



**Electric Automation**  
Automation specialists

Reference: AF80-30-22-14  
Code: 1SBL397001R1422

AF80-30-22-14 250-500V50/60HZ-DC  
Contactor

Buy it at Electric Automation Network



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  $U_c$  min. ...  $U_c$  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.

## Ordering

EAN:	3471523133143
Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085

## Dimensions

Product Net Width:	70 mm
Product Net Depth:	149 mm
Product Net Height:	125.5 mm
Product Net Weight:	1.220 kg

## Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	180 mm
Package Level 1 Length:	150 mm
Package Level 1 Height:	102 mm
Package Level 1 Gross Weight:	1.36 kg
Package Level 1 EAN:	3471523133143
Package Level 2 Units:	10 piece
Package Level 2 Width:	300 mm
Package Level 2 Length:	320 mm
Package Level 2 Height:	500 mm
Package Level 3 Units:	1296 piece

## Technical

Number of Main Contacts NO:	3
Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	2
Number of Auxiliary Contacts NC:	2
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 $q = 40\text{ °C}$ 130 A acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A
Rated Operational Current AC-1 ( $I_e$ ):	(690 V) $40\text{ °C}$ 125 A (690 V) $60\text{ °C}$ 100 A (690 V) $70\text{ °C}$ 85 A
Rated Operational Current AC-3 ( $I_e$ ):	(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

Rated Operational Power AC-3 ( $P_e$ ):	(220 / 230 / 240 V) 22 kW (380 / 400 V) 37 kW (415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 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 780 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 140 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1200 A at 40 °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
Maximum Breaking Capacity:	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 1150 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 750 A
Maximum Electrical Switching Frequency:	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
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) 1000 V
Rated Impulse Withstand Voltage ( $U_{imp}$ ):	8 kV
Maximum Mechanical Switching Frequency:	3600 cycles per hour
Rated Control Circuit Voltage ( $U_c$ ):	50 Hz 250 ... 500 V 60 Hz 250 ... 500 V DC Operation 250 ... 500 V
Operate Time:	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

Connecting Capacity-Main Circuit:	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>
Connecting Capacity-Auxiliary Circuit:	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>
Connecting Capacity-Control Circuit:	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>
Wire Stripping Length:	Main Circuit 17 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 IP10
Terminal Type:	Screw Terminals

## Environmental

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
Maximum Operating Altitude Permissible:	3000 m
Resistance to Shock acc. to IEC 60068-2-27:	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
Resistance to Vibrations acc. to IEC 60068-2-6:	5...300 Hz 3 g closed position / 3 g open position

## Technical UL/CSA

General Use Rating UL/CSA:	(600 V AC) 105 A
Horsepower Rating UL/CSA:	(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
Tightening Torque UL/CSA:	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 53 in·lb

## Certificates and Declarations (Document Number)

ABS Certificate:	ABS_15-GE1349500-PDA_90682247
------------------	-------------------------------

BV Certificate:	BV_2634H36994A
CB Certificate:	CB_SE_77417
CCC Certificate:	CCC_2013010304646569
cUL Certificate:	UL_20130926-E312527_14_1
Declaration of Conformity - CE:	1SBD250176C3000
DNV Certificate:	DNV-GL_E13871
EAC Certificate:	EAC_RU C-FR ME77 B01010
GL Certificate:	DNV-GL_E13871
LR Certificate:	LRS_1300087E1
RINA Certificate:	RINA_ELE084013XG
RMRS Certificate:	RMRS_1400682124
RoHS Information:	1SBD251021E1000

## Classifications

ETIM 5:	EC000066 - Magnet contactor, AC-switching
UNSPSC:	39121529