

# AF16-30-10-14



AF16-30-10-14 250-500V50/60HZ-DC Contactor

## General Information

|                       |   |
|-----------------------|---|
| Extended Product Type | AF16-30-10-14   |
| Product ID            | 1SBL177001R1410   |
| EAN                   | 3471523110649   |
| Catalog Description   | AF16-30-10-14 250-500V50/60HZ-DC Contactor  |
| Long Description      | <p>AF16 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 \text{ min.} \dots U_c \text{ max.}</math> 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> |

## 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 (Sweden)          | 3211374                                   |

## 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            | 3471523110649 |
| Package Level 2 Units          | 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

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**Certificates and Declarations (Document Number)**

|                                |                               |
|--------------------------------|-------------------------------|
| ABS Certificate                | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate                 | BV_2634H24898B0               |
| CB Certificate                 | CB_SE-80871M3                 |
| CCC Certificate                | CCC_2010010304445624          |
| cUL Certificate                | UL_20180227_E312527_7_1       |
| Declaration of Conformity - CE | 1SBD25000U1000                |
| 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_HW02016-15005A             |
| LR Certificate                 | LRS_1300087E1                 |
| RINA Certificate               | RINA_ELE240318XG              |
| RMRS Certificate               | RMRS_1802705280               |
| RoHS Information               | 1SBD25000U1000                |
| UL Certificate                 | UL_20140305-E312527_7_1       |
| UL Listing Card                | E312527                       |

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**Technical UL/CSA**

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|---------------------------|--|
| General Use Rating UL/CSA | (600 V AC) 30 A  |
| Horsepower Rating UL/CSA  | (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<br>(120 V AC) Single Phase 1-1/2 hp<br>(200 ... 208 V AC) Three Phase 5 hp<br>(240 V AC) Single Phase 3 hp |
| Tightening Torque UL/CSA  | Auxiliary Circuit 11 IA<br>Control Circuit 11 IA<br>Main Circuit 13 IA   |

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**Environmental**

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|--|--|
| 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              |
| 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     | Shock Direction: A 30 K40<br>Shock Direction: B2 15 K40<br>Shock Direction: C1 25 K40<br>Shock Direction: C2 25 K40<br>Closed, Shock Direction: B1 25 K40<br>Open, Shock Direction: B1 5 K40 |
| RoHS Status                                    | Following EU Directive 2011/65/EU  |

## 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 ( $I_{th}$ ) | acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A<br>acc. to IEC 60947-4-1, Open Contactors $q = 40\text{ °C}$ 35 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 KWT<br>(380 / 400 V) 7.5 KWT<br>(415 V) 9 KWT<br>(440 V) 9 KWT<br>(500 V) 9 KWT<br>(690 V) 9 KWT<br>(400 V) 7.5 KWT   |
| Rated Operational Current AC-15 ( $I_e$ )          | (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 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 $I_e > 100\text{ A}$ ) at 440 V 250 A<br>$\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100\text{ A}$ ) at 690 V 106 A  |
| Maximum Electrical Switching Frequency             | AC-1 600 cycles per hour<br>AC-2 / AC-4 300 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 Operational Current DC-13 ( $I_e$ )          | (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   |
| 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 <sub>c</sub> ) | 50 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                | Rigid 1/2x 1 ... 6 m <sup>2</sup><br>Flexible with Ferrule 1/2x 0.75 ... 6 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 4 m <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 m <sup>2</sup>  |
| Connecting Capacity Auxiliary Circuit           | Flexible with Ferrule 1/2x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 m <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 m <sup>2</sup>   |
| Connecting Capacity Control Circuit             | Flexible with Ferrule 1/2x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 m <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 m <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 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  |

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## Dimensions

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

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## Popular Downloads

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

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## Ordering

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

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## Categories

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

