

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

## General Information

<b>Extended Product Type:</b>	AF80-30-11-13
<b>Product ID:</b>	1SBL397001R1311
<b>EAN:</b>	3471523133037
<b>Catalog Description:</b>	AF80-30-11-13 100-250V50/60HZ-DC Contactor
<b>Long Description:</b>	<p>AF80 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 <math>U_{c \min}</math> ... <math>U_{c \max}</math>. 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 side-mounted 1 N.O. + 1 N.C. auxiliary contact block, front-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.</p>

## Ordering

<b>Minimum Order Quantity:</b>	1 piece
<b>Customs Tariff Number:</b>	85364900

## Popular Downloads

<b>Data Sheet, Technical Information:</b>	1SBC100173C0201
<b>Instructions and Manuals:</b>	1SBC101036M6801

## Dimensions

<b>Product Net Width:</b>	82 mm
<b>Product Net Depth / Length:</b>	116 mm
<b>Product Net Height:</b>	125.5 mm
<b>Product Net Weight:</b>	1.210 kg

## Technical

<b>Number of Main Contacts NO:</b>	3
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<b>Number of Main Contacts NC:</b>	0
<b>Number of Auxiliary Contacts NO:</b>	1
<b>Number of Auxiliary Contacts NC:</b>	1
<b>Rated Operational Voltage:</b>	Auxiliary Circuit 690 V Main Circuit 690 V
<b>Rated Frequency (f):</b>	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
<b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>	acc. to IEC 60947-4-1, Open Contactors $q = 40\text{ °C}$ 130 A acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A
<b>Rated Operational Current AC-1 (<math>I_e</math>):</b>	(690 V) $40\text{ °C}$ 125 A (690 V) $60\text{ °C}$ 100 A (690 V) $70\text{ °C}$ 85 A
<b>Rated Operational Current AC-3 (<math>I_e</math>):</b>	(220 / 230 / 240 V) $60\text{ °C}$ 80 A (380 / 400 V) $60\text{ °C}$ 80 A (415 V) $60\text{ °C}$ 80 A (440 V) $60\text{ °C}$ 80 A (500 V) $60\text{ °C}$ 65 A (690 V) $60\text{ °C}$ 49 A (1000 V) $60\text{ °C}$ 25 A
<b>Rated Operational Power AC-3 (<math>P_e</math>):</b>	(220 / 230 / 240 V) 22 kW (380 / 400 V) 37 kW (400 V) 37 kW (415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 kW
<b>Rated Operational Current AC-15 (<math>I_e</math>):</b>	(220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A
<b>Rated Short-time Withstand Current (<math>I_{cw}</math>):</b>	at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 10 s 780 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 15 min 140 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 1 min 300 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 1 s 1200 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 30 s 450 A for 0.1 s 140 A for 1 s 100 A
<b>Maximum Breaking Capacity:</b>	$\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100\text{ A}$ ) at 440 V 1150 A $\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100\text{ A}$ ) at 690 V 750 A
<b>Maximum Electrical Switching Frequency:</b>	AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 150 cycles per hour AC-3 1200 cycles per hour DC-13 900 cycles per hour

<b>Rated Operational Current DC-13 (<math>I_e</math>):</b>	(110 V) 0.55 A / 60 A (125 V) 0.55 A / 69 A (220 V) 0.27 A / 60 A (24 V) 6 A / 144 A (250 V) 0.27 A / 68 A (400 V) 0.15 A / 60 A (48 V) 2.8 A / 134 A (500 V) 0.13 A / 65 A (600 V) 0.1 A / 60 A (72 V) 1 A / 72 A
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	8 kV
<b>Maximum Mechanical Switching Frequency:</b>	3600 cycles per hour
<b>Rated Control Circuit Voltage (<math>U_c</math>):</b>	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
<b>Operate Time:</b>	Between Coil De-energization and NC Contact Closing 19 ... 105 ms Between Coil De-energization and NO Contact Opening 17 ... 100 ms Between Coil Energization and NC Contact Opening 38 ... 95 ms Between Coil Energization and NO Contact Closing 42 ... 100 ms
<b>Connecting Capacity Main Circuit:</b>	Flexible with Insulated Ferrule 1/2x 6 ... 50 mm <sup>2</sup> Flexible with Ferrule 1/2x 6 ... 50 mm <sup>2</sup> Rigid 1x 6 ... 70 mm <sup>2</sup> Rigid 2x 6 ... 50 mm <sup>2</sup>
<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>Wire Stripping Length:</b>	Main Circuit 17 mm
<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 IP10
<b>Terminal Type:</b>	Screw Terminals

## Environmental

<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>Climatic Withstand:</b>	Category B according to IEC 60947-1 Annex Q

<b>Maximum Operating Altitude</b> <b>Permissible:</b>	3000 m
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5 ... 300 Hz 3 g closed position / 3 g open position
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	Closed, Shock Direction: A 25 g Closed, Shock Direction: B1 25 g Closed, Shock Direction: B2 15 g Closed, Shock Direction: C1 25 g Closed, Shock Direction: C2 25 g Open, Shock Direction: B1 5 g

## Technical UL/CSA

<b>General Use Rating UL/CSA:</b>	(600 V AC) 105 A
<b>Horsepower Rating UL/CSA:</b>	(120 V AC) Single Phase 7-1/2 Hp (240 V AC) Single Phase 15 Hp (200 ... 208 V AC) Three Phase 25 Hp (220 ... 240 V AC) Three Phase 30 Hp (440 ... 480 V AC) Three Phase 60 Hp (550 ... 600 V AC) Three Phase 75 Hp
<b>Tightening Torque UL/CSA:</b>	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 53 in·lb

## Certificates and Declarations (Document Number)

<b>ABS Certificate:</b>	ABS_15-GE1349500-PDA_90682247
<b>BV Certificate:</b>	BV_2634H36994A
<b>CB Certificate:</b>	CB_SE-77417M1
<b>CCC Certificate:</b>	CCC_2013010304646569
<b>Declaration of Conformity - CE:</b>	1SBD250000U1000
<b>DNV Certificate:</b>	DNV-GL_TAE00001AF-1
<b>DNV GL Certificate:</b>	DNV-GL_TAE00001AF-1
<b>EAC Certificate:</b>	EAC_RU C-FR ME77 B01010
<b>Environmental Information:</b>	1SBD250168E1000
<b>Instructions and Manuals:</b>	1SBC101036M6801
<b>KC Certificate:</b>	KC_HW02016-15011A
<b>LR Certificate:</b>	LRS_1300087E1
<b>RINA Certificate:</b>	RINA_ELE084013XG
<b>RMRS Certificate:</b>	RMRS_1400682124
<b>RoHS Information:</b>	1SBD251021E1000
<b>UL Certificate:</b>	UL_20130926-E312527_14_1
<b>UL Listing Card:</b>	UL_E312527

Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	150 mm
Package Level 1 Depth / Length:	150 mm
Package Level 1 Height:	103 mm
Package Level 1 Gross Weight:	1.33 kg
Package Level 1 EAN:	3471523133037
Package Level 2 Units:	8 piece
Package Level 2 Width:	250 mm
Package Level 2 Depth / Length:	300 mm
Package Level 2 Height:	300 mm
Package Level 3 Units:	192 piece

Classifications

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

