AF16-30-22-11

General Information

Extended Product Type:	AF16-30-22-11
Product ID:	1SBL177001R1122
EAN:	3471523110816
Catalog Description:	AF16-30-22-11 24-60V50/60HZ 20-60VDC Contactor
Long Description:	AF16 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... contactors include an electronic coil interface accepting a wide control voltage Uc min. ... Uc max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC. AF contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF 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 non-removable front-mounted 2 N.O. + 2 N.C. auxiliary contact block, side-mounted add-on 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. AF..-30-..-11 not suitable for a direct control by PLC-output.

Categories

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

Ordering

Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085
EAN:	3471523110816

Dimensions

Product Net Depth:	110.5 mm
Product Net Height:	86 mm
Product Net Weight:	0.320 kg
Product Net Width:	45 mm

Container Information

Package Level 1 Width:	87 mm
Package Level 1 Length:	113 mm
Package Level 1 Height:	47 mm
Package Level 1 Gross Weight:	0.32 kg
Package Level 1 EAN:	3471523110816
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
Package Level 1 Units:	1 piece

Technical

Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	2
Number of Auxiliary Contacts NC:	2
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 (I_e):	(690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A
Rated Operational Current AC-3 (I_e):	(220 / 230 / 240 V) 60 °C 18 A (380 / 400 V) 60 °C 18 A (415 V) 60 °C 18 A (440 V) 60 °C 18 A

	(500 V) 60 °C 15 A (690 V) 60 °C 10.5 A
Rated Operational Power AC-3 (P_e):	(220 / 230 / 240 V) 4 kW (380 / 400 V) 7.5 kW (400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW
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 Ie > 100 A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for Ie > 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 (U_i):	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):	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Operate Time:	Between Coil De-energization and NC Contact Closing 13...98 ms Between Coil De-energization and NO Contact Opening 11...95 ms Between Coil Energization and NC Contact Opening 38...90 ms Between Coil Energization and NO Contact Closing 40...95 ms
Connecting Capacity Main Circuit:	Flexible with Insulated Ferrule 1x 0.75...4 mm² Flexible with Insulated Ferrule 2x 0.75...2.5 mm² Flexible with Ferrule 1/2x 0.75...6 mm² Rigid 1/2x 1...6 mm²
Connecting Capacity Auxiliary Circuit:	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm² Rigid 1/2x 1...2.5 mm²
Connecting Capacity Control Circuit:	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm² Rigid 1/2x 1 ... 2.5 mm²
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:	Screw Terminals
Number of Main Contacts NO:	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) 30 A
Horsepower Rating UL/CSA:	(120 V AC) Single Phase 1-1/2 Hp (240 V AC) Single Phase 3 Hp (200 ... 208 V AC) Three Phase 5 Hp (220 ... 240 V AC) Three Phase 5 Hp (440 ... 480 V AC) Three Phase 10 Hp (550 ... 600 V AC) Three Phase 15 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:	1SBC101409D0201
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:	UL_E312527

Classifications

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