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PRODUCT-DETAILS

## AF305-30-11-33 Contactor



General Information	
Extended Product Type	AF305-30-11-33
Product ID	1SFL587002R3311
EAN	7320500504659
Catalog Description	AF305-30-11-33 Contactor
Long Description	The AF305-30-11-33 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and Main Circuit Bars, controlling motors up to 160 kW / 400 V AC (AC-3) or 250 hp / 480 V UL and switching power circuits up to 500 A (AC-1) or 400 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

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Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

## Popular Downloads

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Data Sheet, Technical Information	1SBC100192C02
Instructions and Manuals	1SFC100008M0201
CAD Dimensional <u>Drawing</u>	2CDC001079B0201

Dimensions	
Product Net Width	140 mm
Product Net Depth / Length	195.5 mm
Product Net Height	225 mm
Product Net Weight	3.9 kg

Number of Main Contacts NC Number of Main Contacts NC Number of Auxiliary Contacts NC Number of Auxiliary Contacts NC Rated Operational Voltage Rated Erequency (f) Conventional Free-air Thermal Current (I <sub>m</sub> ) Rated Operational Current AC-1 (I <sub>e</sub> ) Rated Operational Current AC-1 (I <sub>e</sub> ) Rated Operational Current AC-3 (I <sub>e</sub> ) Rated Operational Power AC-3 (I <sub>e</sub> ) Rated Operational Current Dow Rated Operational Current Dow Rated Operational Current AC-3 (I <sub>e</sub> ) Rated Opera	Technical	
Number of Auxiliary Contacts NO Number of Auxiliary Contacts NO Rated Operational Voltage Rated Frequency (f) Rated Operational Pree-air Conventional Free-air Conventional Free-air Conventional Free-air Conventional Free-air Conventional Pree-air Conventional Pree-air Conventional Pree-air Conventional Pree-air Conventional Current (In) Rated Operational Current (In) Rated Operational Current (In) Rated Operational Current (In) Rated Operational Current (In) (In) (In) (In) (In) (In) (In) (In)	Number of Main Contacts	3
Contacts NO   Number of Auxiliary   1		0
Contacts NC   Rated Operational Voltage   Main Circuit 1000 V   Rated Frequency (f)   Main Circuit 60 Hz   Conventional Free-air   Conventional Free-air   acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 500 A   Conventional Current (I <sub>th</sub> )   Rated Operational Current (I <sub>th</sub> )   (1000 V) 40 °C 375 A   (1000 V) 60 °C 325 A   (1000 V) 70 °C 260 A   (690 V) 40 °C 500 A   (690 V) 55 °C 305 A   (410 V) 75 °C 305 A   (4		1
Rated Frequency (f)	•	1
Conventional Free-air Thermal Current (I <sub>III</sub> )   acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 500 A Thermal Current (I <sub>III</sub> )   acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 500 A Thermal Current (I <sub>III</sub> )   acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 500 A C-7 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage Prior to III acc. to IEC 60947-4-1 and Voltage Prior to III acc. to IEC 60947-4-1 and Voltage Prior to III acc. to IEC 60947-4-1 and Voltage III acc. to IEC 60947-4-1 and Voltage III acc. so IEC 60947-4-1 and Voltage III acc. so IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series, and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III III Series and III Series and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III Series and III Series and III Series and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and Voltage III III Series and °C 500 A C-3 (I <sub>II</sub> )   acc. to IEC 60947-4-1 and	Rated Operational Voltage	Main Circuit 1000 V
Thermal Current (I <sub>th</sub> )  Rated Operational Current  AC-1 (I <sub>e</sub> )  (1000 V) 40 °C 375 A AC-1 (I <sub>e</sub> )  (1000 V) 60 °C 325 A (1000 V) 70 °C 260 A (690 V) 40 °C 500 A (690 V) 70 °C 260 A (690 V) 70 °C 260 A (690 V) 70 °C 325 A  Rated Operational Current  AC-3 (I <sub>e</sub> )  (415 V) 55 °C 305 A (500 V) 55 °C 290 A (690 V) 55 °C 290 A (1000 V) 55 °C 290 A (380 A) 400 V) 55 °C 305 A (380 A) 400 V) 55 °C 305 A Rated Operational Power  AC-3 (P <sub>e</sub> )  (440 V) 55 °C 305 A (440 V) 55 °C 305 A (380 A) 400 V) 55 °C 305 A (380 A) 400 V) 55 °C 305 A (380 A) 400 V) 55 °C 305 A  Rated Operational Power  AC-3 (P <sub>e</sub> )  (415 V) 160 kW (500 V) 200 kW (690 V) 250 kW (1000 V) 185 kW (220 / 230 / 240 V) 90 kW (380 / 400 V) 160 kW (380 / 400 V) 160 kW (380 / 400 V) 160 kW (220 / 230 / 240 V) 90 kW Rated Breaking Capacity AC-3  Rated Making Capacity AC-3  Rated Making Capacity AC-3  Rated Short-Circuit Protective gG Type Fuses 500 A Devices  Rated Short-time  at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 2440 A Withstand Current Low At 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A At 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 1409 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, fro	Rated Frequency (f)	Main Circuit 60 Hz
AC-1 (I <sub>e</sub> )  (1000 V) 60 °C 325 A (1000 V) 70 °C 260 A (690 V) 70 °C 252 A (690 V) 70 °C 252 A AC-3 (I <sub>e</sub> )  (415 V) 55 °C 205 A (690 V) 75 °C 305 A (690 V) 55 °C 200 A (7000 V) 50 °C 200		acc. to IEC 60947-4-1, Open Contactors $\Theta$ = 40 °C 500 A
AC-3 (I <sub>e</sub> )  AC-3 (I <sub>e</sub> )  (440 ½ 55 °C 290 A (500 ½ 55 °C 290 A (500 ½ 55 °C 290 A (500 ½ 55 °C 290 A (690 ½ 55 °C 290 A (1000 ½ 55 °C 290 A (1000 ½ 55 °C 290 A (200 ½ 56 °C 305 A (220 ½ 30 ½ 40 ½ ) 55 °C 295 A (220 ½ 30 ½ 40 ½ ) 55 °C 205 A (220 ½ 30 ½ 240 ½ ) 55 °C 305 A (220 ½ 30 ½ 240 ½ ) 55 °C 305 A (220 ½ 30 ½ 240 ½ ) 55 °C 305 A (220 ½ 30 ½ 240 ½ ) 160 kW (500 ½ 200 kW (690 ½ 250 kW (690 ½ 250 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 400 ½ ) 160 kW (220 ½ 30 ½ 40 ½ ) 160 kW (220 ½ 30 ½ 5 kW (220 ½ 30 ½ 5 kW (320		(1000 V) 60 °C 325 A (1000 V) 70 °C 260 A (690 V) 40 °C 500 A
AC-3 (Pe)  AC-3 (Pe)  (440 V) 160 kW (500 V) 200 kW (500 V) 200 kW (690 V) 250 kW (1000 V) 185 kW (1000 V) 185 kW (380 / 400 V) 160 kW (220 / 230 / 240 V) 90 kW  Rated Breaking Capacity AC-3  Rated Making Capacity 10 x le AC-3  Short-Circuit Protective gG Type Fuses 500 A Devices  Reted Short-time at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 2440 A Withstand Current Low Voltage (I <sub>cw</sub> ) at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 90 s 1409 A  Maximum Electrical  Maximum Electrical Switching Frequency (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour		(440 V) 55 °C 305 A (500 V) 55 °C 290 A (690 V) 55 °C 290 A (1000 V) 55 °C 131 A (380 / 400 V) 55 °C 305 A
Rated Breaking Capacity AC-3  Rated Making Capacity AC-3  Short-Circuit Protective Devices  Rated Short-time  Rated Shor	Rated Operational Power AC-3 (P <sub>e</sub> )	(440 V) 160 kW (500 V) 200 kW (690 V) 250 kW (1000 V) 185 kW (380 / 400 V) 160 kW
Rated Making Capacity AC-3  Short-Circuit Protective Devices  Rated Short-time  at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 2440 A t 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Amb		8 x le AC-3
Devices           Rated Short-time         at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 2440 A           Withstand Current Low         at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 500 A           Voltage (I <sub>cw</sub> )         at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A           at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A           Maximum Electrical         (AC-1) 300 cycles per hour           Switching Frequency         (AC-2 / AC-4) 150 cycles per hour           (AC-3) 300 cycles per hour         (AC-3) 300 cycles per hour           Rated Operational Current         (110 V) 1-Pole, 40 °C 500 A           DC-1 (I <sub>e</sub> )         (220 V) 2 Poles in Series, 40 °C 500 A           Rated Insulation Voltage         acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V	Rated Making Capacity	10 x le AC-3
Withstand Current Low Voltage (I <sub>cw</sub> ) at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 3 s 1409 A  Maximum Electrical (AC-1) 300 cycles per hour Switching Frequency (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour		gG Type Fuses 500 A
Maximum Electrical       (AC-1) 300 cycles per hour         Switching Frequency       (AC-2 / AC-4) 150 cycles per hour         Rated Operational Current       (110 V) 1-Pole, 40 °C 500 A         DC-1 (I <sub>e</sub> )       (220 V) 2 Poles in Series, 40 °C 500 A         Rated Insulation Voltage       acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V	Withstand Current Low	at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 996 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 3050 A
Rated Operational Current (110 V) 1-Pole, 40 °C 500 A  DC-1 (I <sub>e</sub> ) (220 V) 2 Poles in Series, 40 °C 500 A  (220 V) 3 Poles in Series, 40 °C 500 A  Rated Insulation Voltage acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V		(AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour
Rated Insulation Voltage acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V	•	(110 V) 1-Pole, 40 °C 500 A (220 V) 2 Poles in Series, 40 °C 500 A

Rated Impulse Withstand

8 kV

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Voltage (U <sub>imp</sub> )	
Mechanical Durability	5 million
Maximum Mechanical Switching Frequency	300 cycles per hou
Coil Operating Limits	(acc. to IEC 60947-4-1) Uc (at θ ≤ 70 °C
Rated Control Circuit Voltage $(U_c)$	50 Hz 100 250 \ 60 Hz 100 250 \ DC Operation 100 250 \
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 17.5 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 17.5 V·A Pull-in at Max. Rated Control Circuit Voltage 50 Hz 385 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 385 V·A Pull-in at Max. Rated Control Circuit Voltage DC 410 W
Operate Time	Between Coil De-energization and NO Contact Opening 37 47 ms Between Coil Energization and NO Contact Closing 25 55 ms
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP40
Terminal Type	Main Circuit: Bars
Technical UL/CSA	
Maximum Operating Voltage UL/CSA	Main Circuit 1000 \
General Use Rating UL/CSA	(600 V AC) 400 A
Horsepower Rating UL/CSA	(200 208 V AC) Three Phase 40 Hr (200 V AC) Three Phase 100 hr (208 V AC) Three Phase 100 hr (220 240 V AC) Three Phase 50 Hr (220 240 V AC) Three Phase 125 hr (440 480 V AC) Three Phase 100 Hr (440 480 V AC) Three Phase 250 hr (550 600 V AC) Three Phase 150 Hr (550 600 V AC) Three Phase 300 hr
Environmental	
Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay (0.85 1.1 Uc) -25 55 °C
Ambient All Pemperature	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 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	Ye
Circular Design Principles Recyclability Rate	Design for Closing Resource Loops - Standard EN45555 - 76.3 %
End of Life Instructions	1SFC100104D020
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
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Improved Resource	Product Efficiency - Product considered more energy-efficient compared to
Efficiency for Customers	similar product on market or older products from the same line
Sustainable Material Content	Recycled Metal - 33 %

## Eco Transparency

Environmental Product 1SFC100104D0201
Declaration - EPD

Certificates and Declarations	
ABS Certificate	14-LD1092198-PDA
BV Certificate	BV_36353_A0BV
CB Certificate	SE-89316
CCS Certificate	GB14T00030
CQC Certificate	CQC2014010304676670 CQC2014010304673866
Declaration of Conformity - CCC	2020980304001305 2020980304001068
Declaration of Conformity - CE	2CMT2015-005439
Declaration of Conformity - UKCA	2CMT2020-006118
DNV Certificate	DNV_E-14043
EAC Certificate	9AKK107046A8618
GL Certificate	GL_95073-14HH
LR Certificate	LR_14_70011(E1)
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
UL Certificate	20121217-E36588
UL Listing Card	UL E36588

Container Information	
Package Level 1 Units	box 1 piece
Package Level 1 Width	263 mm
Package Level 1 Depth / Length	203 mm
Package Level 1 Height	289 mm
Package Level 1 Gross Weight	4.6 kg
Package Level 1 EAN	7320500504659

Classifications	
Object Classification Code	Q
ETIM 4	EC000066 - Magnet contactor, AC-switching
ETIM 5	EC000066 - Magnet contactor, AC-switching
ETIM 6	EC000066 - Power contactor, AC switching
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4758 >> lec Contactors
E-Number (Finland)	3707526

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E-Number (Sweden) 3210541

## Categories

 $Low\ Voltage\ Products\ \rightarrow\ Control\ Products\ \rightarrow\ Contactors\ \rightarrow\ AF\ Contactors\ \rightarrow\ AF\ Contactors\ \rightarrow\ AF\ 305$ 

