



# Electric Automation

Reference: AF30Z-30-11-22 Code: 1SBL276001R2211

AF30Z-30-11-22 48-130V50/60HZ-DC Contactor

Buy it at Electric Automation Network



AF30Z contactors are used for controlling power circuits up to 690 V AC and 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads. AF..Z contactors include an electronic coil interface accepting a wide control voltage Uc min. ... Uc max. Only four coils cover control voltages between 24...250 V 50/60 Hz or 12...250 V DC. AF. Z contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF..Z contactors allow direct control by PLC-output  $\geq$  24 V DC 500 mA and obtain a reduced holding coil consumption. AF..Z contactors withstand short voltage dips and voltage sags (SEMI F47-0706 compliance) between 24...250 V 50/60 Hz AF..Z contactors have built-in surge protection and do not require additional surge suppressors The AF... series 2-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles with a nonremovable front-mounted 1 N.O. + 1 N.C. auxiliary contact block, side-mounted addon auxiliary contact blocks (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 including the "Mechanically Linked" symbol on the contactor side. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) -Control circuit: AC or DC operated - Accessories: a wide range of accessories is available. Note: 2-stack contactors available in some countries: please consult your ABB representative.

#### Ordering

EAN:	3471523114524
Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085

# Dimensions

Product Net Width:	45 mm
Product Net Depth:	111.5 mm
Product Net Height:	86 mm
Product Net Weight:	0.390 kg

#### Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	87 mm
Package Level 1 Length:	114 mm
Package Level 1 Height:	47 mm
Package Level 1 Gross Weight:	0.39 kg
Package Level 1 EAN:	3471523114524
Package Level 2 Units:	36 piece
Package Level 2 Width:	250 mm
Package Level 2 Length:	300 mm
Package Level 2 Height:	315 mm
Package Level 3 Units:	864 piece

## 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
Standards:	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14
Rated Operational Voltage:	Auxiliary Circuit 690 V Main Circuit 690 V
Rated Frequency (f):	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I <sub>th</sub> ):	acc. to IEC 60947-4-1, Open Contactors q = 40 °C 50 A acc. to IEC 60947-5-1, q = 40 °C 16 A
Rated Operational Current AC-1 (I <sub>e</sub> ):	(690 V) 40 °C 50 A (690 V) 60 °C 42 A (690 V) 70 °C 37 A
Rated Operational Current AC-3 (I <sub>e</sub> ):	(220 / 230 / 240 V) 60 °C 33 A (380 / 400 V) 60 °C 32 A (415 V) 60 °C 32 A (440 V) 60 °C 32 A (500 V) 60 °C 28 A (690 V) 60 °C 21 A

Bated Operational Power AC-3 (Pa):(220 / 230 / 240 / 9 kW (300 / 15 kW (435 / 15 kW (435 / 15 kW (435 / 15 kW (500 / 16 5 kW) (500 / 16 5 kW)(500 / 16 kW) (500 / 16 5 kW)(500 / 16 kW) (500 / 16 5 kW) (500 /		
(140 V) 18.5 kW (690 V) 2.4 (690 V) 2.4 <br< td=""><td>Rated Operational Power AC-3 (P_)</td><td>(380 / 400 V) 15 kW (415 V) 15 kW</td></br<>	Rated Operational Power AC-3 (P_)	(380 / 400 V) 15 kW (415 V) 15 kW
Image: region of the set of	Rated Operational Power AC-3 (Pe):	
Rated Operational Current AC-15 (le):(24 / 127 V) 6 A (690 V) 2 A (690 V) 2 A (690 V) 2 A 		
Rated Operational Current AC-15 (I_p):(400 (440 V) 3 A (500 V) 2 ARated Short-time Withstand Current (I_cw):at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A 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 and 30 °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 1 s 700 A a 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A a 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A for 0.1 s 100 AMaximum Breaking Capacity:cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for le > 100 A) at 690 V 200 AMaximum Electrical Switching Frequency:AC-1 600 cycles per hour AC-2 / AC4 150 cycles per hour AC-2 / AC6 1200 cycles per hour AC-2 / AC6 HOU (220 V) 0.27 A / 60 W (220 V) 0.27 A		
(690 V) 2 Aat Q C Ambient Temp, in Free Air, from a Cold State 10 s 350 A at 40 °C Ambient Temp, in Free Air, from a Cold State 11 min 50 A at 40 °C Ambient Temp, in Free Air, from a Cold State 11 min 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 11 min 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 13 700 AMaximum Breaking Capacity:Cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 500 A Cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 200 AMaximum Electrical Switching Frequency:AC-1 600 cycles per hour AC-2 1/2C 4 150 cycles per hour AC-3 1/200 cycles per hour AC-1 1/200 U/200 A/200 A/2	Rated Operational Current AC-15 (I <sub>e</sub> ):	
s 330 A 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 225 A for 0.1 s 140 A for 1 s 100 AMaximum Breaking Capacity:cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for le > 100 A) at 640 V 200 AMaximum Electrical Switching Frequency:AC-1 600 cycles per hour AC-2 / AC-4 150 cycles per hour AC-3 1200 cycl		
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Rated Short-time Withstand Current (It_w):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 1 s 700 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 °C Ambient Temp, in Free Air, from a Cold State 1 s 700 A stat0 × 1 sto0 × 1 sto0 × 700 × 1 sto0 × 1 sto0 × 1 sto0 × 700 × 1 sto0 × 700 × 1 sto0 × 1		at 40 °C Ambient Temp, in Free Air, from a Cold State 15
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 for 0.1 s 140 A for 1 s 100 AMaximum Breaking Capacity:cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for le > 100 A) at 690 V 200 AMaximum Electrical Switching Frequency:AC-1 600 cycles per hour AC-2 /AC-4 150 cycles per hour AC-3 1500 cycles per hour AC-3 1500 cycles per hour DC-13 900 cycles per hour DC-3 900 cycles per hour DC-3 900 cycles per hour AC-3 AC-3 1200 cycles per hour AC-3 AC-3 AG0 w (120 V) 0.55 A / 60 W (120 V) 0.13 A / 60 W (120 V) 0.14 / 100 W (120 V) 0.15 A / 60 W (120 V) 0.14 / 100 W (120 V) 0.15 A / 60 W (120 V) 0.15 A	Rated Short-time Withstand Current (I)	min 150 A
for 0.1 s 140 A for 1.1 s 100 AMaximum Breaking Capacity:cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 500 A cos phi=0.45 (cos phi=0.35 for le > 100 A) at 690 V 200 AMaximum Electrical Switching Frequency:AC-1 600 cycles per hour AC-2 1/20 cycles A/134 W (500 V) 0.27 A / 60 W (220 V) 0.27 A / 60 W (22		700 A
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Rated Control Circuit Voltage (U <sub>c</sub> ): 50 Hz 48 130 V   60 Hz 48 130 V C Operation 48 130 V   DC Operation 48 130 V DC Operation and NC Contact Closing   1398 ms Between Coil De-energization and NO Contact Opening   1195 ms Between Coil Energization and NC Contact Opening   3890 ms Between Coil Energization and NO Contact Closing	Rated Impulse Withstand Voltage (U <sub>imp</sub> ):	6 kV
Rated Control Circuit Voltage (U_c): 60 Hz 48 130 V   DC Operation 48 130 V DC Operation 48 130 V   Operate Time: Between Coil De-energization and NC Contact Closing 1398 ms   Between Coil De-energization and NO Contact Opening 1195 ms Between Coil Energization and NC Contact Opening 3890 ms   Between Coil Energization and NO Contact Closing Setween Coil Energization and NO Contact Closing 1396 ms	Maximum Mechanical Switching Frequency:	3600 cycles per hour
DC Operation 48 130 V   Description 48 130 V   Descript	Pated Control Circuit Valtage (11.)	
Operate Time: 1398 ms   Between Coil De-energization and NO Contact Opening   1195 ms   Between Coil Energization and NC Contact Opening   3890 ms   Between Coil Energization and NO Contact Closing		
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Operate Time: Between Coil Energization and NC Contact Opening 3890 ms Between Coil Energization and NO Contact Closing		Between Coil De-energization and NO Contact Opening
3890 ms Between Coil Energization and NO Contact Closing	Operate Time:	

Connecting Capacity-Main Circuit:	Flexible with Insulated Ferrule 1x 1.510 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 1.54 mm <sup>2</sup> Flexible with Ferrule 1/2x 1.510 mm <sup>2</sup> Rigid 1/2x 2.510 mm <sup>2</sup>
Connecting Capacity-Auxiliary Circuit:	Flexible with Ferrule 1/2x 0.75 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 1.5 mm <sup>2</sup> Rigid 1/2x 12.5 mm <sup>2</sup>
Connecting Capacity-Control Circuit:	Flexible with Ferrule 1/2x 0.75 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.752.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.751.5 mm <sup>2</sup> Rigid 1/2x 12.5 mm <sup>2</sup>
Wire Stripping Length:	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 14 mm
Degree of Protection:	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 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

#### Environmental

Ambient Air Temperature:	Close to Contactor for Storage -60+80 °C Close to Contactor Fitted with Thermal O/L Relay -25 +60 °C Close to Contactor without Thermal O/L Relay -40 +70 °C
Maximum Operating Altitude Permissible:	3000 m
Resistance to Shock acc. to IEC 60068-2-27:	Closed, Shock Direction: B1 25 g Open, Shock Direction: B1 5 g Shock Direction: A 30 g Shock Direction: B2 15 g Shock Direction: C1 25 g Shock Direction: C2 25 g
Resistance to Vibrations acc. to IEC 60068-2-6:	5300 Hz 4 g closed position / 2 g open position
RoHS Status:	Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1

# Technical UL/CSA

General Use Rating UL/CSA:	(600 V AC) 50 A
Horsepower Rating UL/CSA:	(120 V AC) Single Phase 2 Hp (240 V AC) Single Phase 5 Hp (200 208 V AC) Three Phase 10 Hp (220 240 V AC) Three Phase 10 Hp (440 480 V AC) Three Phase 20 Hp (550 600 V AC) Three Phase 25 Hp
Tightening Torque UL/CSA:	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 22 in·lb

#### Certificates and Declarations (Document Number)

ABS Certificate:	ABS_15-GE1349500-PDA_90682247
CB Certificate:	CB_SE_70856M1
CCC Certificate:	CCC_2010010304445623
cUL Certificate:	UL_20091124-E312527-7-1
Declaration of Conformity - CE:	1SBD250165C1000
DNV Certificate:	DNV-GL_E13871
EAC Certificate:	EAC_RU C-FR ME77 B01010
GL Certificate:	DNV-GL_E13871
GOST Certificate:	GOST_POCCFR.ME77.B07175.pdf
LR Certificate:	LRS_1300087E1
RINA Certificate:	RINA_ELE084013XG
RMRS Certificate:	RMRS_1400682124
RoHS Information:	1SBD251012E1000

# Classifications

ETIM 5:	EC000066 - Magnet contactor, AC-switching
UNSPSC:	39121529