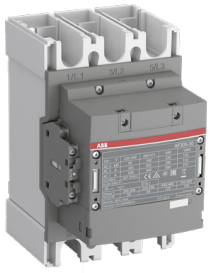
PRODUCT-DETAILS

AF305-30-22-12

AF305-30-22-12 Contactor



General Information

Extended Product Type	AF305-30-22-12
Product ID	1SFL587002R1222
EAN	7320500481752
Catalog Description	AF305-30-22-12 Contactor
Long Description	The AF305-30-22-12 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 160 kW / 400 V AC (AC-3) or 250 hp / 480 V UL and switching power circuits up to 500 A (AC-1) or 400 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. Includes Mounting kit, containing all neccessary screws, washers and sockets for connecting the terminals, and screws for mounting the device.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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Popular Downloads

EPLAN Data	9AAC175203_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical Information (Part 2)	1SAC200017M0002
Instructions and Manuals	1SFC100008M0201
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	140 mm
Product Net Depth / Length	180 mm
Product Net Height	225 mm
Product Net Weight	3.9 kg
Dimension Diagram	1SFB535001G1060

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 500 A
Rated Operational Current AC-1 (I_e)	(1000 V) 40 °C 375 A (1000 V) 55 °C 325 A (1000 V) 60 °C 325 A (1000 V) 70 °C 260 A (690 V) 40 °C 500 A (690 V) 55 °C 400 A (690 V) 70 °C 325 A
Rated Operational Current AC-3 (I_e)	(415 V) 55 °C 305 A (440 V) 55 °C 305 A (500 V) 55 °C 290 A (690 V) 55 °C 290 A (1000 V) 55 °C 131 A (380 / 400 V) 55 °C 305 A (220 / 230 / 240 V) 55 °C 305 A
Rated Operational Current DC-1 (I_e)	(110 V) 1-Pole, 40 °C 500 A (220 V) 2 Poles in Series, 40 °C 500 A (220 V) 3 Poles in Series, 40 °C 500 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 400 A (220 V) 3 Poles in Series, 40 °C 400 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 400 A (220 V) 3 Poles in Series, 40 °C 400 A
Rated Operational Power	(415 V) 160 kW

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AC-3 (P_e)	(440 V) 160 kW (500 V) 200 kW (690 V) 250 kW (1000 V) 185 kW (380 / 400 V) 160 kW (220 / 230 / 240 V) 90 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 500 A
Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 2440 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 4600 A cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 3800 A
Rated Insulation Voltage (U_i)	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V 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 (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 θ ≤ 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 17 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 17 V·A Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 340 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 340 V·A Pull-in at Max. Rated Control Circuit Voltage DC 360 W
Power Loss	at Rated Operating Conditions per Pole 19 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 2 x 70 ... 185 mm² Rigid Al-Cable 1 x 185 ... 240 mm² Rigid Cu-Cable 2 x 70 ... 185 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 1x0.75 ... 2.5 mm² Solid 2 x 1 ... 4 mm² Stranded 1 x 1 .... 4 mm²
Connecting Capacity	Flexible 2 x 70 ... 185 mm² Rigid Al-Cable 1 x 185 ... 240 mm² Rigid Cu-Cable 2 x 70 ... 185 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
Tightening Torque	Cable Lug 28 N·m Main Circuit 22 ... 43 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 1000 V
General Use Rating UL/CSA	(1000 V AC) 400 A
Horsepower Rating UL/CSA	(200 V AC) Three Phase 100 hp (208 V AC) Three Phase 100 hp (220 ... 240 V AC) Three Phase 125 hp (440 ... 480 V AC) Three Phase 250 hp (550 ... 600 V AC) Three Phase 300 hp
Full Load Amps Motor Use	(440 ... 480 V AC) Three Phase 302 A (550 ... 600 V AC) Three Phase 289 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	1SFC100112M0002
Environmental Product Declaration - EPD	1SFC100104D0201 2TFP200030A1001
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 - 76.3 %
Sustainable Material Content in Product (wt. %)	Recycled Metal - 33 %

Certificates and Declarations

A2L Certificate – UL	9AKK108468A6695
ABS Certificate	14-LD1092198-PDA
BV Certificate	BV_36353_A0BV

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CB Certificate	SE-89316
CCS Certificate	GB14T00030
CQC Certificate	CQC2014010304676670 CQC2014010304673866
Declaration of Conformity - CCC	2020980304001305 2020980304001068
Declaration of Conformity - CE	2CMT2015-005439
Declaration of Conformity - UKCA	2CMT2020-006118
DNV Certificate	DNV_E-14043
EAC Certificate	9AKK107046A8618
GL Certificate	GL_95073-14HH
LR Certificate	LR_14_70011(E1)
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
UL Certificate	20121217-E36588
UL Listing Card	UL_E36588

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	263 mm
Package Level 1 Depth / Length	203 mm
Package Level 1 Height	289 mm
Package Level 1 Gross Weight	4.6 kg
Package Level 1 EAN	7320500481752

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)	3706484

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

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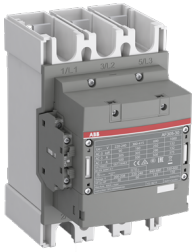
Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF305



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