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 PRODUCT-DETAILS

## AF80-30-00-13

### AF80-30-00-13 100-250V50/60HZ-DC Contactor




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#### General Information

<b>Extended Product Type:</b>	AF80-30-00-13
<b>Product ID:</b>	1SBL397001R1300
<b>EAN:</b>	3471523132931
<b>Catalog Description:</b>	AF80-30-00-13 100-250V50/60HZ-DC Contactor
<b>Long Description:</b>	The AF80-30-00-13 is a 3 pole - 1000 V IEC or 600 UL contactor with screw terminals, controlling motors up to 37 kW / 400 V AC (AC-3) or 60 hp / 480 V UL and switching power circuits up to 125 A (AC-1) or 105 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 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.
<b>Display Name:</b>	AF80-30-00-13

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#### Ordering

<b>Minimum Order Quantity:</b>	1 piece
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Customs Tariff Number: 85364900

## Popular Downloads

EPLAN Data:	9AAC175975_EPLAN
Data Sheet, Technical Information:	1SBC100214C0202
Instructions and Manuals:	1SBC101036M6801
Instructions and Manuals (Part 2):	1SAC200017M0002
CAD Dimensional Drawing:	2CDC001079B0201

## Dimensions

Product Net Width:	70 mm
Product Net Depth / Length:	116 mm
Product Net Height:	125.5 mm
Product Net Weight:	1.17 kg

## Technical

Number of Main Contacts NO:	3
Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	0
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 60947-1, 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:	Main Circuit 1000 V
Rated Frequency (f):	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 $\Theta = 40\text{ °C}$ 130 A):	
Rated Operational Current AC-1 ( $I_e$ ):	(690 V) 40 °C 125 A (690 V) 60 °C 100 A (690 V) 70 °C 85 A
Rated Operational Current AC-3 ( $I_e$ ):	(415 V) 60 °C 80 A (440 V) 60 °C 80 A (500 V) 60 °C 65 A (690 V) 60 °C 49 A (1000 V) 60 °C 25 A (380 / 400 V) 60 °C 80 A (220 / 230 / 240 V) 60 °C 80 A
Rated Operational Current AC-3e ( $I_e$ ):	(415 V) 60 °C 80 A (440 V) 60 °C 80 A (500 V) 60 °C 65 A (690 V) 60 °C 49 A (380 / 400 V) 60 °C 80 A (220 / 230 / 240 V) 60 °C 80 A

<b>Rated Operational Current DC-1 (I<sub>e</sub>):</b>	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
<b>Rated Operational Current DC-3 (I<sub>e</sub>):</b>	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
<b>Rated Operational Current DC-5 (I<sub>e</sub>):</b>	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
<b>Rated Operational Power AC-3 (P<sub>e</sub>):</b>	(400 V) 37 kW (415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 kW (1000 V) 35 kW (380 / 400 V) 37 kW (220 / 230 / 240 V) 22 kW
<b>Rated Operational Power AC-3e (P<sub>e</sub>):</b>	(415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 kW (380 / 400 V) 37 kW (220 / 230 / 240 V) 22 kW

<b>Rated Short-time Withstand Current Low Voltage (<math>I_{cw}</math>):</b>	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 780 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
<b>Maximum Breaking Capacity:</b>	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
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	acc. to IEC 60947-4-1 1000 V acc. to UL/CSA 600 V
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	8 kV
<b>Maximum Electrical Switching Frequency:</b>	(AC-1) 600 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 1200 cycles per hour
<b>Maximum Mechanical Switching Frequency:</b>	3600 cycles per hour
<b>Rated Control Circuit Voltage (<math>U_c</math>):</b>	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
<b>Coil Consumption:</b>	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
<b>Power Loss:</b>	at Rated Operating Conditions AC-1 per Pole 7.6 W at Rated Operating Conditions AC-3 per Pole 3 W
<b>Operate Time:</b>	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
<b>Mounting on DIN Rail:</b>	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715
<b>Mounting by Screws (not supplied) :</b>	2 x M4 or 2 x M6 Screws Placed Diagonally
<b>Connecting Capacity Main Circuit:</b>	Flexible with Ferrule 1/2x 6 ... 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 6 ... 50 mm <sup>2</sup> Rigid Stranded 1x 6 ... 70 mm <sup>2</sup> Rigid Stranded 2x 6 ... 50 mm <sup>2</sup>
<b>Connecting Capacity Control Circuit:</b>	Flexible with Ferrule 1/2x 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 ... 1.5 mm <sup>2</sup> Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup> Rigid Stranded 1/2x 1 ... 2.5 mm <sup>2</sup>
<b>Wire Stripping Length:</b>	Control Circuit 10 mm Main Circuit 17 mm
<b>Degree of Protection:</b>	acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10
<b>Recommended Screw Driver:</b>	Pozidriv PZ
<b>Tightening Torque:</b>	Control Circuit 1.2 N·m Main Circuit 6 N·m
<b>Terminal Type:</b>	Screw Terminals
<b>Product Name:</b>	Block Contactor

## Technical UL/CSA

<b>NEMA Size:</b>	3
<b>Continuous Current Rating NEMA:</b>	90 A

<b>Horsepower Rating NEMA:</b>	(200 V AC) Three Phase 25 Hp (230 V AC) Three Phase 30 Hp (460 V AC) Three Phase 50 Hp (575 V AC) Three Phase 50 Hp
<b>Maximum Operating Voltage UL/CSA:</b>	Main Circuit 600 V
<b>General Use Rating UL/CSA:</b>	(600 V AC) 105 A
<b>Horsepower Rating UL/CSA:</b>	(120 V AC) Single Phase 7-1/2 hp (200 ... 208 V AC) Three Phase 25 hp (220 ... 240 V AC) Three Phase 30 hp (240 V AC) Single Phase 15 hp (440 ... 480 V AC) Three Phase 60 hp (550 ... 600 V AC) Three Phase 75 hp
<b>Connecting Capacity Main Circuit UL/CSA:</b>	Rigid Stranded 1/2x 6-1 AWG
<b>Connecting Capacity Control Circuit UL/CSA:</b>	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
<b>Tightening Torque UL/CSA:</b>	Control Circuit 11 in-lb Main Circuit 53 in-lb
<b>Full Load Amps Motor Use:</b>	(120 V AC) Single Phase 80 A (200 ... 208 V AC) Three Phase 78.2 A (220 ... 240 V AC) Three Phase 80 A (240 V AC) Single Phase 68 A (440 ... 480 V AC) Three Phase 77 A (550 ... 600 V AC) Three Phase 77 A

## Environmental

<b>Ambient Air Temperature:</b>	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
<b>Climatic Withstand:</b>	Category B according to IEC 60947-1 Annex Q
<b>Maximum Operating Altitude Permissible:</b>	Without Derating 3000 m
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	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
<b>Resistance to Vibrations:</b>	3g Closed Position & 3g Open Position 5 ... 300 Hz
<b>Pollution Degree:</b>	3

## Material Compliance

<b>Conflict Minerals Reporting Template (CMRT):</b>	9AKK108467A5658
<b>REACH Declaration:</b>	2CMT2021-006202
<b>RoHS Declaration:</b>	2CMT2021-006277
<b>RoHS Information:</b>	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
<b>SCIP:</b>	2d5965a6-5b05-4e83-9459-9b5d78318aa2 France

<b>Simplified SCIP:</b>	57ec6da0-6b74-4d41-942c-28c569726642 Poland 5d3a40e2-0dd2-48f8-ae60-df6cfd6688b6 Belgium 84e38467-b47e-41a7-a633-0e291c7314f6 Hungary dacab1dc-889c-43ea-957a-0278e2eb9308 Bulgaria 9bd00c9e-233b-4130-8db2-5b4e46325892 Hungary 05d34ee2-b106-4e9e-8aaf-bb3c0696dab1 Belgium b8f41cb2-309c-4bca-b0f8-31c8411b3c2d Italy 73f32aa1-94bb-4e00-9ed0-49dd4c1836be Germany f43cd794-f0d3-407d-a0c2-2e1624bd39f8 Netherlands f6d0f85a-81dc-4d65-a3b8-a6c580818d49 Greece b5f1e100-759a-4cac-9740-c5ad3386a78c Finland 0bc3bb53-fcd8-496e-bf2c-4988d9b5f9e5 Sweden 98c08dc1-2723-4141-a883-43d88a9c1f8e Poland 4186d146-0fba-45da-a4c2-c87d50cbf7f1 Germany 3115cc1f-b1ba-44a5-a504-88ff86c3be36 Spain cbacee52-8d3e-4f4d-b9c8-53847a4f9923 Sweden e2e8ca03-6811-4164-a875-294c3d170711 Norway 64bf0ced-9457-40a7-8fb3-ad748bb21388 Croatia f12fcaa6-7e48-48c3-8dae-bce6dc6370f1 Portugal ba370118-f149-4c18-a5b4-98ddd3a0e2ee Germany 72f40100-060e-4ff9-b571-06ff58ce4bfe Denmark 32d40bf1-bae3-4434-bfe4-6d33f50f23d0 Germany 4d8bf81b-1918-4230-bc72-81d884b83cc7 Czechia 5061ae4c-ad66-4a1a-8bea-d068495ba286 Poland c60693b3-55d4-45d9-a28b-032cb87a11b0 Estonia 0b815038-d3f8-47af-b03c-1494f6049fce Germany 87ca08be-a7de-4803-890e-63cdc6854bbf France
<b>Toxic Substances Control Act - TSCA:</b>	2CMT2023-006525
<b>WEEE B2C / B2B:</b>	Business To Business
<b>WEEE Category:</b>	5. Small Equipment (No External Dimension More Than 50 cm)

**ABB EcoSolutions**

<b>ABB EcoSolutions:</b>	Yes
<b>ABB Site Meeting Group Waste To Landfill Target:</b>	No non-hazardous waste is sent to a landfill
<b>EcoSolutions Profile:</b>	1SBC100156C0308
<b>End Of Life Disassembling Instructions:</b>	1SBC101081M6801
<b>Environmental Product Declaration - EPD:</b>	1SBD250584E2000
<b>Improved Energy Efficiency for Customers:</b>	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
<b>Recyclability Rate of the Product acc. to EN45555:</b>	Design for Closing Resource Loops - Standard EN45555 - 91.9 %

**Certificates and Declarations**

<b>A2L Certificate – UL:</b>	9AKK108469A4890 9AKK108469A4892
<b>ABS Certificate:</b>	ABS_20-2060694-PDA
<b>BV Certificate:</b>	BV_2634H36994B2
<b>CB Certificate:</b>	CB_SE-116522A2
<b>CCC Certificate:</b>	CCC_2024010304656667
<b>Declaration of Conformity - CCC:</b>	2020980304001255

<b>Declaration of Conformity - CE:</b>	1SBD250000U1000
<b>Declaration of Conformity - UKCA:</b>	1SBD250031U1000
<b>DNV Certificate:</b>	DNV_TAE00001AF-4
<b>KC Certificate:</b>	KC_HW02016-15011C
<b>LR Certificate:</b>	LRS_LR23403517TA-02
<b>RINA Certificate:</b>	RINA_ELE084013XG
<b>RMRS Certificate:</b>	RMRS_1802705280
<b>UL Certificate:</b>	UL-US-L312527-1141-10303102-19 UL-CA-L312527-4141-10303102-19
<b>UL Listing Card:</b>	UL_E312527

## Container Information

<b>Package Level 1 Units:</b>	box 1 piece
<b>Package Level 1 Width:</b>	150 mm
<b>Package Level 1 Depth / Length:</b>	150 mm
<b>Package Level 1 Height:</b>	103 mm
<b>Package Level 1 Gross Weight:</b>	1.29 kg
<b>Package Level 1 EAN:</b>	3471523132931

## External Classifications and Standards

<b>Object Classification Code:</b>	Q
<b>ETIM 7:</b>	EC000066 - Power contactor, AC switching
<b>ETIM 8:</b>	EC000066 - Power contactor, AC switching
<b>ETIM 9:</b>	EC000066 - Power contactor, AC switching
<b>eClass:</b>	V11.0 : 27371003
<b>UNSPSC:</b>	39121529
<b>IDEA Granular Category Code (IGCC):</b>	4758 >> lec Contactors
<b>E-Number (Finland):</b>	3707122
<b>E-Number (Sweden):</b>	3210053

## Accessories

Identifier	Description	Type	Qty	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
1SBN010013R1010	CB5-10 Impulse Contact Block	CB5-10	1	piece
1SBN010013R1001	CB5-01 Impulse Contact Block	CB5-01	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
1SBN033405T1000	VM96-4 Mechanical Interlock Unit	VM96-4	1	piece
1SBN110108T1000	BX4 Protective Cover	BX4	1	piece
1SBN110122T1000	BDT4 Test Block	BDT4	1	piece

1ISBN040200R1011	WA4-96-11 24-60V50/60HZ-DC Mechanical Latching Unit	WA4-96-11	1	piece
1ISBN083911R1000	BER96-4 Connection Set for Reversing Contactors	BER96-4	1	piece
1ISBN060100R1000	RA4 Interface Relay	RA4	1	piece
1ISBN083913R2000	BEY96-4 Connection Set for Star-Delta Starter	BEY96-4	1	piece
1ISBN040200R1013	WA4-96-13 100-250V50/60HZ-DC Mechanical Latching Unit	WA4-96-13	1	piece
1ISBN040200R1014	WA4-96-14 250-500V50/60HZ-DC Mechanical Latching Unit	WA4-96-14	1	piece
1ISBN040200R1012	WA4-96-12 48-130V50/60HZ-DC Mechanical Latching Unit	WA4-96-12	1	piece
1ISBN070159T1000	LDC4K Additional Coil Terminal Block	LDC4K	1	piece
1ISBN010160R1001	CA4-01K Auxiliary Contact Block	CA4-01K	1	piece
1ISBN010146R1022	CA4-22EK Auxiliary Contact Block	CA4-22EK	1	piece
1ISBN010160R1010	CA4-10K Auxiliary Contact Block	CA4-10K	1	piece
1ISBN010160T1001	CA4-01K-T Auxiliary Contact Block	CA4-01K-T	1	piece
1ISBN010160T1010	CA4-10K-T Auxiliary Contact Block	CA4-10K-T	1	piece
1ISBN010146R1031	CA4-31EK Auxiliary Contact Block	CA4-31EK	1	piece
1ISBN010146R1040	CA4-40EK Auxiliary Contact Block	CA4-40EK	1	piece

## Categories

Products > Low Voltage Products and Systems > Control Products > Contactors > Block Contactors > AF Contactors > AF80



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