



PRODUCT-DETAILS

AF190-30-00-31

AF190-30-00-31 Contactor



General Information	
Extended Product Type	AF190-30-00-31
Product ID	1SFL487002R3100
EAN	7320500561652
Catalog Description	AF190-30-00-31 Contactor
Long Description	The AF190-30-00-31 is a 3 pole - 1000 V IEC or 600 V UL contactor with Main Circuit Bars, controlling motors up to 90 kW / 400 V AC (AC-3) or 125 hp / 480 V UL and switching power circuits up to 275 A (AC-1) or 250 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. Includes Mounting kit, containing all necessary screws, washers and sockets for connecting the terminals, and screws for mounting the device.

Ordering	
Minimum Order Quantity	1 piece
Customs Tariff Number	8536490099

Popular Downloads

EPLAN Data	9AAC174541_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical Information (Part 2)	1SAC200017M0002
Instructions and Manuals	1SFC100008M0201
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	105 mm
Product Net Depth / Length	165.5 mm
Product Net Height	196 mm
Product Net Weight	2.4 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 1000 V
Rated Frequency (f)	Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I_{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 275 A
Rated Operational Current AC-1 (I_e)	(1000 V) 40 °C 250 A (1000 V) 60 °C 225 A (1000 V) 70 °C 185 A (690 V) 40 °C 275 A (690 V) 60 °C 250 A (690 V) 70 °C 200 A
Rated Operational Current AC-3 (I_e)	(415 V) 60 °C 190 A (440 V) 60 °C 190 A (500 V) 60 °C 156 A (690 V) 60 °C 135 A (1000 V) 60 °C 85 A (380 / 400 V) 60 °C 190 A (220 / 230 / 240 V) 60 °C 190 A
Rated Operational Current AC-3e (I_e)	(415 V) 60 °C 190 A (440 V) 60 °C 190 A (500 V) 60 °C 135 A (690 V) 60 °C 135 A (1000 V) 60 °C 85 A (380 / 400 V) 60 °C 190 A (220 / 230 / 240 V) 60 °C 190 A
Rated Operational Power AC-3 (P_e)	(415 V) 90 kW (440 V) 110 kW (500 V) 110 kW (690 V) 132 kW

	(1000 V) 110 kW (380 / 400 V) 90 kW (220 / 230 / 240 V) 55 kW
Rated Operational Power AC-3e (P _e)	(415 V) 90 kW (440 V) 110 kW (500 V) 110 kW (690 V) 132 kW (1000 V) 110 kW (380 / 400 V) 90 kW (220 / 230 / 240 V) 55 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 1520 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 275 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 621 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1900 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 878 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 3300 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 2200 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
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 10 V-A Holding at Max. Rated Control Circuit Voltage 50 Hz 3 W Holding at Max. Rated Control Circuit Voltage 60 Hz 10 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 3 W Holding at Max. Rated Control Circuit Voltage DC 2.5 V-A Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 245 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 245 V-A Pull-in at Max. Rated Control Circuit Voltage DC 370 V-A Pull-in at Max. Rated Control Circuit Voltage DC 370 W
Power Loss	at Rated Operating Conditions AC-1 per Pole 15 W at Rated Operating Conditions AC-3 per Pole 7 W
Operate Time	Between Coil De-energization and NO Contact Opening 45 ... 80 ms Between Coil Energization and NO Contact Closing 25 ... 60 ms
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 2 x 50 ... 95 mm ² Rigid Al-Cable 1 x 95 ... 185 mm ² Rigid Cu-Cable 1 x 6 ... 150 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 M8 Control Circuit M3.5
Tightening Torque	Auxiliary Circuit 1 N-m Cable Lug 18 N-m Control Circuit 1 N-m Main Circuit 14 ... 31 N-m
Terminal Type	Main Circuit: Bars
Product Name	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 1000 V
General Use Rating UL/CSA	(1000 V AC) 250 A
Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 50 hp (220 ... 240 V AC) Three Phase 60 hp (440 ... 480 V AC) Three Phase 125 hp (550 ... 600 V AC) Three Phase 150 hp
Tightening Torque UL/CSA	Auxiliary Circuit 9 in-lb Control Circuit 9 in-lb Main Circuit 301 in-lb
Full Load Amps Motor Use	(200 ... 208 V AC) Three Phase 150 A (220 ... 240 V AC) Three Phase 154 A (440 ... 480 V AC) Three Phase 156 A (550 ... 600 V AC) Three Phase 144 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

UL 2799 Zero Waste To Landfill Validation available

End Of Life Disassembling Instructions	1SFC100112M0001
Environmental Product Declaration - EPD	1SFC100095D0201
Extended Product Lifetime	Product Durability
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 - 79.1 %

Certificates and Declarations

A2L Certificate – UL	9AKK108468A6695
ABS Certificate	14-LD1092198-PDA
Declaration of Conformity - CE	2CMT2015-005439
Declaration of Conformity - UKCA	2CMT2020-006118
UL Certificate	20121023-E36588

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	160 mm
Package Level 1 Depth / Length	258 mm
Package Level 1 Height	235 mm
Package Level 1 Gross Weight	3 kg
Package Level 1 EAN	7320500561652

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 >> lec Contactors

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN074703R1000	LY185 Connecting Strip	LY185	1	piece
1SFN074807R1000	LW205 Terminal Enlargement	LW205	1	piece
1SFN074810R1000	LX205 Terminal Extension	LX205	1	piece
1SFN074807R2000	LW205-40 Terminal Enlargement	LW205-40	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
1SFN035203R1000	VM205/265 Mechanical Interlock Unit	VM205/265	1	piece
1SFN010832R1001	CEL19-01 Auxiliary Contact Block	CEL19-01	1	piece
1SFN010832R1010	CEL19-10 Auxiliary Contact Block	CEL19-10	1	piece
1SFN124801R1000	LT205-30C Terminal Shroud	LT205-30C	1	piece
1SFN124803R1000	LT205-30L Terminal Shroud	LT205-30L	1	piece
1SFN124804R1000	LT205-30Y Terminal Shroud	LT205-30Y	1	piece
1SFN084806R1000	BEA205/XT4 Connection Set	BEA205/XT4	1	piece
1SFN084806R1001	BEA205/T4 Connection Set	BEA205/T4	1	piece
1SFN084811R1000	BER205-4 Connection Set	BER205-4	1	piece
1SFN084813R1000	BEY190-4 Connection Set	BEY190-4	1	piece
1SFN084814R1000	BEP205-30 Connection Set	BEP205-30	1	piece
1SFN085213R1000	BEY205-4 Connection Set	BEY205-4	1	piece

Categories

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