

PRODUCT-DETAILS

# AF12-30-10-14

## AF12-30-10-14 250-500V50/60HZ-DC Contactor



### General Information

|                       |  |
|-----------------------|--|
| Extended Product Type | AF12-30-10-14                              |
| Product ID            | 1SBL157001R1410                            |
| EAN                   | 3471523110342                              |
| Catalog Description   | AF12-30-10-14 250-500V50/60HZ-DC Contactor |

|                  |  |
|------------------|--|
| Long Description | <p>AF12 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 <math>U_c</math> min. ... <math>U_c</math> 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 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.</p> |
|------------------|--|

### Ordering

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

### Popular Downloads

|                  |                 |
|------------------|-----------------|
| Instructions and | 1SBC101027M6801 |
|------------------|-----------------|

## Manuals

**Dimensions**

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

**Technical**

|  |   |
|--|---|
| Number of Main Contacts NO                               | 3   |
| Number of Main Contacts NC                               | 0   |
| Number of Auxiliary Contacts NO                          | 1   |
| Number of Auxiliary Contacts NC                          | 0   |
| 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 <sub>th</sub> ) | 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 <sub>e</sub> )         | (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 <sub>e</sub> )         | (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 <sub>e</sub> )           | (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 <sub>e</sub> )        | (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 <sub>cw</sub> )    | 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 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>e</sub> )        | (24 V) 6 A / 144 W<br>(48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W   |

|   |  |
|---|--|
|   | (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 250 ... 500 V<br>50 Hz / 60 Hz 250 ... 500 V<br>60 Hz 250 ... 500 V<br>DC Operation 250 ... 500 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<br>Control Circuit 11 IA<br>Main Circuit 13 IA  |

## Environmental

|  |   |
|--|---|
| 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: B1 25 K40  
Open, Shock Direction: B1 5 K40  
Shock Direction: A 30 K40  
Shock Direction: B2 15 K40  
Shock Direction: C1 25 K40  
Shock Direction: C2 25 K40

RoHS Status Following EU Directive 2011/65/EU

**Certificates and Declarations (Document Number)**

|                                |                               |
|--------------------------------|-------------------------------|
| ABS Certificate                | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate                 | BV_2634H24898B0               |
| CB Certificate                 | CB_SE-96551                   |
| CCC Certificate                | CCC_2010010304445624          |
| cUL Certificate                | UL_20180227_E312527_7_1       |
| Declaration of Conformity - CE | 1SBD250000U1000               |
| DNV Certificate                | DNV-GL_TAE00001AF-3           |
| DNV GL Certificate             | DNV-GL_TAE00001AF-3           |
| EAC Certificate                | EAC_RU C-FR ME77 B03597       |
| Environmental Information      | 1SBD250147E1000               |
| GL Certificate                 | DNV-GL_TAE00001AF-3           |
| GOST Certificate               | GOST_POCCFR.ME77.B07175.pdf   |
| Instructions and Manuals       | 1SBC101027M6801               |
| KC Certificate                 | KC_HW02016-15005C             |
| LR Certificate                 | LRS_1300087E1                 |
| RINA Certificate               | RINA_ELE240318XG              |
| RMRS Certificate               | RMRS_1802705280               |
| RoHS Information               | 1SBD250000U1000               |
| UL Certificate                 | UL_20140305-E312527_7_1       |
| UL Listing Card                | E312527                       |

**Container Information**

|                                |               |
|--------------------------------|---------------|
| 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   | 0.31 kg       |
| Package Level 1 EAN            | 3471523110342 |
| 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   | 8.37 kg       |
| Package Level 3 Units          | 1296 piece    |

**Classifications**

|                            |   |
|----------------------------|---|
| 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 |
| UNSPSC             | 39121529                                 |
| E-Number (Finland) | 3706223                                  |
| E-Number (Sweden)  | 3211366                                  |

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## Categories

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

