

General Information

Extended Product Type:	AF12Z-30-10-20
Product ID:	1SBL156001R2010
EAN:	3471523113503
Catalog Description:	AF12Z-30-10-20 12-20VDC Contactor
Long Description:	AF12Z 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. AFZ contactors include an electronic coil interface accepting a wide control voltage Uc min Uc max. Only four coils cover control voltages between 24250 V 50/60 Hz or 12250 V DC. AFZ contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AFZ contactors allow direct control by PLC-output ≥ 24 V DC 500 mA and obtain a reduced holding coil consumption. AFZ contactors withstand short voltage dips and voltage sags (SEMI F47-0706 compliance) between 24250 V 50/60 Hz AFZ contactors have built-in surge protection and do not require additional surge suppressors The AF series 1-stack 3- pole contactors are of the block type design Main poles and auxiliary contact blocks: 3 main poles, 1 built-in auxiliary contact, front and side-mounted add-on auxiliary contact blocks. (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) - Control circuit: DC operated for AFZ-3020 contactors. Only AFZ-3020 contactors need to respect the polarity on the coil terminals (A1+ and A2-) Accessories: a wide range of accessories is available.

Categories

Products » Low Voltage Products and Systems » Control Products » Contactors » Block Contactors

Ordering

Ordening	
Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085
EAN:	3471523113503
Dimensions	
Product Net Depth:	77 mm
Product Net Height:	86 mm
Product Net Weight:	0.310 kg
Product Net Width:	45 mm
Container Information	
Package Level 1 Width:	87 mm
Package Level 1 Length:	79 mm
Package Level 1 Height:	47 mm
Package Level 1 Gross Weight:	0.31 kg
Package Level 1 EAN:	3471523113503
Package Level 2 Units:	54 piece
Package Level 2 Width:	250 mm
Package Level 2 Length:	300 mm
Package Level 2 Height:	315 mm
Package Level 3 Units:	1229 piece
Package Level 1 Units:	1 piece
Technical	
Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	1
Number of Auxiliary Contacts NC:	0
Standards:	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14

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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 _{th}):	acc. to IEC 60947-4-1, Open Contactors q = 40 °C 35 A acc. to IEC 60947-5-1, q = 40 °C 16 A
Rated Operational Current AC-1 (Ie):	: (690 V) 40 °C 28 A (690 V) 60 °C 28 A (690 V) 70 °C 24 A
Rated Operational Current AC-3 (I _e):	: (220 / 230 / 240 V) 60 °C 12 A (380 / 400 V) 60 °C 12 A (415 V) 60 °C 12 A

	(440 V) 60 °C 12 A (500 V) 60 °C 12.5 A (690 V) 60 °C 9 A
Rated Operational Power AC-3 (P _e):	
Rated Operational Current AC-15 (I _e):	(220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A
Rated Short-time Withstand Current (I _{CW}):	: at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity:	cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for le > 100 A) at 690 V 106 A
Maximum Electrical Switching Frequency:	AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 300 cycles per hour AC-3 1200 cycles per hour DC-13 900 cycles per hour
Rated Operational Current DC-13 (I _e):	(110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (48 V) 2.8 A / 134 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W (72 V) 1 A / 72 W
Rated Insulation Voltage (Ui):	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V
Rated Impulse Withstand Voltage (U _{imp}):	6 kV
Maximum Mechanical Switching Frequency:	3600 cycles per hour
Rated Control Circuit Voltage (U _c):	DC Operation 12 20 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 4095 ms
Connecting Capacity Main Circuit:	Flexible with Insulated Ferrule 1x 0.754 mm ² Flexible with Insulated Ferrule 2x 0.752.5 mm ² Flexible with Ferrule 1/2x 0.756 mm ² Rigid 1/2x 16 mm ²
Connecting Capacity Auxiliary 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 1/2x 12.5 mm ²
Connecting Capacity Control Circuit	t: 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 1/2x 1 2.5 mm ²
Wire Stripping Length:	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 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: Number of Main Contacts NO:	Screw Terminals 3
Environmental	
Climatic Withstand:	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible:	3000 m

Resistance to Vibrations acc. to IEC 60068-2-6:	5 300 Hz 4 g closed position / 2 g open position
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
RoHS Status:	Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1
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

Technical UL/CSA

General Use Rating UL/CSA:	(600 V AC) 28 A
Horsepower Rating UL/CSA:	(120 V AC) Single Phase 1 Hp (240 V AC) Single Phase 2 Hp (200 208 V AC) Three Phase 3 Hp (220 240 V AC) Three Phase 3 Hp (440 480 V AC) Three Phase 7-1/2 Hp (550 600 V AC) Three Phase 10 Hp
Tightening Torque UL/CSA:	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 13 in·lb

Certificates and Declarations (Document Number)

Instructions and Manuals:	1SBC101027M6801
ABS Certificate:	ABS_15-GE1349500-PDA_90682247
CB Certificate:	CB_SE_70855M1
CCC Certificate:	CCC_2010010304445624
Data Sheet, Technical Information:	1SBC101404D0201
Declaration of Conformity - CE:	1SBD250000U1000
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:	1SBD251013E1000
UL Certificate:	UL_20140305-E312527_7_1
UL Listing Card:	E312527

Classifications

ETIM 4:	EC000066 - Magnet contactor, AC-switching
ETIM 5:	EC000066 - Magnet contactor, AC-switching
ETIM 6:	EC000066 - Power contactor, AC switching
UNSPSC:	39121529
Object Classification Code:	Q



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