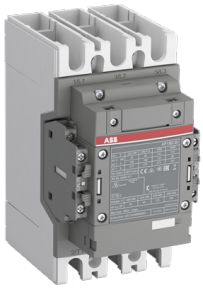
PRODUCT-DETAILS

AF190-30-22-13

AF190-30-22-13 Contactor



General Information

Extended Product Type	AF190-30-22-13
Product ID	1SFL487002R1322
EAN	7320500480489
Catalog Description	AF190-30-22-13 Contactor
Long Description	The AF190-30-22-13 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 90 kW / 400 V AC (AC-3) or 125 hp / 480 V UL and switching power circuits up to 275 A (AC-1) or 250 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 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

Popular Downloads

EPLAN Data	9AAC174541_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	105 mm
Product Net Depth / Length	152 mm
Product Net Height	196 mm
Product Net Weight	2.4 kg
Dimension Diagram	1SFB535001G1056.pdf

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 275 A
Rated Operational Current AC-1 (I_e)	(1000 V) 40 °C 250 A (1000 V) 55 °C 225 A (1000 V) 60 °C 225 A (1000 V) 70 °C 185 A (690 V) 40 °C 275 A (690 V) 55 °C 250 A (690 V) 60 °C 250 A (690 V) 70 °C 200 A
Rated Operational Current AC-3 (I_e)	(415 V) 55 °C 190 A (440 V) 55 °C 190 A (500 V) 55 °C 156 A (690 V) 55 °C 135 A (1000 V) 55 °C 85 A (380 / 400 V) 55 °C 190 A (220 / 230 / 240 V) 55 °C 190 A
Rated Operational Current AC-3e (I_e)	(415 V) 60 °C 190 A (440 V) 60 °C 190 A (500 V) 60 °C 135 A (690 V) 60 °C 135 A (1000 V) 60 °C 85 A (380 / 400 V) 60 °C 190 A (220 / 230 / 240 V) 60 °C 190 A

Rated Operational Current DC-1 (I_e)	(110 V) 2 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 40 °C 250 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 40 °C 250 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 40 °C 250 A
Rated Operational Power AC-3 (P_e)	(415 V) 90 kW (440 V) 110 kW (500 V) 110 kW (690 V) 132 kW (1000 V) 110 kW (380 / 400 V) 90 kW (220 / 230 / 240 V) 55 kW
Rated Operational Power AC-3e (P_e)	(415 V) 90 kW (440 V) 110 kW (500 V) 110 kW (690 V) 132 kW (1000 V) 110 kW (380 / 400 V) 90 kW (220 / 230 / 240 V) 55 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 355 A
Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1520 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 275 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 621 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1900 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 878 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 3300 A cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 2200 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 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 26.8 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 26.8 V·A Holding at Max. Rated Control Circuit Voltage DC 3.5 V·A Holding at Max. Rated Control Circuit Voltage DC 3.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 285 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 285 V·A Pull-in at Max. Rated Control Circuit Voltage DC 360 V·A Pull-in at Max. Rated Control Circuit Voltage DC 360 W
Power Loss	at Rated Operating Conditions per Pole 7 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	Flexible 2 x 50 ... 95 mm²

Main Circuit	Rigid Al-Cable 1 x 95 ... 185 mm² Rigid Cu-Cable 2 x 50 ... 120 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm² Flexible 2x0.75 ... 2.5 mm² Solid 1 x 1 ... 4 mm² Stranded 1 x 1 .... 4 mm²
Connecting Capacity	Flexible 2 x 50 ... 95 mm² Rigid Al-Cable 1 x 95 ... 185 mm² Rigid Cu-Cable 2 x 50 ... 120 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 18 N·m Main Circuit 14 ... 31 N·m
Terminal Type	Main Circuit: Bars
Product Name	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 1000 V
General Use Rating UL/CSA	(1000 V AC) 250 A
Horsepower Rating UL/CSA	(200 V AC) Three Phase 50 hp (208 V AC) Three Phase 50 hp (220 ... 240 V AC) Three Phase 60 hp (440 ... 480 V AC) Three Phase 125 hp (550 ... 600 V AC) Three Phase 150 hp
Full Load Amps Motor Use	(440 ... 480 V AC) Three Phase 156 A (550 ... 600 V AC) Three Phase 144 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

	UL 2799 Zero Waste To Landfill Validation available
EcoSolutions Profile	1SFC100125C0366
End Of Life Disassembling Instructions	1SFC100112M0001
Environmental Product Declaration - EPD	1SFC100095D0201 2TFP200018A1001
Extended Product Lifetime	Product Durability
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 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 - 79.1 %

Certificates and Declarations

A2L Certificate – UL	9AKK108468A6695
ABS Certificate	14-LD1092198-PDA 14-LD1092198-1-PDA-DUP
BV Certificate	BV_36353_A0BV
CB Certificate	SE-82315
CCS Certificate	GB14T00030
CQC Certificate	CQC2014010304676685 CQC2014010304724672
Declaration of Conformity - CCC	2020980304001306 2020980304001071
Declaration of Conformity - CE	2CMT2015-005439
Declaration of Conformity - UKCA	2CMT2020-006118
DNV Certificate	DNV_E-14043
GL Certificate	GL_95072-14HH
KC Certificate	9AKK107046A9912
LR Certificate	16-20064
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
UL Certificate	20121023-E36588
UL Listing Card	UL_E36588

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	160 mm
Package Level 1 Depth / Length	258 mm
Package Level 1 Height	235 mm
Package Level 1 Gross Weight	3 kg
Package Level 1 EAN	7320500480489

External Classifications and Standards

Object Classification	Q

Code	
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)	3706395

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 → AF190

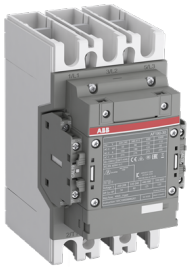


ABB Eco Solutions™