

PRODUCT-DETAILS

# AFS12-30-22-13

## AFS12-30-22-13 100-250V50/60HZ-DC

### Contactors



#### General Information

|                       |   |
|-----------------------|---|
| Extended Product Type | AFS12-30-22-13                              |
| Product ID            | 1SBL157082R1322                             |
| EAN                   | 3471523157132                               |
| Catalog Description   | AFS12-30-22-13 100-250V50/60HZ-DC Contactor |

|                  |   |
|------------------|---|
| Long Description | <p>The AFS12-30-22-13 is a 3 pole - 690 V IEC or 600 V UL contactor with fixed 2 N.O + 2 N.C. front mounted auxiliary contact blocks with screw connections, controlling motors up to 5,5 kW / 400 V AC (AC-3) or 7-1/2 hp / 480 V UL and switching power circuits up to 28 A (AC-1) or 28 A UL general use. AFS contactors can be easily integrated in machine manufacturer's systems complying with main standards EN ISO 13849 and EN 62061 - guaranteeing the safe use of your machinery and equipment. An easily identifiable yellow low energy auxiliary contact block ensures the status feedback circuits required in machine safety applications. Thanks to the AF technology, the contactor has a wide control voltage range (100 ... 250 V), 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.</p> |
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#### Ordering

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

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## Popular Downloads

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Instructions and Manuals

1SBC101052M6801

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## 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  |

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## 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   |
| 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 $q = 40\text{ °C}$ 35 A<br>acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A  |
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 40 °C 28 A<br>(690 V) 60 °C 28 A<br>(690 V) 70 °C 24 A  |
| Rated Operational Current AC-3 ( $I_e$ )           | (415 V) 60 °C 12 A<br>(440 V) 60 °C 12 A<br>(500 V) 60 °C 12.5 A<br>(690 V) 60 °C 9 A<br>(380 / 400 V) 60 °C 12 A<br>(220 / 230 / 240 V) 60 °C 12 A   |
| Rated Operational Power AC-3 ( $P_e$ )             | (400 V) 5.5 kW<br>(415 V) 5.5 kW<br>(440 V) 5.5 kW<br>(500 V) 7.5 kW<br>(690 V) 7.5 kW<br>(380 / 400 V) 5.5 kW<br>(220 / 230 / 240 V) 3 kW  |
| Rated Operational Current AC-15 ( $I_e$ )          | (500 V) 2 A<br>(690 V) 2 A<br>(24 / 127 V) 6 A<br>(220 / 240 V) 4 A<br>(400 / 440 V) 3 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 |

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|---|--|
| Maximum Breaking Capacity                           | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 250 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 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  |
| Rated Operational Current DC-13 (I <sub>o</sub> )   | (24 V) 6 A / 144 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>(125 V) 0.55 A / 69 W<br>(220 V) 0.27 A / 60 W<br>(250 V) 0.27 A / 68 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                          |
| Rated Insulation Voltage (U <sub>i</sub> )          | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V<br>acc. to UL/CSA 600 V   |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | 6 kV   |
| Maximum Mechanical Switching Frequency              | 3600 cycles per hour   |
| Rated Control Circuit Voltage (U <sub>c</sub> )     | 50 Hz 100 ... 250 V<br>50 Hz / 60 Hz 100 ... 250 V<br>60 Hz 100 ... 250 V<br>DC Operation 100 ... 250 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 Ferrule 1/2x 0.75 ... 6 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 6 mm <sup>2</sup>  |
| Connecting Capacity Auxiliary Circuit               | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>                                  |
| Connecting Capacity Control Circuit                 | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>                                  |
| 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 IP40<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  |

## Technical UL/CSA

|                           |   |
|---------------------------|---|
| General Use Rating UL/CSA | (600 V AC) 28 A   |
| Horsepower Rating UL/CSA  | (120 V AC) Single Phase 1 hp<br>(200 ... 208 V AC) Three Phase 3 hp<br>(220 ... 240 V AC) Three Phase 3 hp<br>(240 V AC) Single Phase 2 hp<br>(440 ... 480 V AC) Three Phase 7-1/2 hp<br>(550 ... 600 V AC) Three Phase 10 hp |

Tightening Torque  
UL/CSA

Auxiliary Circuit 11 IA  
Control Circuit 11 IA  
Main Circuit 13 IA

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## Environmental

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|--|---|
| Ambient Air Temperature                        | Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °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         | 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 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 |
| RoHS Status                                    | Following EU Directive 2011/65/EU   |

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## Certificates and Declarations (Document Number)

|                                 |                         |
|---------------------------------|-------------------------|
| CB Certificate                  | CB_SE-96551             |
| CCC Certificate                 | CCC_2010010304445624    |
| CQC Certificate                 | CQC2010010304445624     |
| cUL Certificate                 | UL_20180227_E312527_7_1 |
| Declaration of Conformity - CCC | 2020980304001253        |
| Declaration of Conformity - CE  | 1SBD250022U1000         |
| DNV Certificate                 | DNV-GL_TAE00001AF-3     |
| DNV GL Certificate              | DNV-GL_TAE00001AF-3     |
| EAC Certificate                 | EAC_RUC-FRME77B03199    |
| GL Certificate                  | DNV-GL_TAE00001AF-3     |
| Instructions and Manuals        | 1SBC101052M6801         |
| RINA Certificate                | RINA_ELE240318XG        |
| RMRS Certificate                | RMRS_1802705280         |
| RoHS Information                | 1SBD250022U1000         |
| UL Listing Card                 | E312527                 |

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## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 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            | 3471523157132 |
| Package Level 2 Units          | box 18 piece  |

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|                                |           |
|--------------------------------|-----------|
| Package Level 2 Width          | 250 mm    |
| Package Level 2 Depth / Length | 300 mm    |
| Package Level 2 Height         | 315 mm    |
| Package Level 2 Gross Weight   | 11.52 kg  |
| Package Level 3 Units          | 864 piece |

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## 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  |
| eClass                     | V11.0 : 27371003                          |
| E-Number (Finland)         | 3708063                                   |
| E-Number (Sweden)          | 3210662                                   |

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## Categories

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

