



PRODUCT-DETAILS

AF12-30-10-11

AF12-30-10-11 24-60V50/60HZ 20-60VDC

Contactor



General Information	
Extended Product Type	AF12-30-10-11
Product ID	1SBL157001R1110
EAN	3471523110311
Catalog Description	AF12-30-10-11 24-60V50/60HZ 20-60VDC Contactor
Long Description	The AF12-30-10-11 is a 3 pole - 690 V IEC or 600 UL contactor with 1 built-in auxiliary contact and screw terminals, controlling motors up to 5.5 kW / 400 V AC (AC-3) or 7-1/2 hp / 480 V UL and switching power circuits up to 28 A (AC-1) or 28 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.

Ordering	
Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads	
EPLAN Data	9AAC159646_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Instructions and Manuals	1SBC101027M6801
Instructions and Manuals (Part 2)	1SAC200017M0002
CAD Dimensional Drawing	2CDC001079B0201

Dimensions	
Product Net Width	45 mm
Product Net Depth / Length	77 mm
Product Net Height	86 mm
Product Net Weight	0.27 kg

Technical	
Number of Main Contacts NO	3
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	1
Number of Auxiliary Contacts NC	0
Number of Poles	3P
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60335-2-40 LZGH2 A2L, UL 60947-4-1, CSA C22.2 No. 60335-2-40 LZGH2 A2L, CSA C22.2 No. 60947-4-1
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 690 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Control Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I _{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 35 A acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A
Rated Operational Current AC-1 (I _e)	(690 V) 40 °C 28 A (690 V) 60 °C 28 A (690 V) 70 °C 24 A
Rated Operational Current AC-3 (I _e)	(415 V) 60 °C 12 A (440 V) 60 °C 12 A (500 V) 60 °C 12.5 A (690 V) 60 °C 9 A (380 / 400 V) 60 °C 12 A (220 / 230 / 240 V) 60 °C 12 A
Rated Operational Current AC-3e (I _e)	(415 V) 60 °C 12 A (440 V) 60 °C 12 A (500 V) 60 °C 12.5 A (690 V) 60 °C 9 A (380 / 400 V) 60 °C 12 A (220 / 230 / 240 V) 60 °C 12 A
Rated Operational Current AC-15 (I _e)	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A
Rated Operational	(110 V) 1-Pole, 40 °C 15 A

Current DC-1 (I_e)

(110 V) 1-Pole, 60 °C 15 A
(110 V) 1-Pole, 70 °C 15 A
(110 V) 2 Poles in Series, 40 °C 27 A
(110 V) 2 Poles in Series, 60 °C 27 A
(110 V) 2 Poles in Series, 70 °C 24 A
(110 V) 3 Poles in Series, 40 °C 27 A
(110 V) 3 Poles in Series, 60 °C 27 A
(110 V) 3 Poles in Series, 70 °C 24 A
(220 V) 2 Poles in Series, 40 °C 15 A
(220 V) 2 Poles in Series, 60 °C 15 A
(220 V) 2 Poles in Series, 70 °C 15 A
(220 V) 3 Poles in Series, 40 °C 27 A
(220 V) 3 Poles in Series, 60 °C 27 A
(220 V) 3 Poles in Series, 70 °C 24 A
(72 V) 1-Pole, 40 °C 27 A
(72 V) 1-Pole, 60 °C 27 A
(72 V) 1-Pole, 70 °C 24 A
(72 V) 2 Poles in Series, 40 °C 27 A
(72 V) 2 Poles in Series, 60 °C 27 A
(72 V) 2 Poles in Series, 70 °C 24 A
(72 V) 3 Poles in Series, 40 °C 27 A
(72 V) 3 Poles in Series, 60 °C 27 A
(72 V) 3 Poles in Series, 70 °C 24 A

Rated Operational
Current DC-3 (I_e)

(110 V) 1-Pole, 40 °C 7 A
(110 V) 1-Pole, 60 °C 7 A
(110 V) 1-Pole, 70 °C 7 A
(110 V) 2 Poles in Series, 40 °C 27 A
(110 V) 2 Poles in Series, 60 °C 27 A
(110 V) 2 Poles in Series, 70 °C 24 A
(110 V) 3 Poles in Series, 40 °C 27 A
(110 V) 3 Poles in Series, 60 °C 27 A
(110 V) 3 Poles in Series, 70 °C 24 A
(220 V) 2 Poles in Series, 40 °C 7 A
(220 V) 2 Poles in Series, 60 °C 7 A
(220 V) 2 Poles in Series, 70 °C 7 A
(220 V) 3 Poles in Series, 40 °C 27 A
(220 V) 3 Poles in Series, 60 °C 27 A
(220 V) 3 Poles in Series, 70 °C 24 A
(72 V) 1-Pole, 40 °C 27 A
(72 V) 1-Pole, 60 °C 27 A
(72 V) 1-Pole, 70 °C 24 A
(72 V) 2 Poles in Series, 40 °C 27 A
(72 V) 2 Poles in Series, 60 °C 27 A
(72 V) 2 Poles in Series, 70 °C 24 A
(72 V) 3 Poles in Series, 40 °C 27 A
(72 V) 3 Poles in Series, 60 °C 27 A
(72 V) 3 Poles in Series, 70 °C 24 A

Rated Operational
Current DC-5 (I_e)

(110 V) 1-Pole, 40 °C 4 A
(110 V) 1-Pole, 60 °C 4 A
(110 V) 1-Pole, 70 °C 4 A
(110 V) 2 Poles in Series, 40 °C 15 A
(110 V) 2 Poles in Series, 60 °C 15 A
(110 V) 2 Poles in Series, 70 °C 15 A
(110 V) 3 Poles in Series, 40 °C 27 A
(110 V) 3 Poles in Series, 60 °C 27 A
(110 V) 3 Poles in Series, 70 °C 24 A
(220 V) 2 Poles in Series, 40 °C 4 A
(220 V) 2 Poles in Series, 60 °C 4 A
(220 V) 2 Poles in Series, 70 °C 4 A
(220 V) 3 Poles in Series, 40 °C 12 A
(220 V) 3 Poles in Series, 60 °C 12 A
(220 V) 3 Poles in Series, 70 °C 12 A
(72 V) 1-Pole, 40 °C 12 A
(72 V) 1-Pole, 60 °C 12 A
(72 V) 1-Pole, 70 °C 12 A
(72 V) 2 Poles in Series, 40 °C 27 A
(72 V) 2 Poles in Series, 60 °C 27 A
(72 V) 2 Poles in Series, 70 °C 24 A
(72 V) 3 Poles in Series, 40 °C 27 A
(72 V) 3 Poles in Series, 60 °C 27 A
(72 V) 3 Poles in Series, 70 °C 24 A

Rated Operational Current DC-13 (I _e)	(24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W
Rated Operational Power AC-3 (P _e)	(400 V) 5.5 kW (415 V) 5.5 kW (440 V) 5.5 kW (500 V) 7.5 kW (690 V) 7.5 kW (380 / 400 V) 5.5 kW (220 / 230 / 240 V) 3 kW
Rated Operational Power AC-3e (P _e)	(415 V) 5.5 kW (440 V) 5.5 kW (500 V) 7.5 kW (690 V) 7.5 kW (380 / 400 V) 5.5 kW (220 / 230 / 240 V) 3 kW
Rated Short-time Withstand Current Low Voltage (I _{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 106 A
Rated Insulation Voltage (U _i)	acc. to IEC 60947-4-1 690 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U _{imp})	6 kV
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-15) 1200 cycles per hour (AC-2 / AC-4) 300 cycles per hour (AC-3) 1200 cycles per hour (DC-13) 900 cycles per hour 3600 cycles per hour
Maximum Mechanical Switching Frequency	
Rated Control Circuit Voltage (U _c)	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Power Loss	at 6 A per Pole 0.1 W at Rated Operating Conditions AC-1 per Pole 1 W at Rated Operating Conditions AC-3 per Pole 0.2 W
Operate Time	Between Coil De-energization and NC Contact Closing 13 ... 98 ms Between Coil De-energization and NO Contact Opening 11 ... 95 ms Between Coil Energization and NC Contact Opening 38 ... 90 ms Between Coil Energization and NO Contact Closing 40 ... 95 ms
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M4 Screws Placed Diagonally
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 0.75 ... 6 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 4 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Rigid Solid 1/2x 1 ... 4 mm ² Rigid Stranded 1/2x 1 ... 6 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ²

	Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Rigid Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ²
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Rigid Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ²
Wire Stripping Length	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20
Tightening Torque	Auxiliary Circuit 1.2 N-m Control Circuit 1.2 N-m Main Circuit 1.5 N-m
Terminal Type	Screw Terminals
Product Name	Block Contactor

Technical UL/CSA

NEMA Size	0
Continuous Current Rating NEMA	18 A
Horsepower Rating NEMA	(115 V AC) Single Phase 1 Hp (200 V AC) Three Phase 3 Hp (230 V AC) Single Phase 2 Hp (230 V AC) Three Phase 3 Hp (460 V AC) Three Phase 5 Hp (575 V AC) Three Phase 5 Hp
Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 28 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 1 hp (200 ... 208 V AC) Three Phase 3 hp (220 ... 240 V AC) Three Phase 3 hp (240 V AC) Single Phase 2 hp (440 ... 480 V AC) Three Phase 7-1/2 hp (550 ... 600 V AC) Three Phase 10 hp
Connecting Capacity Main Circuit UL/CSA	Rigid Solid 1/2x 16-10 AWG Rigid Stranded 1/2x 16-10 AWG
Connecting Capacity Auxiliary Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
Connecting Capacity Control Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 11 in-lb Control Circuit 11 in-lb Main Circuit 13 in-lb
Full Load Amps Motor Use	(120 V AC) Single Phase 16 A (200 ... 208 V AC) Three Phase 11 A (220 ... 240 V AC) Three Phase 9.6 A (240 V AC) Single Phase 12 A (440 ... 480 V AC) Three Phase 11 A (550 ... 600 V AC) Three Phase 11 A

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C
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Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible	Without Derating 3000 m
Resistance to Shock acc. to IEC 60068-2-27	Closed, Shock Direction: B1 25 g Open, Shock Direction: B1 5 g Shock Direction: A 30 g Shock Direction: B2 15 g Shock Direction: C1 25 g Shock Direction: C2 25 g
Resistance to Vibrations	4g Closed Position & 2g Open position 5 ... 300 Hz
Pollution Degree	3

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
SCIP	f65e669b-20d8-43fb-8274-7e2dbb1081c7 China
Simplified SCIP	f90543cd-ab33-4a07-b542-20643207fdf9 Poland 57112f6f-c541-4141-b3aa-a3476f817b11 Denmark 5ba3fae0-d77c-45e4-a594-b14912751437 Germany ee5dc123-428b-42c2-bf95-bcc7bf7a6f19 Croatia 95079d6e-4b3c-43c8-a92f-dc8f45fdd350 Czech Republic cada30f6-6e8b-417a-a1fb-79d5576f7acc Germany 610853f9-f761-494d-8feb-c92762c10144 Poland e4cf4642-5ba3-4776-a7c2-c73ada20453d Belgium b6441cab-5123-4844-83ad-99a6ced43f93 Poland 1d064804-a9ea-49be-b30a-146f8e33f26d Netherlands cc7b3f63-6318-429b-bc3a-6e26f3d248e8 Norway 0828aee1-deb6-4361-ad97-15189e90404b Hungary 5d4abeaa-3e53-48d7-abb2-3239364bd15e Hungary 62cfc0d3-8eeb-460b-b46b-a117c0a469f2 Estonia 9aec28df-03d8-4bce-9c6a-c6903713f483 Finland cc82e6c4-5fc9-44ca-b384-289f57c3949e Belgium 9f9596ac-8e6b-4a02-92e0-756818a29633 Bulgaria b279d261-5230-4000-bd99-4069e60ac3a1 Spain f92b3ef9-5a52-498a-8223-436671bd4fff Greece 19b08695-5e7e-4f53-b59d-fe666302cbad Portugal 2aefec57-e310-4d93-a713-f440eacd4fc5 Germany 9858b6d9-3d83-48fe-93fb-5966608c0d68 France ca8f66a9-1353-4d76-9323-c7ab5d89d81d Germany cb589a00-e5bf-4ac0-a0be-3f5f327c3f78 Germany 8e7e3b66-fd47-4540-9a40-54f2c6df496d Sweden 65be4510-7dab-4bee-8358-f3b3e11f3611 Sweden 9fd4dbb7-e2d9-4358-84eb-01bb635d51a4 France
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	No non-hazardous waste is sent to a landfill
End Of Life Disassembling Instructions	1SBC101080M6801
Environmental Product	1SBD250584E3000

Declaration - EPD

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 - 92.7 %

Certificates and Declarations

A2L Certificate – UL	9AKK108469A4875 9AKK108469A4879
ABS Certificate	ABS_20-2060694-PDA
BV Certificate	BV_2634H24898C0
CB Certificate	CB_SE-113345
CCC Certificate	CCC_2024010304656669
CQC Certificate	CQC2010010304445624 CQC2020010304298240
Declaration of Conformity - CCC	2020980304001253 2020980304001082
Declaration of Conformity - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
DNV Certificate	DNV_TAE00001AF-4
GOST Certificate	GOST_POCCFR.ME77.B07175.pdf
KC Certificate	KC_HW02016-15005C
LR Certificate	LRS_LR23403517TA-02
RINA Certificate	RINA_ELE142224XG
RMRS Certificate	RMRS_1802705280
UL Certificate	UL-US-2150887-5 UL-CA-2142658-5
UL Listing Card	E312527

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	87 mm
Package Level 1 Depth / Length	79 mm
Package Level 1 Height	47 mm
Package Level 1 Gross Weight	0.27 kg
Package Level 1 EAN	3471523110311
Package Level 2 Units	box 27 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	315 mm
Package Level 2 Gross Weight	7.29 kg

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)	3705802
E-Number (Sweden)	3211341

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF12

