



**Electric Automation**  
Automation specialists

Reference: AF38-40-00-11  
Code: 1SBL297201R1100

AF38-40-00-11 24-60V50/60HZ  
20-60VDC Contactor

Buy it at Electric Automation Network



AF38 4-pole contactors are used for controlling power circuits up to 690 V AC and 440 V DC. They are mainly used for controlling non-inductive or slightly inductive loads (i.e. resistance furnaces...). 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 4-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 4 N.O. main poles, 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...-...-11 not suitable for a direct control by PLC-output. - AF...-...-11 type available in some countries: please consult your ABB representative.

### Ordering

EAN:	3471523115316
Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085

### Dimensions

Product Net Width:	45 mm
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Product Net Depth:	101 mm
Product Net Height:	86 mm
Product Net Weight:	0.360 kg

## Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	87 mm
Package Level 1 Length:	103 mm
Package Level 1 Height:	47 mm
Package Level 1 Gross Weight:	0.36 kg
Package Level 1 EAN:	3471523115316
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:	4
Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	0
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
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 $q = 40\text{ °C } 55\text{ A}$
Rated Operational Current AC-1 ( $I_e$ ):	(690 V) 40 °C 55 A (690 V) 60 °C 45 A (690 V) 70 °C 37 A
Rated Operational Current AC-3 ( $I_e$ ):	(220 / 230 / 240 V) 60 °C 23.2 A (380 / 400 V) 60 °C 22 A (415 V) 60 °C 21.2 A (440 V) 60 °C 20 A (500 V) 60 °C 17.6 A (690 V) 60 °C 10.5 A
Rated Operational Power AC-3 ( $P_e$ ):	(220 / 230 / 240 V) 5.5 kW (400 V) 11 kW (415 V) 11 kW (440 V) 11 kW (500 V) 11 kW (690 V) 9 kW

Rated Short-time Withstand Current ( $I_{cw}$ ):	<p>at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 300 A</p> <p>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 55 A</p> <p>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A</p> <p>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 450 A</p> <p>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A</p>
Maximum Electrical Switching Frequency:	AC-1 600 cycles per hour
Rated Insulation Voltage ( $U_i$ ):	<p>acc. to UL/CSA 600 V</p> <p>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V</p>
Rated Impulse Withstand Voltage ( $U_{imp}$ ):	6 kV
Maximum Mechanical Switching Frequency:	3600 cycles per hour
Rated Control Circuit Voltage ( $U_c$ ):	<p>50 Hz 24 ... 60 V</p> <p>60 Hz 24 ... 60 V</p> <p>DC Operation 20 ... 60 V</p>
Operate Time:	<p>Between Coil De-energization and NC Contact Closing 13...98 ms</p> <p>Between Coil De-energization and NO Contact Opening 11...95 ms</p> <p>Between Coil Energization and NC Contact Opening 38...90 ms</p> <p>Between Coil Energization and NO Contact Closing 40...95 ms</p>
Connecting Capacity-Main Circuit:	<p>Flexible with Insulated Ferrule 1x 1.5...16 mm<sup>2</sup></p> <p>Flexible with Insulated Ferrule 2x 1.5...16 mm<sup>2</sup></p> <p>Flexible with Ferrule 1/2x 1.5...16 mm<sup>2</sup></p> <p>Rigid 1/2x 1.5...16 mm<sup>2</sup></p>
Connecting Capacity-Control Circuit:	<p>Flexible with Ferrule 1/2x 0.75 ... 2.5 mm<sup>2</sup></p> <p>Flexible with Insulated Ferrule 1x 0.75...2.5 mm<sup>2</sup></p> <p>Flexible with Insulated Ferrule 2x 0.75...1.5 mm<sup>2</sup></p> <p>Rigid 1/2x 1...2.5 mm<sup>2</sup></p>
Wire Stripping Length:	<p>Control Circuit 10 mm</p> <p>Main Circuit 12 mm</p>
Degree of Protection:	<p>acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20</p> <p>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20</p>
Terminal Type:	Screw Terminals

## Environmental

Ambient Air Temperature:	<p>Close to Contactor for Storage -60...+80 °C</p> <p>Near Contactor for Operation in Free Air -40 ... +70 °C</p>
Maximum Operating Altitude Permissible:	3000 m
Resistance to Shock acc. to IEC 60068-2-27:	<p>Closed, Shock Direction: B1 25 g</p> <p>Open, Shock Direction: B1 5 g</p> <p>Shock Direction: A 30 g</p> <p>Shock Direction: B2 15 g</p> <p>Shock Direction: C1 25 g</p> <p>Shock Direction: C2 25 g</p>
Resistance to Vibrations acc. to IEC 60068-2-6:	5...300 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
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## Technical UL/CSA

General Use Rating UL/CSA:	(600 V AC) 55 A
Tightening Torque UL/CSA:	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_70858M1
CCC Certificate:	CCC_2010010304445623
cUL Certificate:	UL_20100802-E319322-3-1
Declaration of Conformity - CE:	1SBD250169C1000
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:	1SBD251015E1000

## Classifications

E-nummer:	3211518
ETIM 5:	EC000066 - Magnet contactor, AC-switching