



PRODUCT-DETAILS

AF190-30-11-31

AF190-30-11-31 Contactor



General Information	
Extended Product Type	AF190-30-11-31
Product ID	1SFL487002R3111
EAN	7320500561669
Catalog Description	AF190-30-11-31 Contactor
Long Description	The AF190-30-11-31 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.

Ordering	
Minimum Order Quantity	1 piece
Customs Tariff Number	8536490099

Popular Downloads

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	1
Number of Auxiliary Contacts NC	1
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 Θ = 40 °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
Maximum Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour
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
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 5 V·A Holding at Max. Rated Control Circuit Voltage 50 Hz 3 W Holding at Max. Rated Control Circuit Voltage 60 Hz 5 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 3 W Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 165 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 165 V·A Pull-in at Max. Rated Control Circuit Voltage DC 205 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
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
Terminal Type	Main Circuit: Bars

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 1000 V
General Use Rating UL/CSA	(600 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

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 U_c) -25 ... 55 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 U_c) -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 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)	

Circular Value		
ABB EcoSolutions		Yes
Circular Design Principles	Design for Closing Resource Loops - Standard EN45555 - 79.2 %	
Recyclability Rate		
End of Life Instructions		1SFC100112M0001
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	
Improved Resource Efficiency for Customers	Product Efficiency - Product requires less energy to operate compared to similar product on market or older products from the same line	
Sustainable Material Content		Recycled Metal - 35 %

Eco Transparency		
Environmental Product Declaration - EPD		1SFC100095D0201

Certificates and Declarations		
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		7320500561669

Classifications		
Object Classification Code		Q
ETIM 7	EC000066 - Power contactor, AC switching	
ETIM 8	EC000066 - Power contactor, AC switching	
eClass		V11.0 : 27371003
UNSPSC		39121529
IDEA Granular Category		4758 >> Iec Contactors

Code (IGCC)

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF190

