

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

## General Information

<b>Extended Product Type:</b>	AF09-30-01-11
<b>Product ID:</b>	1SBL137001R1101
<b>EAN:</b>	3471523110113
<b>Catalog Description:</b>	AF09-30-01-11 24-60V50/60HZ 20-60VDC Contactor
<b>Long Description:</b>	AF09 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 $U_c \text{ min} \dots U_c \text{ max}$ . 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 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: AC or DC operated - Accessories: a wide range of accessories is available. Note: AF...-30...-11 not suitable for a direct control by PLC-output. AF...-30...-11 contactor type available in some countries: please consult your ABB representative.

## Additional Information

<b>ABB Industrial IT Suite:</b>	Control IT
<b>ABS Certificate:</b>	ABS_15-GE1349500-PDA_90682247
<b>Ambient Air Temperature:</b>	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
<b>Block Contactor Type:</b>	3-Pole Contactor
<b>CB Certificate:</b>	CB_SE_70855M1
<b>CCC Certificate:</b>	CCC_2010010304445624
<b>Class NK Certificate:</b>	ClassNK_TA17156M_AF
<b>Climatic Withstand:</b>	Category B according to IEC 60947-1 Annex Q
<b>Coil Voltage Code:</b>	11
<b>Connecting Capacity Auxiliary Circuit:</b>	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 1 ... 2.5 mm <sup>2</sup>
<b>Connecting Capacity Control Circuit:</b>	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 1 ... 2.5 mm <sup>2</sup>
<b>Connecting Capacity Main Circuit:</b>	Flexible with Insulated Ferrule 1x 0.75 ... 4 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 1/2x 0.75 ... 6 mm <sup>2</sup> Rigid 1/2x 1 ... 6 mm <sup>2</sup>
<b>Conventional Free-air Thermal Current (I<sub>th</sub>):</b>	acc. to IEC 60947-4-1, Open Contactors q = 40 °C 35 A acc. to IEC 60947-5-1, q = 40 °C 16 A
<b>Country of Origin:</b>	France (FR)
<b>Customs Tariff Number:</b>	85364900
<b>DNV Certificate:</b>	DNV-GL_TAE00001AF-1
<b>DNV GL Certificate:</b>	DNV-GL_TAE00001AF-1
<b>Data Sheet, Technical Information:</b>	1SBC101402D0201
<b>Declaration of Conformity - CE:</b>	1SBD250000U1000

<b>Degree of Protection:</b>	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
<b>E-nummer:</b>	3210015
<b>EAC Certificate:</b>	EAC_RU C-FR ME77 B01010
<b>EAN:</b>	3471523110113
<b>EPLAN Catalog Tree:</b>	Electrical engineering / Relays, contactors / Contactors
<b>EPLAN Function Definition:</b>	Coil / Coil, 2 connection points / Coil for power contactor A1_A2 NO contact / NO contact, 2 connection points / Power NO contact 1_2 NO contact / NO contact, 2 connection points / Power NO contact 3_4 NO contact / NO contact, 2 connection points / Power NO contact 5_6 NC contact / NC contact, 2 connection points / NC auxiliary contact 21_22
<b>EPLAN Graphical Macro:</b>	9AKK106930A0693
<b>EPLAN Macro:</b>	9AKK106930A0692
<b>ETIM 4:</b>	EC000066 - Magnet contactor, AC-switching
<b>ETIM 5:</b>	EC000066 - Magnet contactor, AC-switching
<b>ETIM 6:</b>	EC000066 - Power contactor, AC switching
<b>Environmental Information:</b>	1SBD250147E1000
<b>Full Load Amps Motor Use:</b>	(120 V AC) Single Phase 13.8 A (240 V AC) Single Phase 10 A (200 ... 208 V AC) Three Phase 7.8 A (220 ... 240 V AC) Three Phase 6.8 A (440 ... 480 V AC) Three Phase 7.6 A (550 ... 600 V AC) Three Phase 9 A
<b>GOST Certificate:</b>	GOST_POCCFR.ME77.B07175.pdf
<b>General Use Rating UL/CSA:</b>	(600 V AC) 25 A
<b>Horsepower Rating UL/CSA:</b>	(120 V AC) Single Phase 3/4 Hp (240 V AC) Single Phase 1-1/2 Hp (200 ... 208 V AC) Three Phase 2 Hp (220 ... 240 V AC) Three Phase 2 Hp (440 ... 480 V AC) Three Phase 5 Hp (550 ... 600 V AC) Three Phase 7-1/2 Hp
<b>IT Publishing Status:</b>	Level 0 - Information enabled
<b>Industrial IT Certification Level:</b>	0
<b>Instructions and Manuals:</b>	1SBC101027M6801
<b>Invoice Description:</b>	AF09-30-01-11 24-60V50/60HZ 20-60VDC Contactor
<b>KC Certificate:</b>	KC_HW02016-15004A
<b>LR Certificate:</b>	LRS_1300087E1
<b>Low Coil Consumption:</b>	No
<b>Maximum Breaking Capacity:</b>	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
<b>Maximum Electrical Switching Frequency:</b>	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
<b>Maximum Mechanical Switching Frequency:</b>	3600 cycles per hour
<b>Maximum Operating Altitude Permissible:</b>	3000 m
<b>Minimum Order Quantity:</b>	1 piece
<b>Mounted Auxiliary Contacts:</b>	0 NO, 1 NC
<b>Mounted Auxiliary Contacts 1st Stack:</b>	0 NO, 1 NC
<b>Mounted Auxiliary Contacts 2nd Stack:</b>	0 NO, 0 NC
<b>Mounting Position:</b>	Max. N.C. built-in and add-on N.C. auxiliary contacts: see accessory fitting details for a 3-pole contactor AF09 ... AF38

Mounting Positions:	1SBC500297F0000
Number of Auxiliary Contacts NC:	1
Number of Auxiliary Contacts NO:	0
Number of Main Contacts NC:	0
Number of Main Contacts NO:	3
Object Classification Code:	Q
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
Order Multiple:	1 piece
Package Level 1 EAN:	3471523110113
Package Level 1 Gross Weight:	0.27 kg
Package Level 1 Height:	47 mm
Package Level 1 Length:	79 mm
Package Level 1 Units:	1 piece
Package Level 1 Width:	87 mm
Package Level 2 Height:	315 mm
Package Level 2 Length:	300 mm
Package Level 2 Units:	54 piece
Package Level 2 Width:	250 mm
Package Level 3 Units:	1296 piece
Power Loss:	at Rated Operating Conditions AC-1 per Pole 0.8 W at Rated Operating Conditions AC-3 per Pole 0.1 W
Product Main Type:	AF09
Product Name:	Block Contactor
Product Net Depth:	77 mm
Product Net Height:	86 mm
Product Net Weight:	0.270 kg
Product Net Width:	45 mm
Product Packing Type:	Box
RINA Certificate:	RINA_ELE084013XG
RMRS Certificate:	RMRS_1400682124
Rated Control Circuit Voltage (U <sub>c</sub> ):	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Rated Frequency (f):	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Rated Impulse Withstand Voltage (U <sub>imp</sub> ):	6 kV
Rated Insulation Voltage (U <sub>i</sub> ):	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V
Rated Operational Current AC-1 (I <sub>e</sub> ):	(690 V) 40 °C 25 A (690 V) 60 °C 25 A (690 V) 70 °C 22 A
Rated Operational Current AC-15 (I <sub>e</sub> ):	(220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A
Rated Operational Current AC-3 (I <sub>e</sub> ):	(220 / 230 / 240 V) 60 °C 9 A (380 / 400 V) 60 °C 9 A (415 V) 60 °C 9 A (440 V) 60 °C 9 A

	(440 V) 0.09 A (500 V) 60 °C 9.5 A (690 V) 60 °C 7 A
<b>Rated Operational Current DC-13 (I<sub>a</sub>):</b>	(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
<b>Rated Operational Power AC-3 (P<sub>e</sub>):</b>	(220 / 230 / 240 V) 2.2 kW (380 / 400 V) 4 kW (400 V) 4 kW (415 V) 4 kW (440 V) 4 kW (500 V) 5.5 kW (690 V) 5.5 kW
<b>Rated Operational Voltage:</b>	Auxiliary Circuit 690 V Main Circuit 690 V
<b>Rated Short-time Withstand Current (I<sub>cw</sub>):</b>	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
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	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
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5 ... 300 Hz 4 g closed position / 2 g open position
<b>RoHS Date:</b>	20090609
<b>RoHS Information:</b>	1SBD251013E1000
<b>Selling Unit of Measure:</b>	piece
<b>Short Description:</b>	AF09-30-01-11 24-60V50/60HZ 20-60VDC Contactor
<b>Standards:</b>	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14
<b>Terminal Type:</b>	Screw Terminals
<b>Tightening Torque:</b>	Auxiliary Circuit 1.2 N·m Control Circuit 1.2 N·m Main Circuit 1.5 N·m
<b>Tightening Torque UL/CSA:</b>	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 13 in·lb
<b>UL Certificate:</b>	UL_20140305-E312527_7_1
<b>UL Listing Card:</b>	E312527
<b>Wire Stripping Length:</b>	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
<b>cUL Certificate:</b>	UL_20170607-E312527-7-1

