

## PRODUCT-DETAILS

# AF80-30-00-14

## AF80-30-00-14 250-500V50/60HZ-DC Contactor



### General Information

|                       |                                            |
|-----------------------|--------------------------------------------|
| Extended Product Type | AF80-30-00-14                              |
| Product ID            | 1SBL397001R1400                            |
| EAN                   | 3471523132948                              |
| Catalog Description   | AF80-30-00-14 250-500V50/60HZ-DC Contactor |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long Description | <p>AF80 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, 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 | 1SBC101036M6801 |
|------------------|-----------------|

## Manuals

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 70 mm    |
| Product Net Depth / Length | 116 mm   |
| Product Net Height         | 125.5 mm |
| Product Net Weight         | 1.17 kg  |

## Technical

|                                                    |                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                         | 3                                                                                                                                                                                                                                                                                                                                                                        |
| Number of Main Contacts NC                         | 0                                                                                                                                                                                                                                                                                                                                                                        |
| Number of Auxiliary Contacts NO                    | 0                                                                                                                                                                                                                                                                                                                                                                        |
| Number of Auxiliary Contacts NC                    | 0                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Operational Voltage                          | Main Circuit 1000 V                                                                                                                                                                                                                                                                                                                                                      |
| Rated Frequency (f)                                | Main Circuit 50 / 60 Hz                                                                                                                                                                                                                                                                                                                                                  |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 130 A                                                                                                                                                                                                                                                                                                                   |
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 40 °C 125<br>(690 V) 60 °C 100 A<br>(690 V) 70 °C 85                                                                                                                                                                                                                                                                                                             |
| Rated Operational Current AC-3 ( $I_e$ )           | (415 V) 60 °C 80 A<br>(440 V) 60 °C 80 A<br>(500 V) 60 °C 65 A<br>(690 V) 60 °C 49 A<br>(1000 V) 60 °C 25 A<br>(380 / 400 V) 60 °C 80 A<br>(220 / 230 / 240 V) 60 °C 80 A                                                                                                                                                                                                |
| Rated Operational Power AC-3 ( $P_e$ )             | (400 V) 37 kW<br>(415 V) 45 kW<br>(440 V) 45 kW<br>(500 V) 45 kW<br>(690 V) 45 kW<br>(1000 V) 35 kW<br>(380 / 400 V) 37 kW<br>(220 / 230 / 240 V) 22 kW                                                                                                                                                                                                                  |
| Rated Short-time Withstand Current ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 780 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 140 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1200 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 450 A<br>for 1 s -empty- A |
| Maximum Breaking Capacity                          | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 1150 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 750 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                                                                                                                                                                                                                                                                           |
| Rated Insulation Voltage ( $U_i$ )                 | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )      | 8 kV                                                                                                                                                                                                                                                                                                                                                                     |
| Maximum Mechanical Switching Frequency             | 3600 cycles per hour                                                                                                                                                                                                                                                                                                                                                     |
| Rated Control Circuit Voltage ( $U_c$ )            | 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 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 |
| Connecting Capacity<br>Main Circuit    | Flexible with Ferrule 1/2x 6 ... 50 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 6 ... 50 mm <sup>2</sup><br>Rigid 1x 6 ... 70 mm <sup>2</sup><br>Rigid 2x 6 ... 50 mm <sup>2</sup>                                                                            |
| Connecting Capacity<br>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                  | Main Circuit 17 mm                                                                                                                                                                                                                                                        |
| Degree of Protection                   | acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10                                                                                                                                                                                                              |
| Terminal Type                          | Screw Terminals                                                                                                                                                                                                                                                           |

## Technical UL/CSA

|                              |                                                                                                                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Use Rating<br>UL/CSA | (600 V AC) 105 A                                                                                                                                                                                                                  |
| Horsepower Rating<br>UL/CSA  | (120 V AC) Single Phase 7-1/2 hp<br>(200 ... 208 V AC) Three Phase 25 hp<br>(220 ... 240 V AC) Three Phase 30 hp<br>(240 V AC) Single Phase 15 hp<br>(440 ... 480 V AC) Three Phase 60 hp<br>(550 ... 600 V AC) Three Phase 75 hp |
| Tightening Torque<br>UL/CSA  | Control Circuit 11 lA<br>Main Circuit 53 lA                                                                                                                                                                                       |

## Environmental

|                                                   |                                                                                                                                                                                                                              |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air<br>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<br>Altitude Permissible         | 3000 m                                                                                                                                                                                                                       |
| Resistance to Vibrations<br>acc. to IEC 60068-2-6 | 5 ... 300 Hz 3 g closed position / 3 g open position                                                                                                                                                                         |
| Resistance to Shock acc.<br>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 |
| RoHS Status                                       | Following EU Directive 2011/65/EU                                                                                                                                                                                            |

## Certificates and Declarations (Document Number)

|                                   |                               |
|-----------------------------------|-------------------------------|
| ABS Certificate                   | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate                    | BV_2634H36994A                |
| CB Certificate                    | CB_SE-96557                   |
| CCC Certificate                   | CCC_2013010304646569          |
| Declaration of<br>Conformity - CE | 1SBD250000U1000               |
| DNV Certificate                   | DNV-GL_TAE00001AF-3           |
| DNV GL Certificate                | DNV-GL_TAE00001AF-3           |
| EAC Certificate                   | EAC_RU_FRME77B03447           |
| Environmental<br>Information      | 1SBD250168E1000               |
| GL Certificate                    | DNV-GL_TAE00001AF-3           |
| Instructions and                  | 1SBC101036M6801               |

## Manuals

|                  |                          |
|------------------|--------------------------|
| KC Certificate   | KC_HW02016-15011C        |
| LR Certificate   | LRS_1300087E1            |
| RINA Certificate | RINA_ELE084013XG         |
| RMRS Certificate | RMRS_1802705280          |
| RoHS Information | 1SBD250000U1000          |
| UL Certificate   | UL_20130926-E312527_14_1 |
| UL Listing Card  | UL_E312527               |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 150 mm        |
| Package Level 1 Depth / Length | 150 mm        |
| Package Level 1 Height         | 103 mm        |
| Package Level 1 Gross Weight   | 1.29 kg       |
| Package Level 1 EAN            | 3471523132948 |
| Package Level 2 Units          | box 8 piece   |
| Package Level 2 Width          | 250 mm        |
| Package Level 2 Depth / Length | 300 mm        |
| Package Level 2 Height         | 300 mm        |
| Package Level 2 Gross Weight   | 10.32 kg      |
| Package Level 3 Units          | 192 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)         | 3707123                                   |
| E-Number (Sweden)          | 3210054                                   |

## Categories

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

