



PRODUCT-DETAILS

AFS80-30-22-13

AFS80-30-22-13 100-250V50/60HZ-DC

Contactors



General Information	
Extended Product Type	AFS80-30-22-13
Product ID	1SBL397082R1322
EAN	3471523157934
Catalog Description	AFS80-30-22-13 100-250V50/60HZ-DC Contactor
Long Description	The AFS80-30-22-13 is a 3 pole - 1000 V IEC or 600 V UL contactor with fixed 2 N.O + 2 N.C. front mounted auxiliary contact blocks with screw connections, controlling motors up to 37 kW / 400 V AC (AC-3) or 60 hp / 480 V UL and switching power circuits up to 125 A (AC-1) or 105 A UL general use. AFS contactors can be easily integrated in machine manufacturer's systems complying with main standards EN ISO 13849 and EN 62061 - guaranteeing the safe use of your machinery and equipment. An easily identifiable yellow low energy auxiliary contact block ensures the status feedback circuits required in machine safety applications. Thanks to the AF technology, the contactor has a wide control voltage range (100 ... 250 V), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories.

Ordering	
Minimum Order Quantity	1 piece

Customs Tariff Number

85364900

Popular Downloads	
Instructions and Manuals	1SBC101052M6801
CAD Dimensional Drawing	2CDC001079B0201
Dimension Diagram	DNV_TAE00001AF-4

Dimensions	
Product Net Width	70 mm
Product Net Depth / Length	149 mm
Product Net Height	125.5 mm
Product Net Weight	1.22 kg

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
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60947-1:22, CSA C22.2 No. 60947-4-1:22
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 1000 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Control Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I _{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 130 A acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A
Rated Operational Current AC-1 (I _e)	(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)	(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 (380 / 400 V) 60 °C 80 A (220 / 230 / 240 V) 60 °C 80 A
Rated Operational Current AC-3e (I _e)	(415 V) 60 °C 80 A (440 V) 60 °C 80 A (500 V) 60 °C 65 A (690 V) 60 °C 49 A (380 / 400 V) 60 °C 80 A (220 / 230 / 240 V) 60 °C 80 A
Rated Operational Power AC-3 (P _e)	(400 V) 37 kW (415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 kW (380 / 400 V) 37 kW (220 / 230 / 240 V) 22 kW

Rated Operational Power AC-3e (P _e)	(415 V) 45 kW (440 V) 45 kW (500 V) 45 kW (690 V) 45 kW (380 / 400 V) 37 kW (220 / 230 / 240 V) 22 kW
Rated Operational Current AC-15 (I _e)	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A
Rated Short-time Withstand Current Low Voltage (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-1 (I _e)	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
Rated Operational Current DC-3 (I _e)	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
Rated Operational Current DC-5 (I _e)	(110 V) 2 Poles in Series, 40 °C 125 A (110 V) 2 Poles in Series, 60 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 125 A (110 V) 3 Poles in Series, 60 °C 100 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 125 A (220 V) 3 Poles in Series, 60 °C 100 A

	(220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 125 A (72 V) 1-Pole, 60 °C 100 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 40 °C 125 A (72 V) 2 Poles in Series, 60 °C 100 A (72 V) 2 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 125 A (72 V) 3 Poles in Series, 60 °C 100 A (72 V) 3 Poles in Series, 70 °C 85 A
Rated Operational Current DC-13 (I _e)	(24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W
Rated Insulation Voltage (U _i)	acc. to IEC 60947-4-1 1000 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 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 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
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M4 or 2 x M6 screws placed diagonally
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 6 ... 50 mm ² Flexible with Insulated Ferrule 1/2x 6 ... 50 mm ² Rigid Stranded 1x 6 ... 70 mm ² Rigid Stranded 2x 6 ... 50 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Rigid 1/2x 1 ... 2.5 mm ²
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Rigid 1/2x 1 ... 2.5 mm ²
Wire Stripping Length	Auxiliary Circuit 10 mm Control Circuit 10 mm 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

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 105 A

Horsepower Rating	(120 V AC) Single Phase 7-1/2 hp
UL/CSA	(200 ... 208 V AC) Three Phase 25 hp
	(220 ... 240 V AC) Three Phase 30 hp
	(240 V AC) Single Phase 15 hp
	(440 ... 480 V AC) Three Phase 60 hp
	(550 ... 600 V AC) Three Phase 75 hp
Connecting Capacity	Rigid Stranded 1/2x 6-1 AWG
Main Circuit UL/CSA	
Tightening Torque	Auxiliary Circuit 11 in-lb
UL/CSA	Control Circuit 11 in-lb
	Main Circuit 53 in-lb

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -40 ... 70 °C
	Close to Contactor without Thermal O/L Relay -40 ... 70 °C
	Close to Contactor for Storage -60 ... +80 °C
Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible	Without Derating 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
Resistance to Vibrations	3g Closed Position & 3g Open Position 5 ... 300 Hz

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS Information	2CMT2021-006277
RoHS Status	Following EU Directive 2011/65/EU
Toxic Substances Control Act - TSCA	2CMT2023-006525
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

Certificates and Declarations

ABS Certificate	ABS_20-2060694-PDA
BV Certificate	BV_2634H36994B1
CB Certificate	CB_SE-96557
CCC Certificate	CCC_2013010304646569
CQC Certificate	CQC2013010304646569
Declaration of Conformity - CCC	2020980304001255
Declaration of Conformity - CE	1SBD250022U1000
Declaration of Conformity - UKCA	1SBD250044U1000
DNV Certificate	DNV_TAE00001AF-4
EAC Certificate	EAC_RUC-FRME77B03199
LR Certificate	LRS_LR23403517TA-02
RMRS Certificate	RMRS_1802705280

UL Certificate

UL-US-L312527-1141-10303102-9

UL-CA-L312527-4141-10303102-9

UL Listing Card

E312527

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	167 mm
Package Level 1 Depth / Length	180 mm
Package Level 1 Height	97 mm
Package Level 1 Gross Weight	1.36 kg
Package Level 1 EAN	3471523157934
Package Level 2 Units	box 6 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	300 mm
Package Level 2 Gross Weight	8.16 kg
Package Level 3 Units	144 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
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4758 >> lec Contactors
E-Number (Finland)	3708071
E-Number (Sweden)	3210674

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SBN010120R1011	CAL4-11 Auxiliary Contact Block	CAL4-11	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AFS Contactors → AFS80

