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 PRODUCT-DETAILS

# AF116-30-11-31

## AF116-30-11-31 Contactor




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**General Information**

Extended Product Type	AF116-30-11-31
Product ID	1SFL427001R3111
EAN	7320500560266
Catalog Description	AF116-30-11-31 Contactor

Long Description	<p>The AF116-30-11-31 is a 3 pole - 690 V IEC or 600 V UL contactor with double clamp, controlling motors up to 55 kW / 400 V AC (AC-3) or 75 hp / 480 V UL and switching power circuits up to 160 A (AC-1) or 160 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.</p>
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**Ordering**

Minimum Order Quantity	1 piece
Customs Tariff Number	8536490099

### Popular Downloads

EPLAN Data	9AAC174538_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical Information (Part 2)	1SAC200017M0002
Instructions and Manuals	1SFC100003M0201
CAD Dimensional Drawing	2CDC001079B0201

### Dimensions

Product Net Width	90 mm
Product Net Depth / Length	138.5 mm
Product Net Height	150 mm
Product Net Weight	1.55 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
Rated Operational Voltage	Main Circuit 690 V
Rated Frequency (f)	Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I <sub>th</sub> )	acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 160 A
Rated Operational Current AC-1 (I <sub>e</sub> )	(690 V) 40 °C 160 A (690 V) 60 °C 145 A (690 V) 70 °C 130 A
Rated Operational Current AC-3 (I <sub>e</sub> )	(415 V) 60 °C 116 A (440 V) 60 °C 116 A (500 V) 60 °C 110 A (690 V) 60 °C 65 A (380 / 400 V) 60 °C 116 A (220 / 230 / 240 V) 60 °C 116 A
Rated Operational Current AC-3e (I <sub>e</sub> )	(415 V) 60 °C 116 A (440 V) 60 °C 116 A (500 V) 60 °C 110 A (690 V) 60 °C 65 A (380 / 400 V) 60 °C 116 A (220 / 230 / 240 V) 60 °C 116 A
Rated Operational Power AC-3 (P <sub>e</sub> )	(400 V) 55 kW (415 V) 55 kW (440 V) 75 kW (500 V) 55 kW (380 / 400 V) 55 kW (220 / 230 / 240 V) 30 kW
Rated Operational Power AC-3e (P <sub>e</sub> )	(415 V) 55 kW (440 V) 75 kW (500 V) 75 kW (690 V) 55 kW

	(380 / 400 V) 55 kW (220 / 230 / 240 V) 30 kW
Rated Breaking Capacity AC-3	8 x I <sub>e</sub> AC-3
Rated Breaking Capacity AC-3e	8.5 x I <sub>e</sub> AC-3e
Rated Making Capacity AC-3	10 x I <sub>e</sub> AC-3
Rated Making Capacity AC-3e	12 x I <sub>e</sub> AC-3e
Rated Short-time Withstand Current Low Voltage (I <sub>cw</sub> )	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 928 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 160 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 379 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 536 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 2000 A cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 1000 A
Rated Insulation Voltage (U <sub>i</sub> )	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 1000 V
Rated Impulse Withstand Voltage (U <sub>imp</sub> )	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 U <sub>c</sub> Min. ... 1.1 x U <sub>c</sub> Max. (at θ ≤ 70 °C)
Rated Control Circuit Voltage (U <sub>c</sub> )	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 4.9 V·A Holding at Max. Rated Control Circuit Voltage 50 Hz 2.5 W Holding at Max. Rated Control Circuit Voltage 60 Hz 4.9 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 2.5 W Holding at Max. Rated Control Circuit Voltage DC 2.7 V·A Holding at Max. Rated Control Circuit Voltage DC 2.7 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 305 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 305 V·A Pull-in at Max. Rated Control Circuit Voltage DC 420 V·A Pull-in at Max. Rated Control Circuit Voltage DC 420 W
Power Loss	at Rated Operating Conditions AC-1 per Pole 12 W at Rated Operating Conditions AC-3 per Pole 6 W
Operate Time	Between Coil De-energization and NO Contact Opening 40 ... 70 ms Between Coil Energization and NO Contact Closing 20 ... 55 ms
Connecting Capacity Main Circuit	Flexible 2 x 10 ... 70 mm <sup>2</sup> Rigid Cu-Cable 1 x 10 ... 95 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible 2x 0.75 ... 2.5 mm <sup>2</sup> Solid 1x 1 ... 4 mm <sup>2</sup> Solid 2x 1 ... 4 mm <sup>2</sup> Stranded 1x 1 ... 4 mm <sup>2</sup> Stranded 2x 1 ... 4 mm <sup>2</sup>
Connecting Capacity	Flexible 1 x 10 ... 70 mm <sup>2</sup> Flexible 2 x 10 ... 70 mm <sup>2</sup> Rigid Cu-Cable 1 x 10 ... 95 mm <sup>2</sup>
Wire Stripping Length	Auxiliary Circuit 9 mm Control Circuit 9 mm
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

Recommended Screw Driver	Main Circuit M6 Control Circuit M3.5
Tightening Torque	Auxiliary Circuit 1 N·m Cable Lug 9 N·m Control Circuit 1 N·m Main Circuit 8 N·m
Terminal Type	Double Clamp
Product Name	Block Contactor

### Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 160 A
Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 30 hp (220 ... 240 V AC) Three Phase 40 hp (440 ... 480 V AC) Three Phase 75 hp (550 ... 600 V AC) Three Phase 100 hp
Tightening Torque UL/CSA	Auxiliary Circuit 9 in-lb Control Circuit 9 in-lb Main Circuit 71 in-lb
Full Load Amps Motor Use	(200 ... 208 V AC) Three Phase 92 A (220 ... 240 V AC) Three Phase 104 A (440 ... 480 V AC) Three Phase 96 A (550 ... 600 V AC) Three Phase 99 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 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
SCIP	fab1a5fc-db27-4137-a3d4-e1c5db300455 Sweden
Simplified SCIP	9cc410c3-9711-4414-8eaf-b8f48ffe44a8 Belgium 3bbd4da4-d976-4804-9d2d-9099091f8fd3 Hungary 9cf2ffd5-e14a-4e2e-aca2-d471fabdb44e France 276d27c9-f224-44b5-9234-f85bb432bdbb Belgium 50f98eae-2dc8-4ea8-b093-8d1919237bb4 Spain dfd27276-0574-4f4c-beb7-e52604d69da3 Poland 029edbc4-54b3-46a9-bfe2-9f0e2250a74a Poland 18bfb723-4af9-49cc-81db-467f64a7456e Czech Republic be246ec1-14ec-4383-ad81-073c5e346308 Croatia 830c934c-fbdf-4f6b-8477-fcc40c7f9b76 Norway e3645eb5-dc12-4f66-bc5a-f9a7c363c69b Finland e638e5a4-63ca-4104-933c-d7f09893c9a4 Italy d7aac88a-c4a0-4a03-b01c-4ccb75260f7 Germany 6bdfdb00-cf19-4d26-a9f4-a2fc0576164d Bulgaria 0585fc18-b421-4e59-9298-66821302c4ab Hungary d1f6cf3f-b84a-4ae2-b2c1-7a00348206f2 Germany

110ec419-eeaf-44de-8793-a8b5374e9f4f Estonia  
 007075f0-d9c8-475b-b164-a7f516e514e2 Greece  
 a64a7152-c93e-4770-96c8-b13c7bee559b Germany  
 6f90ec24-5161-49cf-aa65-bd91a62ea13d Germany  
 cd6b3f46-c8e2-46c9-bbc5-0b534ff081ea Poland  
 77a61597-b023-4c25-b8ec-07f34b54bf7d France  
 223a6349-d136-4573-bacc-7bee3fa4db97 Germany  
 f92a6fd7-df16-4a52-b746-767e6fe4b4ce Netherlands  
 d303c9a9-479c-4317-941f-4f0e6786e03c Sweden  
 b730bf3b-e48d-4adf-802e-f4c37a2dec36 Portugal  
 8dc312da-304b-442f-9882-04ddd247070c Denmark

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	1SFC100092D0201
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 - 87.8 %

**Certificates and Declarations**

A2L Certificate – UL	9AKK108468A6693
ABS Certificate	14-LD1092198-PDA
Declaration of Conformity - CE	2CMT2015-005439
Declaration of Conformity - UKCA	2CMT2020-006118
UL Certificate	20120925-E36588

**Container Information**

Package Level 1 Units	box 1 piece
Package Level 1 Width	207 mm
Package Level 1 Depth / Length	216 mm
Package Level 1 Height	150 mm
Package Level 1 Gross Weight	1.75 kg
Package Level 1 EAN	7320500560266

**External Classifications and Standards**

Object Classification	Q
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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 >> lec Contactors

### Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN074207R1000	LW140 Terminal Enlargement	LW140	1	piece
1SFN074210R1000	LX140 Terminal Extension	LX140	1	piece
1SFN084206R1000	BEA140/XT2 Connection Set	BEA140/XT2	1	piece
1SFN084206R1001	BEA140/XT4 Connection Set	BEA140/XT4	1	piece
1SFN084211R1000	BER140-4 Connection Set	BER140-4	1	piece
1SFN084214R1000	BEP140-30 Connection Set	BEP140-30	1	piece
1SFN084214R2000	BEP140-40 Connection Set	BEP140-40	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
1SFN010832R1001	CEL19-01 Auxiliary Contact Block	CEL19-01	1	piece
1SFN010832R1010	CEL19-10 Auxiliary Contact Block	CEL19-10	1	piece
1SFN124203R1000	LT140-30L Terminal Shroud	LT140-30L	1	piece
1SFN084413R1000	BEY140-4 Connection Set	BEY140-4	1	piece
1SFN084813R1000	BEY190-4 Connection Set	BEY190-4	1	piece

### Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF116

