

## PRODUCT-DETAILS

# AS16-30-10-20

## AS16-30-10-20 24V50/60HZ Contactor

### General Information

|                       |                                    |
|-----------------------|------------------------------------|
| Extended Product Type | AS16-30-10-20                      |
| Product ID            | 1SBL121001R2010                    |
| EAN                   | 3471523036208                      |
| Catalog Description   | AS16-30-10-20 24V50/60HZ Contactor |

### Long Description

AS16 contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V AC or 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads. The AS... 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-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 operated with laminated magnet circuit - Accessories: a wide range of accessories is available.

### Ordering

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

### Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101020M9701 |
|--------------------------|-----------------|

CAD Dimensional  
Drawing

2CDC001079B0201

## Dimensions

|                               |         |
|-------------------------------|---------|
| Product Net Width             | 45 mm   |
| Product Net Depth /<br>Length | 72.5 mm |
| Product Net Height            | 68 mm   |
| Product Net Weight            | 0.22 kg |

## Technical

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts<br>NO                                     | 3                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Main Contacts<br>NC                                     | 0                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Auxiliary<br>Contacts NO                                | 1                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Auxiliary<br>Contacts NC                                | 0                                                                                                                                                                                                                                                                                                                                                                                   |
| Standards                                                         | IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°<br>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<br>Thermal Current ( $I_{th}$ )             | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 25 A<br>acc. to IEC 60947-5-1, $\Theta = 40\text{ °C}$ 10 A                                                                                                                                                                                                                                                          |
| Rated Operational Current<br>AC-1 ( $I_e$ )                       | (690 V) 40 °C 24 A<br>(690 V) 60 °C 20 A<br>(690 V) 70 °C 16 A                                                                                                                                                                                                                                                                                                                      |
| Rated Operational Current<br>AC-3 ( $I_e$ )                       | (415 V) 60 °C 15.5 A<br>(440 V) 60 °C 13.6 A<br>(500 V) 60 °C 12.5 A<br>(690 V) 60 °C 9 A<br>(380 / 400 V) 60 °C 15.5 A<br>(220 / 230 / 240 V) 60 °C 15.7 A                                                                                                                                                                                                                         |
| Rated Operational Power<br>AC-3 ( $P_e$ )                         | (400 V) 7.5 kW<br>(415 V) 7.5 kW<br>(440 V) 7.5 kW<br>(500 V) 7.5 kW<br>(690 V) 7.5 kW<br>(220 / 230 / 240 V) 4 kW                                                                                                                                                                                                                                                                  |
| Rated Operational Current<br>AC-15 ( $I_e$ )                      | (500 V) NC 2<br>(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<br>Withstand Current Low<br>Voltage ( $I_{cw}$ ) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 124 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 24 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 55 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 250 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 75 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 155 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 90 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>g</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                                                                                                |
| Rated Insulation Voltage (U <sub>i</sub> )          | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V<br>acc. to IEC 60947-5-1 and VDE 0110 (Gr. C) 690 V<br>acc. to UL/CSA 600 V                                                                                                                                       |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | Auxiliary Circuit 6 kV                                                                                                                                                                                                                                             |
| Maximum Mechanical Switching Frequency              | 3600 cycles per hour                                                                                                                                                                                                                                               |
| Rated Control Circuit Voltage (U <sub>c</sub> )     | 50 Hz 24 V<br>60 Hz 24 V                                                                                                                                                                                                                                           |
| Operate Time                                        | Between Coil De-energization and NC Contact Closing 7 ... 22 ms<br>Between Coil De-energization and NO Contact Opening 5 ... 19 ms<br>Between Coil Energization and NC Contact Opening 6 ... 18 ms<br>Between Coil Energization and NO Contact Closing 9 ... 24 ms |
| Connecting Capacity Main 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 0.75 ... 4 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 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 0.75 ... 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 0.75 ... 2.5 mm <sup>2</sup>                           |
| Wire Stripping Length                               | Auxiliary Circuit 9 mm<br>Control Circuit 9 mm<br>Main Circuit 9 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<br>IP20                                                          |
| Terminal Type                                       | Screw Terminals                                                                                                                                                                                                                                                    |

## Technical UL/CSA

|                           |                                                                                                                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Use Rating UL/CSA | (600 V AC) 20 A                                                                                                                                                                                                              |
| Horsepower Rating UL/CSA  | (120 V AC) Single Phase 3/4 hp<br>(200 ... 208 V AC) Three Phase 3 hp<br>(220 ... 240 V AC) Three Phase 5 hp<br>(240 V AC) Single Phase 2 hp<br>(440 ... 480 V AC) Three Phase 10 hp<br>(550 ... 600 V AC) Three Phase 10 hp |
| Tightening Torque         | Auxiliary Circuit 9 in-lb                                                                                                                                                                                                    |

UL/CSA

Control Circuit 9 in-lb

Main Circuit 9 in-lb

## 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         | Without Derating 3000 m                                                                                                                                                                                                                                             |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5 ... 300 Hz 3 g Closed position / 2 g Open position                                                                                                                                                                                                                |
| Resistance to Shock acc. to IEC 60068-2-27     | Closed, Shock Direction: B1 10 g<br>Closed, Shock Direction: C1 20 g<br>Closed, Shock Direction: C2 20 g<br>Open, Shock Direction: B1 5 g<br>Open, Shock Direction: C1 9 g<br>Open, Shock Direction: C2 14 g<br>Shock Direction: A 20 g<br>Shock Direction: B2 15 g |

## Certificates and Declarations (Document Number)

|                                  |                           |
|----------------------------------|---------------------------|
| CB Certificate                   | CB_CN13475-M1             |
| CCC Certificate                  | CCC_2007010309251577      |
| CQC Certificate                  | CQC2007010309251577       |
| Declaration of Conformity - CCC  | 2020980304001224          |
| Declaration of Conformity - CE   | 1SBD250014U1000           |
| Declaration of Conformity - UKCA | 1SBD250049U1000           |
| Environmental Information        | 1SBD250154E1000           |
| GOST Certificate                 | GOST_POCCCNME77B07822.pdf |
| Instructions and Manuals         | 1SBC101020M9701           |
| REACH Declaration                | 2CMT2021-006202           |
| RoHS Information                 | 2CMT2021-006277           |
| UL Certificate                   | UL_20120917_E312527_1_1   |
| UL Listing Card                  | UL_E312527                |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | 1 piece       |
| Package Level 1 Width          | 78 mm         |
| Package Level 1 Depth / Length | 80 mm         |
| Package Level 1 Height         | 48 mm         |
| Package Level 1 Gross Weight   | 0.22 kg       |
| Package Level 1 EAN            | 3471523036208 |
| Package Level 2 Units          | 40 piece      |

|                                |           |
|--------------------------------|-----------|
| Package Level 2 Width          | 250 mm    |
| Package Level 2 Depth / Length | 195 mm    |
| Package Level 2 Height         | 315 mm    |
| Package Level 2 Gross Weight   | 8.8 kg    |
| Package Level 3 Units          | 960 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  |
| ETIM 8                             | EC000066 - Power contactor, AC switching  |
| eClass                             | V11.0 : 27371003                          |
| UNSPSC                             | 39121529                                  |
| IDEA Granular Category Code (IGCC) | 4761 >> Magnet contactor, AC-switching    |
| E-Number (Sweden)                  | 3210514                                   |

Categories

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