

Representative Image

# Alternate Catalog No. AF40-30-22-13
# Catalog No. 1SBL347001R1322

**Description: AF40-30-22-13 100-250V50/60HZ-DC Contactor**

**UPC No 3471523132238**

**Home > Contactors & Starters > UL Listed IEC Contactors > AF Contactors**

AF40 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... contactors include an electronic coil interface accepting a wide control voltage Uc min. ... Uc max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC. AF contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF contactors have built-in surge protection and do not require additional surge suppressors. The AF... series 2-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles with a non-removable front-mounted 2 N.O. + 2 N.C. auxiliary contact block, side-mounted add-on auxiliary contact blocks (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 including the "Mechanically Linked" symbol on the contactor side. 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. Note: 2-stack contactors available in some countries: please consult your ABB representative.

## 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) 60 A |
| Object Classification Code | Q |
| Terminal Type | Screw Terminals |
| Rated Control Circuit Voltage | 50 Hz /60 Hz DC Operation 100 ... 250 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 3 g closed position / 3 g open position |
| Number of Auxiliary Contacts NO | 2 |
| RoHS Status | Following EU Directive 2011/65/EU |
| Reference Ambient Air Temperature | Close to Contactor for Storage -60 ... +80 °C<br>Close to Contactor without Thermal O/L Relay -40 ... +70 °C<br>Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C |
| Rated Operational Voltage | Auxiliary Circuit 690 V<br>Main Circuit 690 V |
| Resistance to Shock acc. to IEC 60068-2-27 | Closed, Shock Direction: A 25 K40<br>Closed, Shock Direction: B1 25 K40<br>Closed, Shock Direction: B2 15 K40<br>Closed, Shock Direction: C1 25 K40<br>Closed, Shock Direction: C2 25 K40<br>Open, Shock Direction: B1 5 K40 |
| Number of Auxiliary Contacts NC | 2 |
| Tightening Torque UL/CSA | Auxiliary Circuit 11 IA<br>Control Circuit 11 IA<br>Main Circuit 35 IA |
| Maximum Operating Altitude Permissible | 3000 m |
| Rated Operational Current AC-1 | (690 V) 40 °C 70 A<br>(690 V) 60 °C 60 A<br>(690 V) 70 °C 50 A |

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## Specifications

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|---|---|
| Rated Operational Power AC-3 | (220 / 230 / 240 V) 11 KWT<br>(380 / 400 V) 18.5 KWT<br>(415 V) 22 KWT<br>(440 V) 22 KWT<br>(500 V) 22 KWT<br>(690 V) 22 KWT<br>(400 V) 18.5 KWT |
| Horsepower Rating UL/CSA | (220 ... 240 V AC) Three Phase 15 hp<br>(440 ... 480 V AC) Three Phase 30 hp<br>(550 ... 600 V AC) Three Phase 40 hp<br>(120 V AC) Single Phase 3 hp<br>(200 ... 208 V AC) Three Phase 10 hp<br>(240 V AC) Single Phase 7-1/2 hp |
| Conventional Free-air Thermal Current | acc. to IEC 60947-5-1, q = 40 °C 16 A<br>acc. to IEC 60947-4-1, Open Contactors q = 40 °C 105 A |
| Rated Operational Current AC-15 | (220 / 240 V) 4 A<br>(24 / 127 V) 6 A<br>(500 V) 2 A<br>(690 V) 2 A<br>(400 / 440 V) 3 A |
| Rated Frequency | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Main Circuit 50Hz<br>Main Circuit 60 Hz |
| Rated Short-time Withstand Current | 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<br>for 0.1 s 140 A<br>for 1 s 100 A |
| Rated Operational Current AC-3 | (220 / 230 / 240 V) 60 °C 40 A<br>(380 / 400 V) 60 °C 40 A<br>(415 V) 60 °C 40 A<br>(440 V) 60 °C 40 A<br>(500 V) 60 °C 35 A<br>(690 V) 60 °C 25 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<br>AC-15 1200 cycles per hour<br>DC-13 900 cycles per hour |
| Rated Insulation Voltage | acc. to UL/CSA 600 V<br>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 950 A<br>cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 600 A |
| Maximum Mechanical Switching Frequency | 3600 cycles per hour |
| 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 |
| Secondary Rated Impulse Withstand Voltage | 6 kV |
| Connecting Capacity Main Circuit | Rigid 1/2x 6 ... 3 5 m²<br>Flexible with Ferrule 1/2x 4 ... 35 m²<br>Flexible with Insulated Ferrule 1/2x 4 ... 35 m² |
| Rated Operational Current DC-13 | (125 V) 0.55 A / 69 W<br>(24 V) 6 A / 144 W<br>(250 V) 0.27 A / 68 W<br>(48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W<br>(110 V) 0.55 A / 60 W<br>(220 V) 0.27 A / 60 W<br>(400 V) 0.15 A / 60 W<br>(500 V) 0.13 A / 65 W<br>(600 V) 0.1 A / 60 W |
| Connecting Capacity Control Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 m²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 m²/2x 0.75 ... 1.5 m²<br>Rigid 1/2x 1 ... 2.5 m² |

## Specifications

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| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20<br>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 |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 m²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5/2x 0.75 ... 1.5 m²<br>Rigid 1/2x 1 ... 2.5 m² |
| Screw Terminal Type | Screw Terminals |
| Wire Stripping Length | Main Circuit 16 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 | 1kg |
| Product Net Depth / Length | 144 mm |
| Product Net Width | 55 mm |
| Product Net Height | 125.5 mm |

## Package Information

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| Package Level 1 Width | 180 mm |
| Package Level 1 Height | 102 mm |
| Package Level 1 Depth / Length | 150 mm |
| Package Level 1 EAN | 3471523132238 |
| Package Level 1 Units | box 1 piece |
| Package Level 2 Width | 250 mm |
| Package Level 2 Height | 300 mm |
| Package Level 1 Gross Weight | 1.14 kg |
| Package Level 2 Units | box 6 piece |
| Package Level 3 Units | 144 piece |
| Package Level 2 Depth / Length | 300 mm |
| Package Level 2 Gross Weight | 6.84 kg |

## Ordering

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