



PRODUCT-DETAILS

AF12-30-10-13

AF12-30-10-13 100-250V50/60HZ-DC Contactor



General Information

Extended Product Type	AF12-30-10-13
Product ID	1SBL157001R1310
EAN	3471523110335
Catalog Description	AF12-30-10-13 100-250V50/60HZ-DC Contactor

Long Description	The AF12-30-10-13 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 (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.
------------------	---

Ordering

Minimum Order Quantity	1 piece
------------------------	---------

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 $\Theta = 40^\circ\text{C}$ 35 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 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 Current DC-1 (I_e)	(110 V) 1-Pole, 40 °C 15 A (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
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage (U_c)	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 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	18 A

Rating NEMA

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

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 Information

2CMT2021-006277

RoHS Status

Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

SCIP

c7d87eba-f165-4030-b92d-05bd87c7fd49 China

Simplified SCIP

453c2b6d-a3cd-4ee0-b462-828920f6b74b Greece
 965d8d73-a81a-4095-88bb-6da47469746b Belgium
 12ecfa96-7083-48d3-beb6-a33513f1f550 Portugal
 8cb8e0f5-cdd1-4a42-a2e0-0a20f682044c Germany
 8d11eb2e-29a5-4b4d-94fc-4e1f7fc32d3d Norway
 e85ac360-238f-46e7-8dea-e0ab1fc17da0 Finland
 55df2543-7130-4c5e-b8b8-7c6d11613047 Spain
 c16a616e-26f4-4ef4-b877-d4a5b2bdbf8f Bulgaria
 21dfd195-1dc3-4486-b563-45073bd62b33 Sweden
 ebc8073f-b73f-49a6-a256-8675655f3701 Denmark

7163e0ce-c99b-4549-ab21-0b28dbac2cce Germany
ef65fb19-0c0c-4c66-86f4-d330da83a5e6 Poland
00c728a8-1e7a-480c-af26-187c6be4348f Germany
aea0684f-f587-4a01-8893-e490b39cf624 France
f92a72a4-5138-4530-9e14-2d3d55474d75 Sweden
45a466ba-a387-44fb-89f5-2d86ac6bb9a4 Germany
06921d1d-1308-4022-be3d-42212ce6d5ab France
eaff310c-1a35-49c2-8c64-110e4113dffe Hungary
7a740234-4425-4f34-90d9-114990651787 Hungary
1b18c77d-cd41-408a-a2f3-a4fb33e7ac11 Estonia
16599f1e-6d16-40c1-a8d3-79ef1e9d4d8a Croatia
f81de088-0551-4a8b-a94f-376d9015daaf Czech Republic
841291e2-d4b1-45ad-9b58-44b13a12e558 Germany
2b8c61b8-fa3d-4d28-ac9c-7c1f576adb32 Poland
687739d8-a2ae-4c2b-8e26-9dfd061f5a1b Poland
9827bd2b-7013-459c-9493-e0fa1074700b Netherlands
893b9940-69a7-44a6-a8ab-7643ad4e96da Belgium
2CMT2023-006525

Toxic Substances Control Act - TSCA	
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions

End Of Life Disassembling Instructions	1SBC101080M6801
Environmental Product Declaration - EPD	1SBD250584E3000 2TFP200035A1001
Sustainable Material Content in Packaging (wt. %)	Recycled Cardboard - 86 %
Sustainable Material Content in Product (wt. %)	Recycled Metal - 28 %

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_2010010304445624
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	3471523110335
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 >> Iec Contactors
E-Number (Finland)	3706222
E-Number (Sweden)	3211364

Categories

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

