control by PLC-output $\geq 24 \text{ V DC } 500 \text{ mA}$ and obtain a reduced holding coil consumption. AF..Z contactors withstand short voltage dips and voltage sags (SEMI F47-0706 compliance) between 24...250 V 50/60 Hz AF..Z contactors have built-in surge protection and do not require additional surge suppressors The AF... series 1-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles, 1 built-in auxiliary contact, front and side-mounted add-on auxiliary contact blocks. (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available.

Descriptors

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| Category | AF Contactors |
| Block Contactor Type | 3-Pole Contactor |

Specifications

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| Product Type | AF |
| General Use Rating UL/CSA | (600 V AC) 30 A |
| Object Classification Code | Q |
| Terminal Type | Screw Terminals |
| Rated Control Circuit Voltage | 50 Hz /60 Hz 24 ... 60 V DC Operation 20 ... 60 V |
| Number of Main Contacts NO | 3 |
| Number of Main Contacts NC | 0 |
| Climatic Withstand | Category B according to IEC 60947-1 Annex Q |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5 ... 300 Hz 4 g closed position / 2 g open position |
| Number of Auxiliary Contacts NO | 0 |
| RoHS Status | Following EU Directive 2011/65/EU |
| Reference Ambient Air Temperature | Close to Contactor for Storage -60 ... +80 °C Close to Contactor without Thermal O/L Relay -40 ... +70 °C Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C |
| Rated Operational Voltage | Auxiliary Circuit 690 V Main Circuit 690 V |
| Resistance to Shock acc. to IEC 60068-2-27 | Shock Direction: A 30 K40 Shock Direction: B2 15 K40 Shock Direction: C1 25 K40 Shock Direction: C2 25 K40 Closed, Shock Direction: B1 25 K40 Open, Shock Direction: B1 5 K40 |
| Number of Auxiliary Contacts NC | 1 |
| Tightening Torque UL/CSA | Auxiliary Circuit 11 IA Control Circuit 11 IA Main Circuit 13 IA |
| Maximum Operating Altitude Permissible | 3000 m |

by ABB

Specifications

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| Rated Operational Current AC-1 | (690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A |
| Standards | IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14 |
| Rated Operational Power AC-3 | (220 / 230 / 240 V) 4 KWT (380 / 400 V) 7.5 KWT (415 V) 9 KWT (440 V) 9 KWT (500 V) 9 KWT (690 V) 9 KWT (400 V) 7.5 KWT |
| Horsepower Rating UL/CSA | (220 ... 240 V AC) Three Phase 5 hp (440 ... 480 V AC) Three Phase 10 hp (550 ... 600 V AC) Three Phase 15 hp (120 V AC) Single Phase 1-1/2 hp (200 ... 208 V AC) Three Phase 5 hp (240 V AC) Single Phase 3 hp |
| Conventional Free-air Thermal Current | acc. to IEC 60947-5-1, q = 40 °C 16 A acc. to IEC 60947-4-1, Open Contactors q = 40 °C 35 A |
| Rated Operational Current AC-15 | (220 / 240 V) 4 A (24 / 127 V) 6 A (500 V) 2 A (690 V) 2 A (400 / 440 V) 3 A |
| Rated Frequency | Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Main Circuit 50Hz Main Circuit 60 Hz |
| Rated Short-time Withstand Current | 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 for 0.1 s 140 A for 1 s 100 A |
| Rated Operational Current AC-3 | (220 / 230 / 240 V) 60 °C 18 A (380 / 400 V) 60 °C 18 A (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 |
| Maximum Electrical Switching Frequency | AC-1 600 cycles per hour AC-2 / AC-4 300 cycles per hour AC-3 1200 cycles per hour AC-15 1200 cycles per hour DC-13 900 cycles per hour |
| Rated Insulation Voltage | acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V |
| Maximum Breaking Capacity | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 106 A |
| Maximum Mechanical Switching Frequency | 3600 cycles per hour |
| 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 |
| Secondary Rated Impulse Withstand Voltage | 6 kV |
| Connecting Capacity Main Circuit | Rigid 1/2x 1 ... 6 m ² Flexible with Ferrule 1/2x 0.75 ... 6 m ² Flexible with Insulated Ferrule 1x 0.75 ... 4 m ² /2x 0.75 ... 2.5 m ² |
| Rated Operational Current DC-13 | (125 V) 0.55 A / 69 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (220 V) 0.27 A / 60 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W |

Specifications

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| Connecting Capacity Control Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 m ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 m ² /2x 0.75 ... 1.5 m ² Rigid 1/2x 1 ... 2.5 m ² |
| 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 |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 m ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5/2x 0.75 ... 1.5 m ² Rigid 1/2x 1 ... 2.5 m ² |
| Screw Terminal Type | Screw Terminals |
| Wire Stripping Length | Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm |

Classifications

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| ETIM 4 | EC000066 - Magnet contactor, AC-switching |
| ETIM 6.0 | EC000066 - Power contactor, AC switching |
| ETIM 7 | EC000066 - Power contactor, AC switching |
| ETIM 5.0 | EC000066 - Magnet contactor, AC-switching |

Dimensions

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| Product Net Weight | 0.31kg |
| Product Net Depth / Length | 77 mm |
| Product Net Width | 45 mm |
| Product Net Height | 86 mm |

Package Information

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| Package Level 1 Width | 87 mm |
| Package Level 1 Height | 47 mm |
| Package Level 1 Depth / Length | 79 mm |
| Package Level 1 EAN | 3471523113916 |
| Package Level 1 Units | box 1 piece |
| Package Level 2 Width | 250 mm |
| Package Level 2 Height | 315 mm |
| Package Level 1 Gross Weight | 0.31 kg |
| Package Level 2 Units | 27 piece |
| Package Level 3 Units | 1296 piece |
| Package Level 2 Depth / Length | 300 mm |
| Package Level 2 Gross Weight | 8.37 kg |

Ordering

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