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#### **General Information**

 Extended Product Type:
 AF80-30-22-13

 Product ID:
 1SBL397001R1322

 EAN:
 3471523133136

Catalog Description: AF80-30-22-13 100-250V50/60HZ-DC Contactor

Long Description: 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 Uc min. ... Uc 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.

Categories

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

#### **Ordering**

EAN:	3471523133136
Minimum Order Quantity:	1 piece
<b>Customs Tariff Number:</b>	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:	3471523133136
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 (Ith):

acc. to IEC 60947-4-1, Open Contactors q = 40  $^{\circ}\text{C}$  130 A

acc. to IEC 60947-5-1, q = 40 °C 16 A

Rated Operational Current AC-1 (Ie): (690 V) 40 °C 125 A

(690 V) 60 °C 100 A (690 V) 70 °C 85 A

Rated Operational Current AC-3 ( $I_e$ ): (220 / 230 / 240 V) 60 °C 80 A

(380 / 400 V) 60 °C 80 A (415 V) 60 °C 80 A (440 V) 60 °C 80 A (500 V) 60 °C 65 A (690 V) 60 °C 49 A (1000 V) 60 °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** 

(l<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 Short-time Withstand Current at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 780 A

(I<sub>cw</sub>):

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 le > 100 A) at 440 V 1150 A cos phi=0.45 (cos phi=0.35 for le > 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

(l<sub>e</sub>):

(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<sub>i</sub>): acc. to UL/CSA 600 V

acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V

Rated Impulse Withstand Voltage

(U<sub>imp</sub>):

**Maximum Mechanical Switching** 

Frequency:

3600 cycles per hour

Rated Control Circuit Voltage (U<sub>c</sub>):

50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 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 mm²
Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²
Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²

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 Closed, 60068-2-27: Closed.

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  $\,$  5...300 Hz  $\,$ 3 g closed position /  $\,$ 3 g open position 60068-2-6:

# 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







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Product	Code	Reference	Product link
AF80-30-22-13 100-250V50/60HZ-DC Contactor	1SBL397001R1322	AF80-30-22-13	Buy on EAN