



PRODUCT-DETAILS

AF30Z-30-00-30

AF30Z-30-00-30 24VDC Contactor



General Information	
Extended Product Type	AF30Z-30-00-30
Product ID	1SBL276001R3000
EAN	3471523114494
Catalog Description	AF30Z-30-00-30 24VDC Contactor
Long Description	The AF30Z-30-00-30 is a 3-pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 15 kW / 400 V AC (AC-3) or 20 hp / 480 V UL and switching power circuits up to 50 A (AC-1) or 50 A UL general use. Thanks to the AF technology, the contactor has a 24 V DC coil, featuring a reduced holding coil consumption down to 1.7 W and offering the possibility of a direct control by PLC-output ≥ 250 mA 24 V DC, without need of additional interface relay, 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	
Data Sheet, Technical Information	1SBC100214C0202
Instructions and Manuals	1SBC101053M6801
CAD Dimensional Drawing	2CDC001079B0201

Dimensions	
Product Net Width	45 mm
Product Net Depth / Length	106 mm
Product Net Height	86 mm
Product Net Weight	0.48 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
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1
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 $\Theta = 40\text{ }^{\circ}\text{C}$ 50 A acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A
Rated Operational Current AC-1 (I _e)	(690 V) 40 °C 50 A (690 V) 60 °C 42 A (690 V) 70 °C 37 A
Rated Operational Current AC-3 (I _e)	(415 V) 60 °C 32 A (440 V) 60 °C 32 A (500 V) 60 °C 28 A (690 V) 60 °C 21 A (380 / 400 V) 60 °C 32 A (220 / 230 / 240 V) 60 °C 33 A
Rated Operational Current AC-3e (I _e)	(415 V) 60 °C 32 A (440 V) 60 °C 32 A (500 V) 60 °C 28 A (690 V) 60 °C 21 A (380 / 400 V) 60 °C 32 A (220 / 230 / 240 V) 60 °C 33 A
Rated Operational Power AC-3 (P _e)	(415 V) 15 kW (440 V) 18.5 kW (500 V) 18.5 kW (690 V) 18.5 kW (380 / 400 V) 15 kW (220 / 230 / 240 V) 9 kW
Rated Operational Power AC-3e (P _e)	(415 V) 15 kW (440 V) 18.5 kW (500 V) 18.5 kW (690 V) 18.5 kW (380 / 400 V) 15 kW (220 / 230 / 240 V) 9 kW
Rated Short-time	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A

Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 50 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 200 A
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 1200 cycles per hour
Rated Operational Current DC-1 (I_e)	(110 V) 2 Poles in Series, 40 °C 50 A (110 V) 2 Poles in Series, 60 °C 42 A (110 V) 2 Poles in Series, 70 °C 37 A (110 V) 3 Poles in Series, 40 °C 50 A (110 V) 3 Poles in Series, 60 °C 42 A (110 V) 3 Poles in Series, 70 °C 37 A (220 V) 3 Poles in Series, 40 °C 50 A (220 V) 3 Poles in Series, 60 °C 42 A (220 V) 3 Poles in Series, 70 °C 37 A (72 V) 1-Pole, 40 °C 50 A (72 V) 1-Pole, 60 °C 42 A (72 V) 1-Pole, 70 °C 37 A (72 V) 2 Poles in Series, 40 °C 50 A (72 V) 2 Poles in Series, 60 °C 42 A (72 V) 2 Poles in Series, 70 °C 37 A (72 V) 3 Poles in Series, 40 °C 50 A (72 V) 3 Poles in Series, 60 °C 42 A (72 V) 3 Poles in Series, 70 °C 37 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 50 A (110 V) 2 Poles in Series, 60 °C 42 A (110 V) 2 Poles in Series, 70 °C 37 A (110 V) 3 Poles in Series, 40 °C 50 A (110 V) 3 Poles in Series, 60 °C 42 A (110 V) 3 Poles in Series, 70 °C 37 A (220 V) 3 Poles in Series, 40 °C 50 A (220 V) 3 Poles in Series, 60 °C 42 A (220 V) 3 Poles in Series, 70 °C 37 A (72 V) 1-Pole, 40 °C 50 A (72 V) 1-Pole, 60 °C 42 A (72 V) 1-Pole, 70 °C 37 A (72 V) 2 Poles in Series, 40 °C 50 A (72 V) 2 Poles in Series, 60 °C 42 A (72 V) 2 Poles in Series, 70 °C 37 A (72 V) 3 Poles in Series, 40 °C 50 A (72 V) 3 Poles in Series, 60 °C 42 A (72 V) 3 Poles in Series, 70 °C 37 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 50 A (110 V) 2 Poles in Series, 60 °C 42 A (110 V) 2 Poles in Series, 70 °C 37 A (110 V) 3 Poles in Series, 40 °C 50 A (110 V) 3 Poles in Series, 60 °C 42 A (110 V) 3 Poles in Series, 70 °C 37 A (220 V) 3 Poles in Series, 40 °C 25 A (220 V) 3 Poles in Series, 60 °C 25 A (220 V) 3 Poles in Series, 70 °C 25 A (72 V) 1-Pole, 40 °C 25 A (72 V) 1-Pole, 60 °C 25 A (72 V) 1-Pole, 70 °C 25 A (72 V) 2 Poles in Series, 40 °C 50 A (72 V) 2 Poles in Series, 60 °C 42 A (72 V) 2 Poles in Series, 70 °C 37 A (72 V) 3 Poles in Series, 40 °C 50 A (72 V) 3 Poles in Series, 60 °C 42 A (72 V) 3 Poles in Series, 70 °C 37 A
Rated Insulation Voltage (U_i)	acc. to IEC 60947-4-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U_{imp})	6 kV
Maximum Mechanical	3600 cycles per hour

Switching Frequency	
Rated Control Circuit Voltage (U _c)	DC Operation 24 V
Operate Time	Between Coil De-energization and NC Contact Closing 22 ... 57 ms Between Coil De-energization and NO Contact Opening 17 ... 29 ms Between Coil Energization and NC Contact Opening 20 ... 35 ms Between Coil Energization and NO Contact Closing 27 ... 53 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 1.5 ... 10 mm ² Flexible with Insulated Ferrule 1x 1.5 ... 10 mm ² Flexible with Insulated Ferrule 2x 1.5 ... 4 mm ² Rigid Solid 1/2x 2.5 ... 4 mm ² Rigid Stranded 1/2x 2.5 ... 10 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	Control Circuit 10 mm Main Circuit 14 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 IP20
Terminal Type	Screw Terminals

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 50 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 2 hp (200 ... 208 V AC) Three Phase 10 hp (220 ... 240 V AC) Three Phase 10 hp (240 V AC) Single Phase 5 hp (440 ... 480 V AC) Three Phase 20 hp (550 ... 600 V AC) Three Phase 25 hp
Connecting Capacity Main Circuit UL/CSA	Rigid Solid 1/2x 14-10 AWG Rigid Stranded 1/2x 14-8 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	Control Circuit 11 in-lb Main Circuit 22 in-lb

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	acc. to IEC 60068-2-30 and 60068-2-11 - UTE C 63-100 specification II
Maximum Operating Altitude Permissible	Without Derating 3000 m
Resistance to Vibrations	4g Closed Position & 2g Open position 5 ... 300 Hz

Material Compliance

Conflict Minerals Reporting Template	9AKK108467A5658
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(CMRT)

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)

ABB EcoSolutions

Environmental Product Declaration - EPD	1SBD250584E4000
Sustainable Material Content	Recycled Metal - 28 %
Sustainable Material Content in Packaging	Recycled Cardboard - 86 %
End of Life Instructions	1SBC101080M6801

Certificates and Declarations

ABS Certificate	ABS_20-2060694-PDA
CB Certificate	CB_SE-112316
CCC Certificate	CCC_2010010304445623
CQC Certificate	CQC2010010304445623 CQC2020010304294316
Declaration of Conformity - CCC	2020980304001254 2020980304001052
Declaration of Conformity - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
DNV Certificate	DNV_TAE00001AF-4
RINA Certificate	RINA_ELE142224XG
RMRS Certificate	RMRS_1802705280
UL Certificate	UL-US-2150887-5 UL-CA-2142658-5

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	96 mm
Package Level 1 Depth / Length	112 mm
Package Level 1 Height	50 mm
Package Level 1 Gross Weight	0.526 kg
Package Level 1 EAN	3471523114494
Package Level 2 Units	crate 12 piece
Package Level 2 Width	51 mm
Package Level 2 Depth / Length	98 mm
Package Level 2 Height	114 mm
Package Level 2 Gross Weight	6.312 kg
Package Level 3 Units	576 piece

Classifications		
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)		3709061

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF30

