



PRODUCT-DETAILS

AF116-30-22B-12

AF116-30-22B-12 Contactor



| General Information | |
|-----------------------|---|
| Extended Product Type | AF116-30-22B-12 |
| Product ID | 1SFL427002R1222 |
| EAN | 7320500476901 |
| Catalog Description | AF116-30-22B-12 Contactor |
| Long Description | <p>The AF116-30-22B-12 is a 3 pole - 690 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and 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.</p> |

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

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 | 126 mm |
| Product Net Height | 150 mm |
| Product Net Weight | 1.3 kg |
| Dimension Diagram | 1SFB535001G1051 |

Technical

| | |
|--|---|
| Number of Main Contacts NO | 3 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 2 |
| Number of Auxiliary Contacts NC | 2 |
| 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 (690 V) 60 °C 145 A (690 V) 70 °C 130 A |
| Rated Operational Current AC-3 (I_e) | (415 V) 55 °C 116 A (440 V) 55 °C 116 A (500 V) 55 °C 110 A (690 V) 55 °C 65 A (380 / 400 V) 55 °C 116 A (220 / 230 / 240 V) 55 °C 116 A |
| Rated Operational Current AC-3e (I_e) | (415 V) 60 °C 116 A (440 V) 60 °C 116 A (500 V) 60 °C 110 A (690 V) 60 °C 65 A (380 / 400 V) 60 °C 116 A (220 / 230 / 240 V) 60 °C 116 A |
| Rated Operational Current DC-1 (I_e) | (110 V) 2 Poles in Series, 40 °C 145 A (220 V) 3 Poles in Series, 40 °C 145 A |
| Rated Operational Current DC-3 (I_e) | (110 V) 2 Poles in Series, 40 °C 145 A (220 V) 3 Poles in Series, 40 °C 145 A |
| Rated Operational Current DC-5 (I_e) | (110 V) 2 Poles in Series, 40 °C 145 A (220 V) 3 Poles in Series, 40 °C 145 A |
| Rated Operational Power AC-3 (P_e) | (415 V) 55 kW (440 V) 75 kW (500 V) 75 kW (690 V) 55 kW (380 / 400 V) 55 kW (220 / 230 / 240 V) 30 kW |
| Rated Operational Power AC-3e (P_e) | (415 V) 55 kW (440 V) 75 kW (500 V) 75 kW (690 V) 55 kW (380 / 400 V) 55 kW (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 |
| Short-Circuit Protective Devices | gG Type Fuses 250 A |
| 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 at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 160 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 379 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1160 A 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 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 acc. to UL/CSA 600 V |
| Rated Impulse Withstand Voltage (U_{imp}) | Main Circuit 8 kV |
| Maximum Electrical Switching Frequency | (AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour |
| Mechanical Durability | 5 million |
| Maximum Mechanical Switching Frequency | 300 cycles per hour |
| Coil Operating Limits | (acc. to IEC 60947-4-1) 0.85 x Uc Min. ... 1.1 x Uc Max. (at $\theta \leq 70$ °C) |
| Rated Control Circuit Voltage (U_c) | 50 Hz 48 ... 130 V 60 Hz 48 ... 130 V DC Operation 48 ... 130 V |
| Coil Consumption | Holding at Max. Rated Control Circuit Voltage 50 Hz 4 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 4 V·A Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 180 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 180 V·A Pull-in at Max. Rated Control Circuit Voltage DC 150 W |
| Power Loss | at Rated Operating Conditions per Pole 6 W |
| Operate Time | Between Coil De-energization and NO Contact Opening 37 ... 47 ms Between Coil Energization and NO Contact Closing 25 ... 55 ms |
| Connecting Capacity Main Circuit | Flexible 1 x 10 ... 70 mm ² Rigid Cu-Cable 1 x 10 ... 95 mm ² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Flexible 2x0.75 ... 2.5 mm ² Solid 2 x 1 ... 4 mm ² Stranded 2 x 1 ... 4 mm ² |
| Connecting Capacity | Flexible 2 x 10 ... 70 mm ² Rigid Cu-Cable 2 x 10 ... 95 mm ² |
| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00 |
| Tightening Torque | Cable Lug 9 N·m Main Circuit 8 N·m |
| Terminal Type | Main Circuit: Bars |
| 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 V AC) Three Phase 30 hp (208 V AC) Three Phase 30 hp (220 ... 240 V AC) Three Phase 40 hp (440 ... 480 V AC) Three Phase 75 hp (550 ... 600 V AC) Three Phase 100 hp |
| Full Load Amps Motor | (440 ... 480 V AC) Three Phase 96 A |

Use (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 ... 50 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 70 °C 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 |
| End Of Life Disassembling Instructions | 1SFC100112M0001 |
| Environmental Product Declaration - EPD | 1SFC100092D0201 2TFP200059A1001 |
| 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 % |
| Sustainable Material Content in Product (wt. %) | Recycled Metal - 37 % |

Certificates and Declarations

| | |
|----------------------------------|---------------------|
| A2L Certificate - UL | 9AKK108468A6693 |
| ABS Certificate | 14-LD1092198-PDA |
| BV Certificate | BV_36353_A0BV |
| CB Certificate | SEMKO_SE-70479M1 |
| CCS Certificate | GB14T00030 |
| CQC Certificate | CQC2013010304604055 |
| Declaration of Conformity - CCC | 2020980304001304 |
| Declaration of Conformity - CE | 2CMT2015-005439 |
| Declaration of Conformity - UKCA | 2CMT2020-006118 |
| DNV Certificate | DNV_E-14043 |
| EAC Certificate | 9AKK107046A8618 |
| LR Certificate | LR_14_70011(E1) |
| PRS Certificate | TE_2092_880423_16 |
| RINA Certificate | ELE060313XG_002 |
| RMRS Certificate | 9AKK107045A6978 |
| UL Certificate | 20120925-E36588 |

UL Listing Card

UL 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 | 1.5 kg |
| Package Level 1 EAN | 7320500476901 |

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 >> Iec Contactors |
| E-Number (Finland) | 3706178 |

Accessories

| Identifier | Description | Type | Quantity | Unit Of Measure |
|-----------------|-------------------------------------|------------|----------|-----------------|
| 1SFN034403R1000 | VM140/190 Mechanical Interlock Unit | VM140/190 | 1 | piece |
| 1SFN074203R1000 | LY140 Connecting Strip | LY140 | 1 | piece |
| 1SFN074207R1000 | LW140 Terminal Enlargement | LW140 | 1 | piece |
| 1SFN074208R1000 | LD146-30 Connection Module | LD146-30 | 1 | piece |
| 1SFN074210R1000 | LX140 Terminal Extension | LX140 | 1 | piece |
| 1SFN074211R1000 | LL146-30 Connection Socket | LL146-30 | 1 | piece |
| 1SFN084206R1000 | BEA140/XT2 Connection Set | BEA140/XT2 | 1 | piece |
| 1SFN084206R1001 | BEA140/XT4 Connection Set | BEA140/XT4 | 1 | piece |
| 1SFN084206R1002 | BEA140/XT3 Connection Set | BEA140/XT3 | 1 | piece |
| 1SFN084211R1000 | BER140-4 Connection Set | BER140-4 | 1 | piece |
| 1SFN084214R1000 | BEP140-30 Connection Set | BEP140-30 | 1 | piece |
| 1SFN084413R1000 | BEY140-4 Connection Set | BEY140-4 | 1 | piece |
| 1SFN094200R1000 | PR146-1 Adapter Plate | PR146-1 | 1 | piece |
| 1SFN124203R1000 | LT140-30L Terminal Shroud | LT140-30L | 1 | piece |
| 1SFN074208R2000 | LD146-40 Connection Module | LD146-40 | 1 | piece |
| 1SFN074211R2000 | LL146-40 connection sockets kit | LL146-40 | 1 | piece |
| 1SFN084214R2000 | BEP140-40 Connection Set | BEP140-40 | 1 | piece |
| 1SFN124203R2000 | LT140-40L Terminal Shroud | LT140-40L | 1 | piece |

Categories

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

