# AFS16-30-22-11

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

## General Information

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| **Extended Product Type:** | AFS16-30-22-11 |
| **Product ID:** | 1SBL177082R1122 |
| **EAN:** | 3471523005464 |
| **Catalog Description:** | AFS16-30-22-11 24-60V50/60HZ 20-60VDC Contactor |
| **Long Description:** | AFS09 ... AFS38 contactors are designed for machine safety applications. They are delivered with fixed front-mounted auxiliary contact blocks makin g them ideal for monitoring and controlling circuits. Mechanically linked an d mirror contacts make your system safer. - control circuit with electronic c oil interface: - 24...60 V AC, 20...60 V DC and 100...250 V AC / DC operate d accepting a wide control voltage range - reduced panel energy consumpt ion - mirror and mechanically linked contacts, with front marked symbol ac c. to IEC60947-5-1, always guaranteeing the right contactor status - front-mounted auxiliary contact block: - permanently fixed - protective cover to p revent manual operation - yellow housing for easy identification - minimum switching capacity 12 V / 3 mA, with a failure rate 10-7 acc. to IEC 60947-5 -4 - built-in surge suppression |

## Ordering

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| **Minimum Order Quantity:** | 1 piece |
| **Customs Tariff Number:** | 85364900 |

## Popular Downloads

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|---|---|
| **Instructions and Manuals:** | 1SBC101052M6801 |

## Dimensions

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| **Product Net Width:** | 45 mm |
| **Product Net Depth / Length:** | 110.5 mm |
| **Product Net Height:** | 86 mm |
| **Product Net Weight:** | 0.32 kg |

## Technical

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| **Number of Main Contacts NO:** | 3 |
| **Number of Main Contacts NC:** | 0 |
| **Number of Auxiliary Contacts NO:** | 2 |
| **Number of Auxiliary Contacts NC:** | 2 |
| **Standards:** | IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14 |

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| **Rated Operational Voltage:** | Auxiliary Circuit 690 V<br>Main Circuit 690 V |
| **Rated Frequency (f):** | Auxiliary 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 q = 40 °C 35 A<br>acc. to IEC 60947-5-1, q = 40 °C 16 A |
| **Rated Operational Current AC-1 ($I_e$):** | (690 V) 40 °C 30 A<br>(690 V) 60 °C 30 A<br>(690 V) 70 °C 26 A |
| **Rated Operational Current AC-3 ($I_e$):** | (220 / 230 / 240 V) 60 °C 18 A<br>(380 / 400 V) 60 °C 18 A<br>(415 V) 60 °C 18 A<br>(440 V) 60 °C 18 A<br>(500 V) 60 °C 15 A<br>(690 V) 60 °C 10.5 A |
| **Rated Operational Power AC-3 ($P_e$):** | (220 / 230 / 240 V) 4 kW<br>(380 / 400 V) 7.5 kW<br>(400 V) 7.5 kW<br>(415 V) 9 kW<br>(440 V) 9 kW<br>(500 V) 9 kW<br>(690 V) 9 kW |
| **Rated Operational Current AC-15 ($I_e$):** | (220 / 240 V) 4 A<br>(24 / 127 V) 6 A<br>(400 / 440 V) 3 A<br>(500 V) 2 A<br>(690 V) 2 A |
| **Rated Short-time Withstand Current ($I_{cw}$):** | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A<br>for 0.1 s 140 A<br>for 1 s 100 A |
| **Maximum Breaking Capacity:** | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 250 A<br>cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 106 A |
| **Maximum Electrical Switching Frequency:** | AC-1 600 cycles per hour<br>AC-15 1200 cycles per hour<br>AC-2 / AC-4 300 cycles per hour<br>AC-3 1200 cycles per hour<br>DC-13 900 cycles per hour |

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| **Rated Operational Current DC-13 ($I_e$):** | (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<br>(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 |
| **Rated Insulation Voltage ($U_i$):** | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V |
| **Rated Impulse Withstand Voltage ($U_{imp}$):** | 6 kV |
| **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 |
| **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 Main Circuit:** | Flexible with Insulated Ferrule 1x 0.75 ... 4 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm²<br>Flexible with Ferrule 1/2x 0.75 ... 6 mm²<br>Rigid 1/2x 1 ... 6 mm² |
| **Connecting Capacity Auxiliary 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 1/2x 1 ... 2.5 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 1/2x 1 ... 2.5 mm² |
| **Wire Stripping Length:** | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm<br>Main Circuit 10 mm |
| **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 IP20 |
| **Terminal Type:** | Screw Terminals |

## Environmental

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| **Ambient Air Temperature:** | Close to Contactor for Storage -60 ... +80 °C<br>Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C<br>Close to Contactor without Thermal O/L Relay -40 ... +70 °C |
| **Climatic Withstand:** | Category B according to IEC 60947-1 Annex Q |
| **Maximum Operating Altitude Permissible:** | 3000 m |
| **Resistance to Vibrations acc. to IEC 60068-2-6:** | 5 ... 300 Hz 4 g closed position / 2 g open position |
| **Resistance to Shock acc. to IEC 60068-2-27:** | Closed, Shock Direction: A 30 g<br>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 |

## Technical UL/CSA

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| **General Use Rating UL/CSA:** | (600 V AC) 30 A |
| **Horsepower Rating UL/CSA:** | (120 V AC) Single Phase 1-1/2 Hp<br>(240 V AC) Single Phase 3 Hp<br>(200 ... 208 V AC) Three Phase 5 Hp<br>(220 ... 240 V AC) Three Phase 5 Hp<br>(440 ... 480 V AC) Three Phase 10 Hp<br>(550 ... 600 V AC) Three Phase 15 Hp |
| **Tightening Torque UL/CSA:** | Auxiliary Circuit 11 in·lb<br>Control Circuit 11 in·lb<br>Main Circuit 13 in·lb |

## Certificates and Declarations (Document Number)

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| **CB Certificate:** | CB_SE-80871M3 |
| **cUL Certificate:** | UL_20180227_E312527_7_1 |
| **Declaration of Conformity - CE:** | 1SBD250022U1000 |
| **Instructions and Manuals:** | 1SBC101052M6801 |
| **UL Listing Card:** | E312527 |

## Container Information

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| **Package Level 1 Units:** | 1 piece |
| **Package Level 1 Width:** | 87 mm |
| **Package Level 1 Depth / Length:** | 113 mm |
| **Package Level 1 Height:** | 47 mm |
| **Package Level 1 Gross Weight:** | 0.32 kg |
| **Package Level 1 EAN:** | 3471523005464 |
| **Package Level 2 Units:** | 36 piece |
| **Package Level 2 Width:** | 250 mm |
| **Package Level 2 Depth / Length:** | 300 mm |

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| **Package Level 2 Height:** | 315 mm |
| **Package Level 2 Gross Weight:** | 11.52 kg |
| **Package Level 3 Units:** | 864 piece |

## Classifications

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| **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 |

