



PRODUCT-DETAILS

AF96-30-11-11

AF96-30-11-11 24-60V50/60HZ 20-60VDC

Contactors



General Information	
Extended Product Type	AF96-30-11-11
Product ID	1SBL407001R1111
EAN	3471523133310
Catalog Description	AF96-30-11-11 24-60V50/60HZ 20-60VDC Contactor
Long Description	The AF96-30-11-11 is a 3 pole - 1000 V IEC or 600 UL contactor with pre-mounted auxiliary contacts and screw terminals, controlling motors up to 45 kW / 400 V AC (AC-3) or 60 hp / 480 V UL and switching power circuits up to 130 A (AC-1) or 115 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	9AAC175976_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Instructions and Manuals	1SBC101036M6801
Instructions and Manuals (Part 2)	1SAC200017M0002
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	82 mm
Product Net Depth / Length	116 mm
Product Net Height	125.5 mm
Product Net Weight	1.26 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	1
Number of Poles	3P
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60335-2-40 LZGH2 A2L, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60335-2-40 LZGH2 A2L, CSA C22.2 No. 60947-1:22, CSA C22.2 No. 60947-4-1:22
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 1000 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 $\Theta = 40^\circ\text{C}$ 130 A acc. to IEC 60947-5-1, $\Theta = 40^\circ\text{C}$ 16 A
Rated Operational Current AC-1 (I_e)	(690 V) 40 °C 130 A (690 V) 60 °C 105 A (690 V) 70 °C 90 A
Rated Operational Current AC-3 (I_e)	(415 V) 60 °C 96 A (440 V) 60 °C 96 A (500 V) 60 °C 80 A (690 V) 60 °C 57 A (1000 V) 60 °C 30 A (380 / 400 V) 60 °C 105 A (220 / 230 / 240 V) 60 °C 105 A
Rated Operational Current AC-3e (I_e)	(415 V) 60 °C 96 A (440 V) 60 °C 96 A (500 V) 60 °C 80 A (690 V) 60 °C 57 A (380 / 400 V) 60 °C 105 A (220 / 230 / 240 V) 60 °C 105 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 Current DC-1 (I_e)	(110 V) 2 Poles in Series, 40 °C 130 A (110 V) 2 Poles in Series, 60 °C 105 A (110 V) 2 Poles in Series, 70 °C 90 A (110 V) 3 Poles in Series, 40 °C 130 A (110 V) 3 Poles in Series, 60 °C 105 A (110 V) 3 Poles in Series, 70 °C 90 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 105 A (220 V) 3 Poles in Series, 70 °C 90 A (72 V) 1-Pole, 40 °C 130 A (72 V) 1-Pole, 60 °C 105 A (72 V) 1-Pole, 70 °C 90 A (72 V) 2 Poles in Series, 40 °C 130 A (72 V) 2 Poles in Series, 60 °C 105 A (72 V) 2 Poles in Series, 70 °C 90 A (72 V) 3 Poles in Series, 40 °C 130 A (72 V) 3 Poles in Series, 60 °C 105 A (72 V) 3 Poles in Series, 70 °C 90 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 130 A (110 V) 2 Poles in Series, 60 °C 105 A (110 V) 2 Poles in Series, 70 °C 90 A (110 V) 3 Poles in Series, 40 °C 130 A (110 V) 3 Poles in Series, 60 °C 105 A (110 V) 3 Poles in Series, 70 °C 90 A (220 V) 3 Poles in Series, 40 °C 130 A (220 V) 3 Poles in Series, 60 °C 105 A (220 V) 3 Poles in Series, 70 °C 90 A (72 V) 1-Pole, 40 °C 130 A (72 V) 1-Pole, 60 °C 105 A (72 V) 1-Pole, 70 °C 90 A (72 V) 2 Poles in Series, 40 °C 130 A (72 V) 2 Poles in Series, 60 °C 105 A (72 V) 2 Poles in Series, 70 °C 90 A (72 V) 3 Poles in Series, 40 °C 130 A (72 V) 3 Poles in Series, 60 °C 105 A (72 V) 3 Poles in Series, 70 °C 90 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 130 A (110 V) 2 Poles in Series, 60 °C 105 A (110 V) 2 Poles in Series, 70 °C 90 A (110 V) 3 Poles in Series, 40 °C 130 A (110 V) 3 Poles in Series, 60 °C 105 A (110 V) 3 Poles in Series, 70 °C 90 A (220 V) 3 Poles in Series, 40 °C 130 A (220 V) 3 Poles in Series, 60 °C 105 A (220 V) 3 Poles in Series, 70 °C 90 A (72 V) 1-Pole, 40 °C 130 A (72 V) 1-Pole, 60 °C 105 A (72 V) 1-Pole, 70 °C 90 A (72 V) 2 Poles in Series, 40 °C 130 A (72 V) 2 Poles in Series, 60 °C 105 A (72 V) 2 Poles in Series, 70 °C 90 A (72 V) 3 Poles in Series, 40 °C 130 A (72 V) 3 Poles in Series, 60 °C 105 A (72 V) 3 Poles in Series, 70 °C 90 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)	(415 V) 55 kW (440 V) 55 kW (500 V) 55 kW (690 V) 55 kW (1000 V) 40 kW

	(380 / 400 V) 45 kW (380 / 400 V) 55 kW (220 / 230 / 240 V) 25 kW (220 / 230 / 240 V) 30 kW
Rated Operational Power AC-3e (P _e)	(415 V) 55 kW (440 V) 55 kW (500 V) 55 kW (690 V) 55 kW (380 / 400 V) 45 kW (380 / 400 V) 55 kW (220 / 230 / 240 V) 25 kW (220 / 230 / 240 V) 30 kW
Rated Short-time Withstand Current Low Voltage (I _{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 840 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 140 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1200 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 450 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 1150 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 750 A
Rated Insulation Voltage (U _i)	acc. to IEC 60947-4-1 1000 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U _{imp})	8 kV
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-15) 1200 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 1200 cycles per hour (DC-13) 900 cycles per hour
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage (U _c)	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Coil Consumption	Average Holding Value 50 / 60 Hz 4 V·A Average Holding Value 50 Hz 4 V·A Average Holding Value 60 Hz 4 V·A Average Holding Value DC 2 W Average Holding Value, from Warm State 2 W
Power Loss	at 6 A per Pole 0.1 W at Rated Operating Conditions AC-1 per Pole 8.2 W at Rated Operating Conditions AC-3 per Pole 4.5 W
Operate Time	Between Coil De-energization and NC Contact Closing 19 ... 105 ms Between Coil De-energization and NO Contact Opening 17 ... 100 ms Between Coil Energization and NC Contact Opening 38 ... 95 ms Between Coil Energization and NO Contact Closing 42 ... 100 ms
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M4 or 2 x M6 Screws Placed Diagonally
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 6 ... 50 mm ² Flexible with Insulated Ferrule 1/2x 6 ... 50 mm ² Rigid Stranded 1x 6 ... 70 mm ² Rigid Stranded 2x 6 ... 50 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 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 1/2x 1 ... 2.5 mm ²
Wire Stripping Length	Auxiliary Circuit 10 mm Control Circuit 10 mm

	Main Circuit 17 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 IP10
Recommended Screw Driver	Pozidriv PZ
Tightening Torque	Auxiliary Circuit 1.2 N·m Control Circuit 1.2 N·m Main Circuit 6 N·m
Terminal Type	Screw Terminals
Product Name	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 115 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 7-1/2 hp (200 ... 208 V AC) Three Phase 30 hp (220 ... 240 V AC) Three Phase 40 hp (240 V AC) Single Phase 20 hp (440 ... 480 V AC) Three Phase 75 hp (550 ... 600 V AC) Three Phase 75 hp
Connecting Capacity Main Circuit UL/CSA	Rigid Stranded 1/2x 6-1 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 53 in·lb
Full Load Amps Motor Use	(120 V AC) Single Phase 80 A (200 ... 208 V AC) Three Phase 92 A (220 ... 240 V AC) Three Phase 80 A (240 V AC) Single Phase 88 A (440 ... 480 V AC) Three Phase 77 A (550 ... 600 V AC) Three Phase 77 A

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -40 ... 70 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C
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: A 25 g Closed, Shock Direction: B1 25 g Closed, Shock Direction: B2 15 g Closed, Shock Direction: C1 25 g Closed, Shock Direction: C2 25 g Open, Shock Direction: B1 5 g
Resistance to Vibrations	3g Closed Position & 3g 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
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	1SBC101081M6801
Environmental Product Declaration - EPD	1SBD250584E2000
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 Product Efficiency - Product requires less energy to operate 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 - 91.9 %

Certificates and Declarations

A2L Certificate – UL	9AKK108469A4890 9AKK108469A4892
ABS Certificate	ABS_20-2060694-PDA
BV Certificate	BV_2634H36994B2
CB Certificate	CB_SE-116522
CCC Certificate	CCC_2024010304656667
Declaration of Conformity - CCC	2020980304001255
Declaration of Conformity - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
DNV Certificate	DNV_TAE00001AF-4
KC Certificate	KC_HW02016-15011C
LR Certificate	LRS_LR23403517TA-02
RINA Certificate	RINA_ELE084013XG
RMRS Certificate	RMRS_1802705280
UL Certificate	UL-US-L312527-1141-10303102-19 UL-CA-L312527-4141-10303102-19
UL Listing Card	UL_E312527

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	150 mm
Package Level 1 Depth / Length	150 mm
Package Level 1 Height	103 mm
Package Level 1 Gross Weight	1.38 kg
Package Level 1 EAN	3471523133310

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)		3707140

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SBN010015R1001	CE5-01D0.1 Auxiliary Contact Block	CE5-01D0.1	1	piece
1SBN010015R1010	CE5-10D0.1 Auxiliary Contact Block	CE5-10D0.1	1	piece
1SBN010016R1001	CE5-01W0.1 Auxiliary Contact Block	CE5-01W0.1	1	piece
1SBN010016R1010	CE5-10W0.1 Auxiliary Contact Block	CE5-10W0.1	1	piece
1SBN010017R1001	CE5-01D2 Auxiliary Contact Block	CE5-01D2	1	piece
1SBN010017R1010	CE5-10D2 Auxiliary Contact Block	CE5-10D2	1	piece
1SBN010018R1001	CE5-01W2 Auxiliary Contact Block	CE5-01W2	1	piece
1SBN010018R1010	CE5-10W2 Auxiliary Contact Block	CE5-10W2	1	piece
1SBN010110R1010	CA4-10 Auxiliary Contact Block	CA4-10	1	piece
1SBN010110T1010	CA4-10-T Auxiliary Contact Block	CA4-10-T	1	piece
1SBN010110R1001	CA4-01 Auxiliary Contact Block	CA4-01	1	piece
1SBN010110T1001	CA4-01-T Auxiliary Contact Block	CA4-01-T	1	piece
1SBN010111R1010	CC4-10 Leading Auxiliary Contact Block	CC4-10	1	piece
1SBN010111R1001	CC4-01 Lagging Auxiliary Contact Block	CC4-01	1	piece
1SBN010120R1011	CAL4-11 Auxiliary Contact Block	CAL4-11	1	piece
1SBN010120T1011	CAL4-11-T Auxiliary Contact Block	CAL4-11-T	1	piece
1SBN010140R1022	CA4-22E Auxiliary Contact Block	CA4-22E	1	piece
1SBN010140R1031	CA4-31E Auxiliary Contact Block	CA4-31E	1	piece
1SBN010140R1040	CA4-40E Auxiliary Contact Block	CA4-40E	1	piece
1SBN010140R1004	CA4-04E Auxiliary Contact Block	CA4-04E	1	piece
1SBN070156T1000	LDC4 Additional Coil Terminal Block	LDC4	1	piece
1SBN020112R1000	TEF4-ON Frontal Electronic Timer	TEF4-ON	1	piece
1SBN020113R1000	TEF4S-ON Frontal Electronic Timer	TEF4S-ON	1	piece
1SBN010134R1011	CAL4-11K Auxiliary Contact Block	CAL4-11K	1	piece
1SBN020114R1000	TEF4-OFF Frontal Electronic Timer	TEF4-OFF	1	piece
1SBN020115R1000	TEF4S-OFF Frontal Electronic Timer	TEF4S-OFF	1	piece
1SBN110108T1000	BX4 Protective Cover	BX4	1	piece
1SBN040200R1011	WA4-96-11 24-60V50/60HZ-DC Mechanical Latching Unit	WA4-96-11	1	piece
1SBN060100R1000	RA4 Interface Relay	RA4	1	piece
1SBN040200R1013	WA4-96-13 100-250V50/60HZ-DC Mechanical Latching Unit	WA4-96-13	1	piece
1SBN040200R1014	WA4-96-14 250-500V50/60HZ-DC Mechanical Latching Unit	WA4-96-14	1	piece
1SBN040200R1012	WA4-96-12 48-130V50/60HZ-DC Mechanical Latching Unit	WA4-96-12	1	piece
1SBN070159T1000	LDC4K Additional Coil Terminal Block	LDC4K	1	piece
1SBN010160R1001	CA4-01K Auxiliary Contact Block	CA4-01K	1	piece
1SBN010146R1022	CA4-22EK Auxiliary Contact Block	CA4-22EK	1	piece
1SBN010160R1010	CA4-10K Auxiliary Contact Block	CA4-10K	1	piece
1SBN010160T1001	CA4-01K-T Auxiliary Contact Block	CA4-01K-T	1	piece
1SBN010160T1010	CA4-10K-T Auxiliary Contact Block	CA4-10K-T	1	piece
1SBN010146R1031	CA4-31EK Auxiliary Contact Block	CA4-31EK	1	piece
1SBN010146R1040	CA4-40EK Auxiliary Contact Block	CA4-40EK	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF96

