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 PRODUCT-DETAILS

## AF40-30-00-13

### AF40-30-00-13 100-250V50/60HZ-DC Contactor




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**General Information**

Extended Product Type	AF40-30-00-13
Product ID	1SBL347001R1300
EAN	3471523132030
Catalog Description	AF40-30-00-13 100-250V50/60HZ-DC Contactor

Long Description	<p>The AF40-30-00-13 is a 3 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 18.5 kW / 400 V AC (AC-3) or 30 hp / 480 V UL and switching power circuits up to 70 A (AC-1) or 60 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.</p>
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**Ordering**

Minimum Order Quantity	1 piece
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**Popular Downloads**

Data Sheet, Technical Information	1SBC100214C0202
Instructions and Manuals	1SBC101036M6801
CAD Dimensional Drawing	2CDC001079B0201

**Dimensions**

Product Net Width	55 mm
Product Net Depth / Length	111 mm
Product Net Height	125.5 mm
Product Net Weight	0.95 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 690 V
Rated Frequency (f)	Control Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I <sub>th</sub> )	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 105 A
Rated Operational Current AC-1 (I <sub>e</sub> )	(690 V) 40 °C 70 A (690 V) 60 °C 60 A (690 V) 70 °C 50 A
Rated Operational Current AC-3 (I <sub>e</sub> )	(415 V) 60 °C 40 A (440 V) 60 °C 40 A (500 V) 60 °C 35 A (690 V) 60 °C 25 A (380 / 400 V) 60 °C 40 A (220 / 230 / 240 V) 60 °C 40 A
Rated Operational Current AC-3e (I <sub>e</sub> )	(415 V) 60 °C 40 A (440 V) 60 °C 40 A (500 V) 60 °C 35 A (690 V) 60 °C 25 A (380 / 400 V) 60 °C 40 A (220 / 230 / 240 V) 60 °C 40 A
Rated Operational Current DC-1 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 70 A (110 V) 2 Poles in Series, 60 °C 60 A (110 V) 2 Poles in Series, 70 °C 50 A (110 V) 3 Poles in Series, 40 °C 70 A (110 V) 3 Poles in Series, 60 °C 60 A (110 V) 3 Poles in Series, 70 °C 50 A (220 V) 3 Poles in Series, 40 °C 70 A (220 V) 3 Poles in Series, 60 °C 60 A (220 V) 3 Poles in Series, 70 °C 50 A (72 V) 1-Pole, 40 °C 70 A

	(72 V) 1-Pole, 60 °C 60 A (72 V) 1-Pole, 70 °C 50 A (72 V) 2 Poles in Series, 40 °C 70 A (72 V) 2 Poles in Series, 60 °C 60 A (72 V) 2 Poles in Series, 70 °C 50 A (72 V) 3 Poles in Series, 40 °C 70 A (72 V) 3 Poles in Series, 60 °C 60 A (72 V) 3 Poles in Series, 70 °C 50 A
Rated Operational Current DC-3 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 70 A (110 V) 2 Poles in Series, 60 °C 60 A (110 V) 2 Poles in Series, 70 °C 50 A (110 V) 3 Poles in Series, 40 °C 70 A (110 V) 3 Poles in Series, 60 °C 60 A (110 V) 3 Poles in Series, 70 °C 50 A (220 V) 3 Poles in Series, 40 °C 70 A (220 V) 3 Poles in Series, 60 °C 60 A (220 V) 3 Poles in Series, 70 °C 50 A (72 V) 1-Pole, 40 °C 70 A (72 V) 1-Pole, 60 °C 60 A (72 V) 1-Pole, 70 °C 50 A (72 V) 2 Poles in Series, 40 °C 70 A (72 V) 2 Poles in Series, 60 °C 60 A (72 V) 2 Poles in Series, 70 °C 50 A (72 V) 3 Poles in Series, 40 °C 70 A (72 V) 3 Poles in Series, 60 °C 60 A (72 V) 3 Poles in Series, 70 °C 50 A
Rated Operational Current DC-5 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 70 A (110 V) 2 Poles in Series, 60 °C 60 A (110 V) 2 Poles in Series, 70 °C 50 A (110 V) 3 Poles in Series, 40 °C 70 A (110 V) 3 Poles in Series, 60 °C 60 A (110 V) 3 Poles in Series, 70 °C 50 A (220 V) 3 Poles in Series, 40 °C 70 A (220 V) 3 Poles in Series, 60 °C 60 A (220 V) 3 Poles in Series, 70 °C 50 A (72 V) 1-Pole, 40 °C 70 A (72 V) 1-Pole, 60 °C 60 A (72 V) 1-Pole, 70 °C 50 A (72 V) 2 Poles in Series, 40 °C 70 A (72 V) 2 Poles in Series, 60 °C 60 A (72 V) 2 Poles in Series, 70 °C 50 A (72 V) 3 Poles in Series, 40 °C 70 A (72 V) 3 Poles in Series, 60 °C 60 A (72 V) 3 Poles in Series, 70 °C 50 A
Rated Operational Power AC-3 (P <sub>e</sub> )	(400 V) 18.5 kW (415 V) 22 kW (440 V) 22 kW (500 V) 22 kW (690 V) 22 kW (380 / 400 V) 18.5 kW (220 / 230 / 240 V) 11 kW
Rated Operational Power AC-3e (P <sub>e</sub> )	(415 V) 22 kW (440 V) 22 kW (500 V) 22 kW (690 V) 22 kW (380 / 400 V) 18.5 kW (220 / 230 / 240 V) 11 kW
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 600 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 110 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 350 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 950 A cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 600 A
Rated Insulation Voltage (U <sub>i</sub> )	acc. to IEC 60947-4-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U <sub>imp</sub> )	6 kV

Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 1200 cycles per hour
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage (U <sub>c</sub> )	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 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 Rated Operating Conditions AC-1 per Pole 3 W at Rated Operating Conditions AC-3 per Pole 1 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 TH35-7.5 (35 x 7.5 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 4 ... 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 4 ... 35 mm <sup>2</sup> Rigid Stranded 1/2x 6 ... 35 mm <sup>2</sup>
Connecting Capacity Control Circuit	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>
Wire Stripping Length	Control Circuit 10 mm Main Circuit 16 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 IP10
Recommended Screw Driver	Pozidriv PZ
Tightening Torque	Control Circuit 1.2 N·m Main Circuit 4 N·m
Terminal Type	Screw Terminals
Product Name	Block Contactor

## Technical UL/CSA

NEMA Size	2
Continuous Current Rating NEMA	45 A
Horsepower Rating NEMA	(115 V AC) Single Phase 3 Hp (200 V AC) Three Phase 10 Hp (230 V AC) Single Phase 7-1/2 Hp (230 V AC) Three Phase 15 Hp (460 V AC) Three Phase 25 Hp (575 V AC) Three Phase 25 Hp
Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 60 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 3 hp (200 ... 208 V AC) Three Phase 10 hp (220 ... 240 V AC) Three Phase 15 hp (240 V AC) Single Phase 7-1/2 hp (440 ... 480 V AC) Three Phase 30 hp (550 ... 600 V AC) Three Phase 40 hp

Connecting Capacity Main Circuit UL/CSA	Rigid Stranded 1/2x 10-2 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	Control Circuit 11 in-lb Main Circuit 35 in-lb
Full Load Amps Motor Use	(120 V AC) Single Phase 34 A (200 ... 208 V AC) Three Phase 32.2 A (220 ... 240 V AC) Three Phase 42 A (240 V AC) Single Phase 40 A (440 ... 480 V AC) Three Phase 41 A (550 ... 600 V AC) Three Phase 40 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 Information	2CMT2021-006277
RoHS Status	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

Environmental Product Declaration - EPD	2TFP200016A1001 1SBD250584E1000
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## Certificates and Declarations

A2L Certificate – UL	9AKK108469A4890;9AKK108469A4892
ABS Certificate	ABS_20-2060694-PDA
BV Certificate	BV_2634H36994B1
CB Certificate	CB_SE-113324M1
CCC Certificate	CQC2015010304824714
CQC Certificate	CQC2015010304824714 CQC2012010304589737

Declaration of Conformity - CCC	2020980304001256 2020980304001074
Declaration of Conformity - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
DNV Certificate	DNV_TAE00001AF-4
KC Certificate	KC_HW02016-15006C
LR Certificate	LRS_LR23403517TA-02
RINA Certificate	RINA_ELE084013XG
RMRS Certificate	RMRS_1802705280
UL Certificate	UL-US-L312527-1141-10303102-9 UL-CA-L312527-4141-10303102-9
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	97 mm
Package Level 1 Gross Weight	1.05 kg
Package Level 1 EAN	3471523132030
Package Level 2 Units	box 10 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	300 mm
Package Level 2 Gross Weight	10.5 kg
Package Level 3 Units	240 piece

## Classifications

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)	3706599
E-Number (Sweden)	3210033

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## Categories

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Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF40

