PRODUCT-DETAILS

AF460-30-22-68

AF460-30-22-68 24-60V DC Contactor



General Information

Extended Product Type	AF460-30-22-68
Product ID	1SFL597001R6822
EAN	7320500217917
Catalog Description	AF460-30-22-68 24-60V DC Contactor
Long Description	The AF460-30-22-68 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

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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Popular Downloads

EPLAN Data	9AAC200766_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical Information (Part 2)	1SAC200017M0002
Instructions and Manuals	1SFC380023-en
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	186 mm
Product Net Depth / Length	216 mm
Product Net Height	278 mm
Product Net Weight	10.6 kg
Dimension Diagram	53540919-59

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 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 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

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	(220 V) 3 Poles in Series, 40 °C 700 A (600 V) 3 Poles in Series, 40 °C 700 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 Ie AC-3
Rated Making Capacity AC-3	10 x Ie AC-3
Short-Circuit Protective Devices	gG Type Fuses 1.5 ... 1.8 In A 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 840 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 3100 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 4600 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 4400 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 2500 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 5000 A cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 4500 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) 60 cycles per hour (AC-3) 300 cycles per hour
Mechanical Durability	3 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 θ ≤ 70 °C)
Rated Control Circuit Voltage (U_c)	50 Hz 24 ... 60 V 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
Power Loss	at Rated Operating Conditions per Pole 21 W
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 mm² Rigid Al-Cable 2x240 mm² Rigid Cu-Cable 240 mm² Rigid Cu-Cable 2x240 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm² Flexible 2x0.75 ... 2.5 mm² Solid 2 x 1 ... 4 mm² Stranded 2 x 1 .... 4 mm²
Connecting Capacity	Bar 47 mm² Rigid Al-Cable 2x240 mm² Rigid Cu-Cable 2x240 mm²
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
Connecting Terminals (delivered in open position) Main Poles	M 3.5 (+,-) pozidriv 2 screw with cable clamp

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Recommended Screw Driver	Main Circuit M10 Control Circuit Pozidriv 2 Control Circuit M3.5
Tightening Torque	Cable Lug 35 N·m Main Circuit 35 N·m
Terminal Type	Main Circuit: Bars
Suitable for Product Class	Block ContactorsBlock Contactors
Product Name	Block Contactor

Technical UL/CSA

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	(1000 V AC) 650 A (600 V AC) 650 A
Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 150 Hp (200 ... 208 V AC) Three Phase 150 hp (200 V AC) Three Phase 150 hp (208 V AC) Three Phase 150 hp (220 ... 240 V AC) Three Phase 200 Hp (220 ... 240 V AC) Three Phase 200 hp (440 ... 480 V AC) Three Phase 400 Hp (440 ... 480 V AC) Three Phase 400 hp (550 ... 600 V AC) Three Phase 500 Hp (550 ... 600 V AC) Three Phase 500 hp
Full Load Amps Motor Use	(440 ... 480 V AC) Three Phase 477 A (550 ... 600 V AC) Three Phase 472 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 Operation -40 ... 70 °C 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

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

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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	1SFC100112M0003
Environmental Product Declaration - EPD	1SFC100105D0201
Improved Energy Efficiency for Customers	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 - 63.1 %
Sustainable Material Content in Product (wt. %)	Recycled Metal - 37 %

Certificates and Declarations

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
Declaration of Conformity - CE	2CMT2019-005796
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-200438
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

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

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Package Level 1 Gross Weight	12 kg
Package Level 1 EAN	7320500217917

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)	4755 >> Contactors
E-Number (Finland)	3707170

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN170801R1001	RU19/120 LVRT-Module	RU19/120	1	piece
1SFN170801R1002	RU19/240 LVRT-Module	RU19/240	1	piece

Categories

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



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