PRODUCT-DETAILS

# AF116-30-00B-32

## AF116-30-00B-32 Contactor

### General Information

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|---|---|
| Extended Product Type | AF116-30-00B-32 |
| Product ID | 1SFL427002R3200 |
| EAN | 7320500561492 |
| Catalog Description | AF116-30-00B-32 Contactor |
| Long Description | The AF116-30-00B-32 is a 3 pole - 690 V IEC or 600 V UL contactor with Main Circuit Bars, 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

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| 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

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| Product Net Width | 90 mm |
| Product Net Depth / Length | 138.5 mm |
| Product Net Height | 150 mm |
| Product Net Weight | 1.3 kg |

## Technical

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| 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 Θ = 40 °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 |

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|---|---|
| | (380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW |
| Rated Breaking Capacity AC-3 | 8 x Ie AC-3 |
| Rated Breaking Capacity AC-3e | 8.5 x Ie AC-3e |
| Rated Making Capacity AC-3 | 10 x Ie AC-3 |
| Rated Making Capacity AC-3e | 12 x Ie AC-3e |
| Rated Short-time Withstand Current Low Voltage ($I_{cw}$) | 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 Capacity | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 2000 A<br>cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 1000 A |
| Rated Insulation Voltage ($U_i$) | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 1000 V |
| Rated Impulse Withstand Voltage ($U_{imp}$) | Main Circuit 8 kV |
| Maximum Electrical 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 Switching Frequency | 300 cycles per hour |
| Rated Control Circuit Voltage ($U_c$) | 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 Main Circuit | Flexible 2 x 10 ... 70 mm²<br>Rigid Cu-Cable 1 x 10 ... 95 mm² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Ferrule 2x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm²<br>Flexible 1x 0.75 ... 2.5 mm²<br>Flexible 2x 0.75 ... 2.5 mm²<br>Solid 1x 1 ... 4 mm²<br>Solid 2x 1 ... 4 mm²<br>Stranded 1x 1 ... 4 mm²<br>Stranded 2x 1 ... 4 mm² |
| Connecting Capacity | Flexible 1 x 10 ... 70 mm²<br>Flexible 2 x 10 ... 70 mm²<br>Rigid Cu-Cable 1 x 10 ... 95 mm² |
| 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 |

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|---|---|
| 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 | Main Circuit: Bars |
| Product Name | Block Contactor |

## Technical UL/CSA

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|---|---|
| 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

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|---|---|
| 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

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|---|---|
| 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

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|---|---|
| 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 |
| End Of Life Disassembling Instructions | 1SFC100112M0001 |
| Environmental Product Declaration - EPD | 1SFC100092D0201 |

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|---|---|
| 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 |
| Recyclability Rate of the Product acc. to EN45555 | Design for Closing Resource Loops - Standard EN45555 - 87.8 % |

## Certificates and Declarations

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|---|---|
| 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

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|---|---|
| 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 | 1.5 kg |
| Package Level 1 EAN | 7320500561492 |

## External Classifications and Standards

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|---|---|
| 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 >> Iec 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

ABB Eco Solutions™