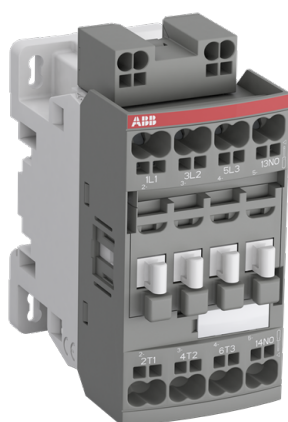


PRODUCT-DETAILS

# AF16Z-30-10K-21

## AF16Z-30-10K-21 24-60V50/60HZ 20-60VDC Contactor



### General Information

|                       |  |
|-----------------------|--|
| Extended Product Type | AF16Z-30-10K-21                                  |
| Product ID            | 1SBL176005R2110                                  |
| EAN                   | 3471523156111                                    |
| Catalog Description   | AF16Z-30-10K-21 24-60V50/60HZ 20-60VDC Contactor |

|                  |   |
|------------------|---|
| Long Description | The AF16Z-30-10K-21 is a 3 pole - 690 V IEC or 600 UL contactor with 1 built-in auxiliary contact and Push-in spring terminals, controlling motors up to 7.5 kW / 400 V AC (AC-3) or 10 hp / 480 V UL and switching power circuits up to 30 A (AC-1) or 30 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 V DC), 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. |
|------------------|---|

### Ordering

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

### Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101054M6801 |
|--------------------------|-----------------|

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 45 mm    |
| Product Net Depth / Length | 77 mm    |
| Product Net Height         | 92.3 mm  |
| Product Net Weight         | 0.315 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  |
| 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 $q = 40\text{ }^{\circ}\text{C}$ 35 A<br>acc. to IEC 60947-5-1, $q = 40\text{ }^{\circ}\text{C}$ 16 A   |
| Rated Operational Current AC-1 ( $I_e$ )                    | (690 V) $40\text{ }^{\circ}\text{C}$ 30<br>(690 V) $60\text{ }^{\circ}\text{C}$ 30 A<br>(690 V) $70\text{ }^{\circ}\text{C}$ 26  |
| Rated Operational Current AC-3 ( $I_e$ )                    | (415 V) $60\text{ }^{\circ}\text{C}$ 18 A<br>(440 V) $60\text{ }^{\circ}\text{C}$ 18 A<br>(500 V) $60\text{ }^{\circ}\text{C}$ 15 A<br>(690 V) $60\text{ }^{\circ}\text{C}$ 10.5 A<br>(380 / 400 V) $60\text{ }^{\circ}\text{C}$ 18 A<br>(220 / 230 / 240 V) $60\text{ }^{\circ}\text{C}$ 18 A   |
| Rated Operational Power AC-3 ( $P_e$ )                      | (415 V) 9 kW<br>(440 V) 9 kW<br>(500 V) 9 kW<br>(690 V) 9 kW<br>(380 / 400 V) 7.5 kW<br>(220 / 230 / 240 V) 4 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 Low Voltage ( $I_{cw}$ ) | at $40\text{ }^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 10 s 150 A<br>at $40\text{ }^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 15 min 35 A<br>at $40\text{ }^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 min 60 A<br>at $40\text{ }^{\circ}\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 s 300 A<br>at $40\text{ }^{\circ}\text{C}$ 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-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 ( $I_e$ )                   | (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 24 ... 60 V<br>50 Hz / 60 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 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 0.5 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.5 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 0.5 ... 4 mm <sup>2</sup><br>Rigid 1/2x 1 ... 6 mm <sup>2</sup> |
| Connecting Capacity Auxiliary Circuit               | Flexible with Ferrule 1/2x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible 1/2x 0.5 ... 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 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible 1/2x 0.5 ... 2.5 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 12 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                                       | Push-in Spring Terminals  |

## Technical UL/CSA

|                           |  |
|---------------------------|--|
| General Use Rating UL/CSA | (600 V AC) 30 A  |
| Horsepower Rating UL/CSA  | (120 V AC) Single Phase 1-1/2 hp<br>(200 ... 208 V AC) Three Phase 5 hp<br>(220 ... 240 V AC) Three Phase 5 hp<br>(240 V AC) Single Phase 3 hp<br>(440 ... 480 V AC) Three Phase 10 hp<br>(550 ... 600 V AC) Three Phase 15 hp |

## Environmental

|  |   |
|--|---|
| Ambient Air Temperature                        | 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 4 g closed position / 2 g open position  |
| RoHS Status                                    | Following EU Directive 2011/65/EU   |

## Certificates and Declarations (Document Number)

|                 |  |
|-----------------|--|
| CB Certificate  | CB_SE-96551M1                              |
| CCC Certificate | CCC_2010010304445624                       |
| CQC Certificate | CQC2010010304445624<br>CQC2020010304298240 |

|                                 |                                      |
|---------------------------------|--------------------------------------|
| cUL Certificate                 | UL_20180227_E312527_7_1              |
| Declaration of Conformity - CCC | 2020980304001253<br>2020980304001082 |
| Declaration of Conformity - CE  | 1SBD250000U1000                      |
| DNV Certificate                 | DNV-GL_TAE00001AF-3                  |
| DNV GL Certificate              | DNV-GL_TAE00001AF-3                  |
| GL Certificate                  | DNV-GL_TAE00001AF-3                  |
| Instructions and Manuals        | 1SBC101054M6801                      |
| RINA Certificate                | RINA_ELE240318XG                     |
| RMRS Certificate                | RMRS_1802705280                      |
| RoHS Information                | 1SBD250000U1000                      |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 93 mm         |
| Package Level 1 Depth / Length | 86 mm         |
| Package Level 1 Height         | 45 mm         |
| Package Level 1 Gross Weight   | 0.33 kg       |
| Package Level 1 EAN            | 3471523156111 |
| Package Level 2 Units          | box 21 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   | 14.85 kg      |
| Package Level 3 Units          | 1080 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  |
| eClass                     | V11.0 : 27371003                          |
| UNSPSC                     | 39121529                                  |
| E-Number (Finland)         | 3707890                                   |
| E-Number (Sweden)          | 3210612                                   |

## Categories

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

