PRODUCT-DETAILS

AF190B-30-22-12

AF190B-30-22-12 Contactor

360°

General Information

Extended Product Type	AF190B-30-22-12
Product ID	1SFL487063R1222
EAN	7320500511299
Catalog Description	AF190B-30-22-12 Contactor
Long Description	The AF190B-30-22-12 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and standard ferrules, 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 (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

Popular Downloads

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	153 mm
Product Net Height	196 mm
Product Net Weight	2.4 kg

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
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1, IEC 60077-1 (applicable parts), IEC 60077-2 (applicable parts), EN 50155 (applicable parts), TR CU 001/2011, IEC 61373, For compliance confirmation on applicable parts based on your application and combination, please consult your ABB sales representatives.
Rated Operational Voltage	Main Circuit 1000 V
Rated Frequency (f)	Main Circuit 50 / 60 Hz
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 135 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)	(100 V) 1 Pole, 40 °C 250 A (100 V) 1 Pole, 60 °C 250 A (100 V) 1 Pole, 70 °C 200 A (110 V) 2 Poles in Series, 40 °C 250 A (110 V) 2 Poles in Series, 60 °C 250 A (110 V) 2 Poles in Series, 70 °C 200 A (110 V) 3 Poles in Series, 40 °C 250 A (110 V) 3 Poles in Series, 60 °C 250 A (110 V) 3 Poles in Series, 70 °C 200 A (175 V) 2 Poles in Series, 40 °C 250 A (175 V) 2 Poles in Series, 60 °C 250 A (175 V) 2 Poles in Series, 70 °C 200 A (200 V) 2 Poles in Series, 40 °C 250 A (200 V) 2 Poles in Series, 60 °C 250 A (200 V) 2 Poles in Series, 70 °C 200 A (220 V) 3 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 60 °C 250 A (220 V) 3 Poles in Series, 70 °C 200 A (260 V) 3 Poles in Series, 40 °C 250 A (260 V) 3 Poles in Series, 60 °C 250 A (260 V) 3 Poles in Series, 70 °C 200 A (300 V) 3 Poles in Series, 40 °C 250 A (300 V) 3 Poles in Series, 60 °C 250 A (300 V) 3 Poles in Series, 70 °C 200 A (72 V) 1-Pole, 40 °C 250 A (72 V) 1-Pole, 60 °C 250 A (72 V) 1-Pole, 70 °C 200 A (72 V) 2 Poles in Series, 40 °C 250 A (72 V) 2 Poles in Series, 60 °C 250 A (72 V) 2 Poles in Series, 70 °C 200 A (72 V) 3 Poles in Series, 40 °C 250 A (72 V) 3 Poles in Series, 60 °C 250 A (72 V) 3 Poles in Series, 70 °C 200 A (90 V) 1 Pole, 40 °C 250 A (90 V) 1 Pole, 60 °C 250 A (90 V) 1 Pole, 70 °C 200 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 250 A (110 V) 2 Poles in Series, 60 °C 250 A (110 V) 2 Poles in Series, 70 °C 200 A (110 V) 3 Poles in Series, 40 °C 250 A (110 V) 3 Poles in Series, 60 °C 250 A (110 V) 3 Poles in Series, 70 °C 200 A (220 V) 3 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 60 °C 250 A (220 V) 3 Poles in Series, 70 °C 200 A (72 V) 2 Poles in Series, 40 °C 250 A (72 V) 2 Poles in Series, 60 °C 250 A (72 V) 2 Poles in Series, 70 °C 200 A (72 V) 3 Poles in Series, 40 °C 250 A (72 V) 3 Poles in Series, 60 °C 250 A (72 V) 3 Poles in Series, 70 °C 200 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 250 A (110 V) 2 Poles in Series, 60 °C 250 A (110 V) 2 Poles in Series, 70 °C 200 A (110 V) 3 Poles in Series, 40 °C 250 A (110 V) 3 Poles in Series, 60 °C 250 A (110 V) 3 Poles in Series, 70 °C 200 A (220 V) 3 Poles in Series, 40 °C 250 A (220 V) 3 Poles in Series, 60 °C 250 A (220 V) 3 Poles in Series, 70 °C 200 A (72 V) 2 Poles in Series, 40 °C 250 A (72 V) 2 Poles in Series, 60 °C 250 A (72 V) 2 Poles in Series, 70 °C 200 A (72 V) 3 Poles in Series, 40 °C 250 A (72 V) 3 Poles in Series, 60 °C 250 A (72 V) 3 Poles in Series, 70 °C 200 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
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
Rated Insulation Voltage (U_i)	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 600 V
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 Uc Min. ... 1.1 x Uc Max. (at θ ≤ 70 °C)
Rated Control Circuit Voltage (U_c)	50 Hz / 60 Hz 48 ... 130 V DC Operation 48 ... 130 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 14.5 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 14.5 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 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 465 V·A Pull-in at Max. Rated Control Circuit Voltage DC 465 W
Power Loss	7 W at Rated Operating Conditions per Pole 7 W
Connecting Capacity Main Circuit	Flexible 2 x 50 ... 95 mm² Rigid Cu-Cable 2 x 50 ... 120 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	Flexible 2 x 50 ... 95 mm² Rigid Cu-Cable 2 x 10 ... 95 mm²
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	Main Circuit 600 V

Voltage UL/CSA	
General Use Rating UL/CSA	(1000 V AC) 250 A
Horsepower Rating UL/CSA	(200 ... 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	(200 ... 208 V AC) Three Phase 150 A (220 ... 240 V AC) Three Phase 154 A (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 ... 55 °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	No declaration needed
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
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
CB Certificate	SE-82315
CQC Certificate	CQC2014010304676685

Declaration of Conformity - CCC	2020980304001306
Declaration of Conformity - CE	2CMT2015-005440
Declaration of Conformity - UKCA	2CMT2020-006124
KC Certificate	9AKK107046A9912
UL Certificate	20121023-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	7320500511299

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 (Sweden)	3210441

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN074807R1000	LW205 Terminal Enlargement	LW205	1	piece
1SFN074810R1000	LX205 Terminal Extension	LX205	1	piece
1SFN010820R1011	CAL19-11 Auxiliary Contact Block	CAL19-11	1	piece
1SFN010820R3311	CAL19-11B Auxiliary Contact Block	CAL19-11B	1	piece
1SFN030300R1000	VM19 Mechanical Interlock Unit	VM19	1	piece
1SFN034403R1000	VM140/190 Mechanical Interlock Unit	VM140/190	1	piece
1SFN035203R1000	VM205/265 Mechanical Interlock Unit	VM205/265	1	piece
1SFN010829R1011	CAL19-11-RT Auxiliary Contact Block	CAL19-11-RT	1	piece
1SFN010829R3311	CAL19-11B-RT Auxiliary Contact Block	CAL19-11B-RT	1	piece
1SFN124801R1000	LT205-30C Terminal Shroud	LT205-30C	1	piece
1SFN124803R1000	LT205-30L Terminal Shroud	LT205-30L	1	piece
1SFN124804R1000	LT205-30Y Terminal Shroud	LT205-30Y	1	piece
1SFN084811R1000	BER205-4 Connection Set	BER205-4	1	piece

Categories

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




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