

PRODUCT-DETAILS

AF460-30-11-68

AF460-30-11 24-60V DC Contactor



General Information

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|-----------------------|---------------------------------|
| Extended Product Type | AF460-30-11-68 |
| Product ID | 1SFL597001R6811 |
| EAN | 7320500217887 |
| Catalog Description | AF460-30-11 24-60V DC Contactor |

Long Description

The AF460-30-11-68 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and Main Circuit Bars, controlling motors up to 250 kW / 400 V AC (AC-3) or 400 hp / 480 V UL and switching power circuits up to 700 A (AC-1) or 650 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 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

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

Popular Downloads

| | |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
|-----------------------------------|-----------------|

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|--------------------------|-----------------|
| Instructions and Manuals | 1SFC380023-en |
| CAD Dimensional Drawing | 2CDC001079B0201 |
| Dimension Diagram | 53540919-59 |

Dimensions

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| Product Net Width | 186 mm |
| Product Net Depth / Length | 216 mm |
| Product Net Height | 278 mm |
| Product Net Weight | 10.6 kg |

Technical

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| Number of Main Contacts NO | 3 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 1 |
| Number of Auxiliary Contacts NC | 1 |
| Rated Operational Voltage | Main Circuit 1000 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 700 A |
| Rated Operational Current AC-1 (I _e) | (1000 V) 40 °C 700 A (1000 V) 55 °C 600 A (1000 V) 60 °C 600 A (1000 V) 70 °C 480 A (690 V) 40 °C 700 A (690 V) 55 °C 600 A (690 V) 70 °C 480 A |
| Rated Operational Current AC-3 (I _e) | (415 V) 55 °C 460 A (440 V) 55 °C 460 A (500 V) 55 °C 460 A (690 V) 55 °C 400 A (1000 V) 55 °C 200 A (380 / 400 V) 55 °C 460 A (220 / 230 / 240 V) 55 °C 460 A |
| Rated Operational Power AC-3 (P _e) | (415 V) 250 kW (440 V) 250 kW (500 V) 315 kW (690 V) 355 kW (1000 V) 280 kW (380 / 400 V) 250 kW (220 / 230 / 240 V) 132 kW |
| Rated Breaking Capacity AC-3 | 8 x I _e AC-3 |
| Rated Making Capacity AC-3 | 10 x I _e AC-3 |
| Short-Circuit Protective Devices | gG Type Fuses 800 A |
| Rated Short-time Withstand Current Low Voltage (I _{cw}) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 4400 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 840 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 2500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 4600 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 3100 A |
| Maximum Breaking Capacity | cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 5000 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 4500 A |
| Maximum Electrical | (AC-1) 300 cycles per hour |

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| Switching Frequency | (AC-2 / AC-4) 60 cycles per hour (AC-3) 300 cycles per hour |
| Rated Operational Current DC-1 (I_e) | (110 V) 1-Pole, 40 °C 700 A (110 V) 2 Poles in Series, 40 °C 700 A (220 V) 3 Poles in Series, 40 °C 700 A (600 V) 3 Poles in Series, 40 °C 700 A |
| Rated Operational Current DC-3 (I_e) | (110 V) 1-Pole, 40 °C 700 A (110 V) 2 Poles in Series, 40 °C 700 A (220 V) 3 Poles in Series, 40 °C 700 A (600 V) 3 Poles in Series, 40 °C 700 A |
| Rated Operational Current DC-5 (I_e) | (110 V) 1-Pole, 40 °C 700 A (110 V) 2 Poles in Series, 40 °C 700 A (220 V) 3 Poles in Series, 40 °C 700 A (600 V) 3 Poles in Series, 40 °C 700 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 |
| Mechanical Durability | 3 million |
| Maximum Mechanical Switching Frequency | 300 cycles per hour |
| Coil Operating Limits | (acc. to IEC 60947-4-1) 0.85 x U_c Min. ... 1.1 x U_c Max. (at $\theta \leq 70^\circ\text{C}$) |
| Rated Control Circuit Voltage (U_c) | DC Operation 24 ... 60 V |
| Coil Consumption | Holding at Max. Rated Control Circuit Voltage 50 Hz 12 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 12 V·A Holding at Max. Rated Control Circuit Voltage DC 5 V·A Pull-in at Max. Rated Control Circuit Voltage 50 Hz 900 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 900 V·A Pull-in at Max. Rated Control Circuit Voltage DC 900 V·A |
| Operate Time | Between Coil De-energization and NC Contact Closing 45 ... 55 ms Between Coil De-energization and NO Contact Opening 48 ... 58 ms Between Coil Energization and NC Contact Opening 45 ... 115 ms Between Coil Energization and NO Contact Closing 50 ... 120 ms |
| Connecting Capacity Main Circuit | Bar 47 mm ² Rigid Al-Cable 2x240 mm ² Rigid Cu-Cable 240 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 1x0.75 ... 2.5 mm ² Solid 2 x 1 ... 4 mm ² Stranded 2 x 1 ... 4 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 |
| Terminal Type | Main Circuit: Bars |

Technical UL/CSA

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| NEMA Size | 6 |
| Horsepower Rating NEMA | (200 V AC) Three Phase 150 Hp (230 V AC) Three Phase 200 Hp (460 V AC) Three Phase 400 Hp (575 V AC) Three Phase 400 Hp |
| Maximum Operating Voltage UL/CSA | Main Circuit 1000 V |
| General Use Rating UL/CSA | (600 V AC) 650 A |
| Horsepower Rating UL/CSA | (200 V AC) Three Phase 150 hp (208 V AC) Three Phase 150 hp (220 ... 240 V AC) Three Phase 200 hp (440 ... 480 V AC) Three Phase 400 hp (550 ... 600 V AC) Three Phase 500 hp |

Environmental

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| 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 |
| Resistance to Shock acc. to IEC 60068-2-27 | Shock Direction: A 5 g Shock Direction: B1 5 g Shock Direction: B2 5 g Shock Direction: C1 5 g Shock Direction: C2 5 g |

Material Compliance

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| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658 |
| REACH Declaration | 2CMT2021-006202 |
| RoHS Information | 2CMT2021-006277 |
| RoHS Status | 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) |

Circular Value

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| ABB EcoSolutions | Yes |
| Circular Design Principles Recyclability Rate | Design for Closing Resource Loops - Standard EN45555 - 63.1 % |
| End of Life Instructions | 1SFC100112M0001 |
| 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 |
| Improved Resource Efficiency for Customers | Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line |
| Sustainable Material Content | Recycled Metal - 37 % |

Eco Transparency

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| Environmental Product Declaration - EPD | 1SFC100105D0201 |
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Certificates and Declarations

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|---------------------------------|--|
| ABS Certificate | 15-LD1408622-PDA |
| BV Certificate | BV_13409-C0BV |
| CB Certificate | SE-82316 |
| CCS Certificate | GB14T00030 |
| CQC Certificate | CQC2007010304256683 CQC2011010304514755 |
| CSA Certificate | 306711 |
| Declaration of Conformity - CCC | 2020980304001300 2020980304001081 |

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|-------------------------------------|-------------------|
| Declaration of Conformity - CE | 2CMT2015-005436 |
| Declaration of Conformity - UKCA | 2CMT2020-006118 |
| DNV Certificate | DNV_E-10966 |
| DNV GL Certificate | TAE00001W1 |
| EAC Certificate | 9AKK107046A8618 |
| GL Certificate | GL_42988-02HH |
| LOVAG Certificate | SE-0115087 |
| LR Certificate | 16-20064 |
| PRS Certificate | TE_2092_880423_16 |
| RINA Certificate | ELE060313XG_002 |
| RMRS Certificate | 9AKK107045A6978 |
| UL Certificate | 20121207-E36588 |
| UL Listing Card | UL_E36588 |

Container Information

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|-----------------------------------|---------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 280 mm |
| Package Level 1 Depth / Length | 375 mm |
| Package Level 1 Height | 310 mm |
| Package Level 1 Gross Weight | 12 kg |
| Package Level 1 EAN | 7320500217887 |

Classifications

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|---------------------------------------|---|
| 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) | 4758 >> Iec Contactors |
| E-Number (Norway) | 4115290 |
| E-Number (Sweden) | 3228342 |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF460

