



PRODUCT-DETAILS

# AF116-30-00-32

## AF116-30-00-32 Contactor



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF116-30-00-32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product ID            | 1SFL427001R3200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EAN                   | 7320500560297                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Catalog Description   | AF116-30-00-32 Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Long Description      | The AF116-30-00-32 is a 3 pole - 690 V IEC or 600 V UL contactor with double clamp, controlling motors up to 55 kW / 400 V AC (AC-3) or 75 hp / 480 V UL and switching power circuits up to 160 A (AC-1) or 160 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (48-130 V 50/60 Hz and 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  | 8536490099 |

## Popular Downloads

|                                            |                  |
|--------------------------------------------|------------------|
| EPLAN Data                                 | 9AAC174538_EPLAN |
| Data Sheet, Technical Information          | 1SBC100214C0202  |
| Data Sheet, Technical Information (Part 2) | 1SAC200017M0002  |
| Instructions and Manuals                   | 1SFC100003M0201  |
| CAD Dimensional Drawing                    | 2CDC001079B0201  |

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 90 mm    |
| Product Net Depth / Length | 138.5 mm |
| Product Net Height         | 150 mm   |
| Product Net Weight         | 1.55 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                                                                                                                                                       |
| Number of Poles                                    | 3P                                                                                                                                                      |
| Rated Operational Voltage                          | Main Circuit 690 V                                                                                                                                      |
| Rated Frequency (f)                                | Main Circuit 50 / 60 Hz                                                                                                                                 |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 160 A                                                                                    |
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 40 °C 160 A<br>(690 V) 60 °C 145 A<br>(690 V) 70 °C 130 A                                                                                       |
| Rated Operational Current AC-3 ( $I_e$ )           | (415 V) 60 °C 116 A<br>(440 V) 60 °C 116 A<br>(500 V) 60 °C 110 A<br>(690 V) 60 °C 65 A<br>(380 / 400 V) 60 °C 116 A<br>(220 / 230 / 240 V) 60 °C 116 A |
| Rated Operational Current AC-3e ( $I_e$ )          | (415 V) 60 °C 116 A<br>(440 V) 60 °C 116 A<br>(500 V) 60 °C 110 A<br>(690 V) 60 °C 65 A<br>(380 / 400 V) 60 °C 116 A<br>(220 / 230 / 240 V) 60 °C 116 A |
| Rated Operational Power AC-3 ( $P_e$ )             | (400 V) 55 kW<br>(415 V) 55 kW<br>(440 V) 75 kW<br>(500 V) 55 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                    |
| Rated Operational Power AC-3e ( $P_e$ )            | (415 V) 55 kW<br>(440 V) 75 kW<br>(500 V) 75 kW<br>(690 V) 55 kW                                                                                        |

|                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                         | (380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Breaking Capacity<br>AC-3                                         | 8 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Rated Breaking Capacity<br>AC-3e                                        | 8.5 x I <sub>e</sub> AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rated Making Capacity<br>AC-3                                           | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Rated Making Capacity<br>AC-3e                                          | 12 x I <sub>e</sub> AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Rated Short-time<br>Withstand Current Low<br>Voltage (I <sub>cw</sub> ) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 928 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 160 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 379 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 536 A                                                                                                                                                                                                                                                                          |
| Maximum Breaking<br>Capacity                                            | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 2000 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 1000 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Insulation Voltage<br>(U <sub>i</sub> )                           | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 1000 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rated Impulse<br>Withstand Voltage (U <sub>imp</sub> )                  | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Electrical<br>Switching Frequency                               | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mechanical Durability                                                   | 5 million                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum Mechanical<br>Switching Frequency                               | 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Control Circuit<br>Voltage (U <sub>c</sub> )                      | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Coil Consumption                                                        | Holding at Max. Rated Control Circuit Voltage 50 Hz 15.1 V-A<br>Holding at Max. Rated Control Circuit Voltage 50 Hz 2 W<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 15.1 V-A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 2 W<br>Holding at Max. Rated Control Circuit Voltage DC 2.4 V-A<br>Holding at Max. Rated Control Circuit Voltage DC 2.4 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 320 V-A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 320 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 435 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 435 W |
| Power Loss                                                              | at Rated Operating Conditions AC-1 per Pole 12 W<br>at Rated Operating Conditions AC-3 per Pole 6 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Operate Time                                                            | Between Coil De-energization and NO Contact Opening 40 ... 70 ms<br>Between Coil Energization and NO Contact Closing 20 ... 55 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Connecting Capacity<br>Main Circuit                                     | Flexible 2 x 10 ... 70 mm <sup>2</sup><br>Rigid Cu-Cable 1 x 10 ... 95 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Connecting Capacity<br>Auxiliary Circuit                                | Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Ferrule 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 ... 2.5 mm <sup>2</sup><br>Flexible 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 2x 0.75 ... 2.5 mm <sup>2</sup><br>Solid 1x 1 ... 4 mm <sup>2</sup><br>Solid 2x 1 ... 4 mm <sup>2</sup><br>Stranded 1x 1 ... 4 mm <sup>2</sup><br>Stranded 2x 1 ... 4 mm <sup>2</sup>                                                                                                                           |
| Connecting Capacity                                                     | Flexible 1 x 10 ... 70 mm <sup>2</sup><br>Flexible 2 x 10 ... 70 mm <sup>2</sup><br>Rigid Cu-Cable 1 x 10 ... 95 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Wire Stripping Length                                                   | Auxiliary Circuit 9 mm<br>Control Circuit 9 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Degree of Protection                                                    | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Recommended Screw                                                       | Main Circuit M6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                   |                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------|
| Driver            | Control Circuit M3.5                                                                      |
| Tightening Torque | Auxiliary Circuit 1 N·m<br>Cable Lug 9 N·m<br>Control Circuit 1 N·m<br>Main Circuit 8 N·m |
| Terminal Type     | Double Clamp                                                                              |
| Product Name      | Block Contactor                                                                           |

## Technical UL/CSA

|                                  |                                                                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                            |
| General Use Rating UL/CSA        | (600 V AC) 160 A                                                                                                                                              |
| Horsepower Rating UL/CSA         | (200 ... 208 V AC) Three Phase 30 hp<br>(220 ... 240 V AC) Three Phase 40 hp<br>(440 ... 480 V AC) Three Phase 75 hp<br>(550 ... 600 V AC) Three Phase 100 hp |
| Tightening Torque UL/CSA         | Auxiliary Circuit 9 in·lb<br>Control Circuit 9 in·lb<br>Main Circuit 71 in·lb                                                                                 |
| Full Load Amps Motor Use         | (200 ... 208 V AC) Three Phase 92 A<br>(220 ... 240 V AC) Three Phase 104 A<br>(440 ... 480 V AC) Three Phase 96 A<br>(550 ... 600 V AC) Three Phase 99 A     |

## Environmental

|                                        |                                                                                                                                                                                                                  |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 55 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 70 °C<br>Close to Contactor for Storage -40 ... 70 °C |
| Maximum Operating Altitude Permissible | Without Derating 3000 m                                                                                                                                                                                          |

## Material Compliance

|                                             |                                                                        |
|---------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658                                                        |
| REACH Declaration                           | 2CMT2021-006202                                                        |
| RoHS Declaration                            | 2CMT2021-006277                                                        |
| RoHS Information                            | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| Toxic Substances Control Act - TSCA         | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                              | Business To Business                                                   |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm)             |

## ABB EcoSolutions

|                                                 |                                                                                                                                                                             |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABB EcoSolutions                                | Yes                                                                                                                                                                         |
| ABB Site Meeting Group Waste To Landfill Target | Non-hazardous waste is sent to a landfill, where there is no alternative option available within 100km of a facility<br>UL 2799 Zero Waste To Landfill Validation available |
| End Of Life Disassembling Instructions          | 1SFC100112M0001                                                                                                                                                             |
| Environmental Product                           | 1SFC100092D0201                                                                                                                                                             |

|                                                   |                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Declaration - EPD                                 |                                                                                                                                                                                                                                                                                     |
| Improved Energy Efficiency for Customers          | Product Efficiency - Product requires less energy to operate compared to similar product on market or older products from the same line<br>Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line |
| Recyclability Rate of the Product acc. to EN45555 | Design for Closing Resource Loops - Standard EN45555 - 87.8 %                                                                                                                                                                                                                       |

Certificates and Declarations

|                                  |                  |
|----------------------------------|------------------|
| A2L Certificate – UL             | 9AKK108468A6693  |
| ABS Certificate                  | 14-LD1092198-PDA |
| Declaration of Conformity - CE   | 2CMT2015-005439  |
| Declaration of Conformity - UKCA | 2CMT2020-006118  |
| UL Certificate                   | 20120925-E36588  |

Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 207 mm        |
| Package Level 1 Depth / Length | 216 mm        |
| Package Level 1 Height         | 150 mm        |
| Package Level 1 Gross Weight   | 1.75 kg       |
| Package Level 1 EAN            | 7320500560297 |

External Classifications and Standards

|                                    |                                          |
|------------------------------------|------------------------------------------|
| Object Classification Code         | Q                                        |
| ETIM 7                             | EC000066 - Power contactor, AC switching |
| ETIM 8                             | EC000066 - Power contactor, AC switching |
| ETIM 9                             | EC000066 - Power contactor, AC switching |
| eClass                             | V11.0 : 27371003                         |
| UNSPSC                             | 39121529                                 |
| IDEA Granular Category Code (IGCC) | 4758 >> lec Contactors                   |

Accessories

| Identifier      | Description                         | Type       | Quantity | Unit Of Measure |
|-----------------|-------------------------------------|------------|----------|-----------------|
| 1SFN074207R1000 | LW140 Terminal Enlargement          | LW140      | 1        | piece           |
| 1SFN074210R1000 | LX140 Terminal Extension            | LX140      | 1        | piece           |
| 1SFN084206R1000 | BEA140/XT2 Connection Set           | BEA140/XT2 | 1        | piece           |
| 1SFN084206R1001 | BEA140/XT4 Connection Set           | BEA140/XT4 | 1        | piece           |
| 1SFN084211R1000 | BER140-4 Connection Set             | BER140-4   | 1        | piece           |
| 1SFN084214R1000 | BEP140-30 Connection Set            | BEP140-30  | 1        | piece           |
| 1SFN084214R2000 | BEP140-40 Connection Set            | BEP140-40  | 1        | piece           |
| 1SFN010820R1011 | CAL19-11 Auxiliary Contact Block    | CAL19-11   | 1        | piece           |
| 1SFN010820R3311 | CAL19-11B Auxiliary Contact Block   | CAL19-11B  | 1        | piece           |
| 1SFN030300R1000 | VM19 Mechanical Interlock Unit      | VM19       | 1        | piece           |
| 1SFN034403R1000 | VM140/190 Mechanical Interlock Unit | VM140/190  | 1        | piece           |
| 1SFN010832R1001 | CEL19-01 Auxiliary Contact Block    | CEL19-01   | 1        | piece           |
| 1SFN010832R1010 | CEL19-10 Auxiliary Contact Block    | CEL19-10   | 1        | piece           |
| 1SFN124203R1000 | LT140-30L Terminal Shroud           | LT140-30L  | 1        | piece           |
| 1SFN084413R1000 | BEY140-4 Connection Set             | BEY140-4   | 1        | piece           |
| 1SFN084813R1000 | BEY190-4 Connection Set             | BEY190-4   | 1        | piece           |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF116

