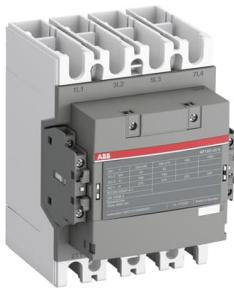




PRODUCT-DETAILS

AF190-40-22-11

AF190-40-22-11 Contactor



General Information	
Extended Product Type	AF190-40-22-11
Product ID	1SFL487102R1122
EAN	7320500504222
Catalog Description	AF190-40-22-11 Contactor
Long Description	<p>The AF190-40-22-11 is a 4 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) / and switching power circuits up to 275 A (AC-1) or 230 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 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. Includes Mounting kit, containing all necessary screws, washers and sockets for connecting the terminals, and screws for mounting the device.</p>

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	140 mm
Product Net Depth / Length	153 mm
Product Net Height	196 mm
Product Net Weight	3.3 kg
Dimension Diagram	1SFB535001G1122

Technical

Number of Main Contacts NO	4
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	2
Number of Auxiliary Contacts NC	2
Number of Poles	4P
Rated Operational Voltage	Main Circuit 1000 V
Rated Frequency (f)	Main Circuit 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I_{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 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 (380 / 400 V) 55 °C 190 A (220 / 230 / 240 V) 55 °C 190 A
Rated Operational Power AC-3 (P_e)	(415 V) 90 kW (440 V) 110 kW (380 / 400 V) 90 kW (220 / 230 / 240 V) 55 kW
Rated Breaking Capacity AC-3	8 x I_e AC-3
Rated Breaking Capacity AC-3e	8.5 x I_e AC-3e
Rated Making Capacity	10 x I_e AC-3

AC-3

Rated Making Capacity AC-3e	12 x I _e 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 275 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 878 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 1900 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1520 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 621 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 3300 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-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 U _c Min. ... 1.1 x U _c Max. (at $\theta \leq 70^\circ\text{C}$)
Rated Control Circuit Voltage (U _c)	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 10 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 10 V-A Holding at Max. Rated Control Circuit Voltage DC 2.5 V-A Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 245 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 245 V-A Pull-in at Max. Rated Control Circuit Voltage DC 370 V-A Pull-in at Max. Rated Control Circuit Voltage DC 370 W
Power Loss	15 W at Rated Operating Conditions per Pole 15 W
Operate Time	Between Coil De-energization and NO Contact Opening 45 ... 80 ms Between Coil Energization and NO Contact Closing 25 ... 60 ms
Connecting Capacity Main Circuit	Flexible 2 x 50 ... 95 mm ² Rigid Al-Cable 1 x 95 ... 185 mm ² Rigid Cu-Cable 2 x 50 ... 120 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 1 x 1 ... 4 mm ² Solid 2 x 1 ... 4 mm ² Stranded 1 x 1 4 mm ² Stranded 2 x 1 4 mm ²
Connecting Capacity	Flexible 2 x 50 ... 95 mm ² Rigid Cu-Cable 2 x 10 ... 95 mm ²
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP40 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 14 ... 31 N-m
Terminal Type	Main Circuit: Bars
Product Name	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
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General Use Rating	(1000 V AC) 250 A
UL/CSA	
Horsepower Rating	(200 ... 208 V AC) Three Phase 20 Hp
UL/CSA	(200 V AC) Three Phase 50 hp
	(208 V AC) Three Phase 50 hp
	(220 ... 240 V AC) Three Phase 25 Hp
	(220 ... 240 V AC) Three Phase 60 hp
	(440 ... 480 V AC) Three Phase 60 Hp
	(440 ... 480 V AC) Three Phase 125 hp
	(550 ... 600 V AC) Three Phase 75 Hp
	(550 ... 600 V AC) Three Phase 150 hp

Environmental

Ambient Air	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °
Temperature	C
	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 55 °
	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	Without Derating 3000 m
Altitude Permissible	

Material Compliance

Conflict Minerals	9AKK108467A5658
Reporting Template	
(CMRT)	
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	2CMT2023-006525
Control Act - TSCA	
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	Non-hazardous waste is sent to a landfill, where there is no alternative
Waste To Landfill Target	option available within 100km of a facility
	UL 2799 Zero Waste To Landfill Validation available
End Of Life	1SFC100112M0001
Disassembling	
Instructions	
Environmental Product	1SFC100095D0201
Declaration - EPD	
Extended Product	Product Durability
Lifetime	
Improved Energy	Product Efficiency - Product requires less energy to operate compared to
Efficiency for Customers	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	Design for Closing Resource Loops - Standard EN45555 - 79.1 %
Product acc. to EN45555	

Certificates and Declarations

ABS Certificate	14-LD1092198-PDA
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	14-LD1092198-1-PDA-DUP
BV Certificate	BV_36353_A0BV
CB Certificate	SE-82315
CQC Certificate	CQC2014010304676685
Declaration of Conformity - CCC	2020980304001306
Declaration of Conformity - CE	2CMT2015-005440
Declaration of Conformity - UKCA	2CMT2020-006118
LR Certificate	16-20064
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
UL Certificate	20140925-E73397

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	166 mm
Package Level 1 Depth / Length	238 mm
Package Level 1 Height	180 mm
Package Level 1 Gross Weight	3.9 kg
Package Level 1 EAN	7320500504222

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 >> lec Contactors
E-Number (Finland)	3707181

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN010820R1011	CAL19-11 Auxiliary Contact Block	CAL19-11	1	piece
1SFN010820R3311	CAL19-11B Auxiliary Contact Block	CAL19-11B	1	piece
1SFN010832R1001	CEL19-01 Auxiliary Contact Block	CEL19-01	1	piece
1SFN010832R1010	CEL19-10 Auxiliary Contact Block	CEL19-10	1	piece
1SFN074208R2000	LD146-40 Connection Module	LD146-40	1	piece
1SFN124203R2000	LT140-40L Terminal Shroud	LT140-40L	1	piece
1SFN124801R2000	LT205-40C Terminal Shroud	LT205-40C	1	piece
1SFN074807R2000	LW205-40 Terminal Enlargement	LW205-40	1	piece
1SFN124803R2000	LT205-40L Terminal Shroud	LT205-40L	1	piece
1SFN075407R2000	LW370-40 Terminal Enlargement	LW370-40	1	piece
1SFN125401R2000	LT370-40C Terminal Shroud	LT370-40C	1	piece
1SFN125403R2000	LT370-40L Terminal Shroud	LT370-40L	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF190

