



PRODUCT-DETAILS

AF140-30-00B-31

AF140-30-00B-31 Contactor



General Information	
Extended Product Type	AF140-30-00B-31
Product ID	1SFL447002R3100
EAN	7320500561522
Catalog Description	AF140-30-00B-31 Contactor
Long Description	The AF140-30-00B-31 is a 3 pole - 690 V IEC or 600 V UL contactor with Main Circuit Bars, controlling motors up to 75 kW / 400 V AC (AC-3) or 100 hp / 480 V UL and switching power circuits up to 200 A (AC-1) or 200 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	8536490099

Popular Downloads

EPLAN Data	9AAC174539_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	1.3 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
Rated Operational Voltage	Main Circuit 690 V
Rated Frequency (f)	Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I_{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 200 A
Rated Operational Current AC-1 (I_e)	(690 V) 40 °C 200 A (690 V) 60 °C 175 A (690 V) 70 °C 160 A
Rated Operational Current AC-3 (I_e)	(415 V) 60 °C 140 A (440 V) 60 °C 140 A (500 V) 60 °C 130 A (690 V) 60 °C 80 A (380 / 400 V) 60 °C 140 A (220 / 230 / 240 V) 60 °C 140 A
Rated Operational Current AC-3e (I_e)	(415 V) 60 °C 140 A (440 V) 60 °C 140 A (500 V) 60 °C 130 A (690 V) 60 °C 80 A (380 / 400 V) 60 °C 140 A (220 / 230 / 240 V) 60 °C 140 A
Rated Operational Power AC-3 (P_e)	(415 V) 75 kW (440 V) 90 kW (500 V) 90 kW (690 V) 75 kW (380 / 400 V) 75 kW (220 / 230 / 240 V) 37 kW
Rated Operational Power AC-3e (P_e)	(415 V) 75 kW (440 V) 90 kW (500 V) 90 kW (690 V) 75 kW

	(380 / 400 V) 75 kW (220 / 230 / 240 V) 37 kW
Rated Breaking Capacity AC-3	8 x I _e AC-3
Rated Breaking Capacity AC-3e	8.5 x I _e AC-3e
Rated Making Capacity AC-3	10 x I _e AC-3
Rated Making Capacity AC-3e	12 x I _e AC-3e
Rated Short-time Withstand Current Low Voltage (I _{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1168 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 200 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 477 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1460 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 674 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 3000 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 1500 A
Rated Insulation Voltage (U _i)	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 1000 V
Rated Impulse Withstand Voltage (U _{imp})	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 _c Min. ... 1.1 x U _c Max. (at θ ≤ 70 °C)
Rated Control Circuit Voltage (U _c)	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 18 W at Rated Operating Conditions AC-3 per Pole 9 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 ² Rigid Cu-Cable 1 x 10 ... 95 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Ferrule 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 ... 2.5 mm ² Flexible 1x 0.75 ... 2.5 mm ² Flexible 2x 0.75 ... 2.5 mm ² Solid 1x 1 ... 4 mm ² Solid 2x 1 ... 4 mm ² Stranded 1x 1 ... 4 mm ² Stranded 2x 1 ... 4 mm ²
Connecting Capacity	Flexible 1 x 10 ... 70 mm ² Flexible 2 x 10 ... 70 mm ² Rigid Cu-Cable 1 x 10 ... 95 mm ²
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	Main Circuit: Bars
Product Name	Block Contactor

Technical UL/CSA

NEMA Size	4
Continuous Current Rating NEMA	135 A
Horsepower Rating NEMA	(200 V AC) Three Phase 40 Hp (230 V AC) Three Phase 50 Hp (460 V AC) Three Phase 100 Hp (575 V AC) Three Phase 100 Hp
Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 200 A
Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 40 hp (220 ... 240 V AC) Three Phase 50 hp (440 ... 480 V AC) Three Phase 100 hp (550 ... 600 V AC) Three Phase 125 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 120 A (220 ... 240 V AC) Three Phase 130 A (440 ... 480 V AC) Three Phase 124 A (550 ... 600 V AC) Three Phase 125 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
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
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
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	1.5 kg
Package Level 1 EAN	7320500561522

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

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 → AF140

