

## General Information

<b>Extended Product Type:</b>	AF16-40-00-13
<b>Product ID:</b>	1SBL177201R1300
<b>EAN:</b>	3471523115132
<b>Catalog Description:</b>	AF16-40-00-13 100-250V50/60HZ-DC Contactor
<b>Long Description:</b>	AF16 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.

## 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 Near Contactor for Operation in Free Air -40 ... +70 °C
<b>Block Contactor Type:</b>	4-Pole Contactor
<b>CB Certificate:</b>	CB_SE_70857M1
<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>	13
<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 (<math>I_{th}</math>):</b>	acc. to IEC 60947-4-1, Open Contactors $q = 40^\circ\text{C}$ 35 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>	1SBC101420D0201
<b>Declaration of Conformity - CE:</b>	1SBD250001U1000
<b>Degree of Protection:</b>	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>	3211398
<b>EAC Certificate:</b>	EAC_RU C-FR ME77 B01010
<b>EAN:</b>	3471523115132
<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 NO contact / NO contact, 2 connection points / Power NO contact 7_8
<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>GOST Certificate:</b>	GOST_POCCFR.ME77.B07175.pdf
<b>General Use Rating UL/CSA:</b>	(600 V AC) 30 A
<b>IIT Publishing Status:</b>	Level 0 - Information enabled
<b>Industrial IT Certification Level:</b>	0
<b>Instructions and Manuals:</b>	1SBC101027M6801
<b>Invoice Description:</b>	AF16-40-00-13 100-250V50/60HZ-DC Contactor
<b>KC Certificate:</b>	KC_HW02016-15008A
<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 I <sub>e</sub> > 100 A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 106 A
<b>Maximum Electrical Switching Frequency:</b>	AC-1 600 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, 0 NC
<b>Mounted Auxiliary Contacts 1st Stack:</b>	0 NO, 0 NC
<b>Mounted Auxiliary Contacts 2nd Stack:</b>	0 NO, 0 NC
<b>Mounting Position:</b>	Max. add-on N.C. auxiliary contacts: see accessory fitting details for a 4-pole contactor AF09 ... AF38
<b>Mounting Positions:</b>	1SBC500297F0000
<b>Number of Auxiliary Contacts NC:</b>	0
<b>Number of Auxiliary Contacts NO:</b>	0
<b>Number of Main Contacts NC:</b>	0
<b>Number of Main Contacts NO:</b>	4
<b>Object Classification Code:</b>	Q
<b>Operate Time:</b>	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
<b>Order Multiple:</b>	1 piece
<b>Package Level 1 EAN:</b>	3471523115132
<b>Package Level 1 Gross Weight:</b>	0.27 kg
<b>Package Level 1 Height:</b>	47 mm
<b>Package Level 1 Length:</b>	79 mm
<b>Package Level 1 Units:</b>	1 piece
<b>Package Level 1 Width:</b>	87 mm
<b>Package Level 2 Height:</b>	315 mm
<b>Package Level 2 Length:</b>	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 1.2 W
Product Main Type:	AF16
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 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
Rated Frequency (f):	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 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A
Rated Operational Current AC-3 (I <sub>e</sub> ):	(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 <sub>e</sub> ):	(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 Voltage:	Main Circuit 690 V
Rated Short-time Withstand Current (I <sub>cw</sub> ):	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
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:	5 ... 300 Hz 4 g closed position / 2 g open position
RoHS Date:	20090609
RoHS Information:	1SBD251011E1000
Selling Unit of Measure:	piece
Short Description:	AF16-40-00-13 100-250V50/60HZ-DC Contactor
Standards:	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>	Control Circuit 1.2 N·m Main Circuit 1.5 N·m
<b>Tightening Torque UL/CSA:</b>	Control Circuit 11 in·lb Main Circuit 13 in·lb
<b>UL Certificate:</b>	UL_20120918-E319322-3-1
<b>UL Listing Card:</b>	UL_E319322
<b>UNSPSC:</b>	39121529
<b>Wire Stripping Length:</b>	Control Circuit 10 mm Main Circuit 10 mm

