



 PRODUCT-DETAILS

AF09-22-00-13

AF09-22-00-13 100-250V50/60HZ-DC Contactor



General Information

Extended Product Type:	AF09-22-00-13
Product ID:	1SBL137501R1300
EAN:	3471523116238
Catalog Description:	AF09-22-00-13 100-250V50/60HZ-DC Contactor
Long Description:	The AF09-22-00-13 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 4 kW / 400 V AC (AC-3) and switching power circuits up to 25 A (AC-1) or 25 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 V 50/60 Hz and DC), 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.
Display Name:	AF09-22-00-13

Ordering

Minimum Order Quantity:	1 piece
Customs Tariff Number:	85364900

Popular Downloads

EPLAN Data:	9AAC159656_EPLAN
Data Sheet, Technical Information:	1SBC100214C0202
Instructions and Manuals:	1SBC101027M6801
Instructions and Manuals (Part 2):	1SAC200017M0002
CAD Dimensional Drawing:	2CDC001079B0201

Dimensions

Product Net Width:	45 mm
Product Net Depth / Length:	77 mm
Product Net Height:	86 mm
Product Net Weight:	0.27 kg

Technical

Number of Main Contacts NO:	2
Number of Main Contacts NC:	2
Number of Auxiliary Contacts NO:	0
Number of Auxiliary Contacts NC:	0
Number of Poles:	4P
Standards:	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60335-2-40 LZGH2 A2L, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60335-2-40 LZGH2 A2L, CAN/CSA C22.2 No.60947-1, CAN/CSA C22.2 No.60947-4-1
Rated Operational Voltage:	Main Circuit 690 V
Rated Frequency (f):	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 $\Theta = 40\text{ }^{\circ}\text{C}$ 35 A
Rated Operational Current AC-1 (I_e):	(690 V) 40 °C 25 A (690 V) 60 °C 25 A (690 V) 70 °C 22 A
Rated Operational Current AC-3 (I_e):	(415 V) 60 °C 9 A (440 V) 60 °C 9 A (500 V) 60 °C 9.5 A (690 V) 60 °C 7 A (380 / 400 V) 60 °C 9 A (220 / 230 / 240 V) 60 °C 9 A
Rated Operational Power AC-3 (P_e):	(400 V) 4 kW (415 V) 4 kW (440 V) 4 kW (500 V) 5.5 kW (690 V) 5.5 kW (380 / 400 V) 4 kW (220 / 230 / 240 V) 2.2 kW

Rated Short-time Withstand Current Low Voltage (I_{cw}):	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
Maximum Breaking Capacity:	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 106 A
Rated Insulation Voltage (U_i):	acc. to IEC 60947-4-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U_{imp}):	6 kV
Maximum Electrical Switching Frequency:	(AC-1) 600 cycles per hour
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
Power Loss:	at Rated Operating Conditions AC-1 per Pole 0.8 W at Rated Operating Conditions AC-3 per Pole 0.1 W
Operate Time:	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
Mounting on DIN Rail:	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied) :	2 x M4 Screws Placed Diagonally
Connecting Capacity Main Circuit:	Flexible with Ferrule 1/2x 0.75 ... 6 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 4 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Rigid Solid 1/2x 1 ... 4 mm ² Rigid Stranded 1/2x 1 ... 6 mm ²
Connecting Capacity Auxiliary Circuit:	Rigid Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 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 Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ²
Wire Stripping Length:	Control Circuit 10 mm Main Circuit 10 mm
Degree of Protection:	acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20
Tightening Torque:	Control Circuit 1.2 N·m Main Circuit 1.5 N·m
Terminal Type:	Screw Terminals
Product Name:	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA:	Main Circuit 600 V
General Use Rating UL/CSA:	(600 V AC) 25 A
Connecting Capacity Main Circuit UL/CSA:	Rigid Solid 1/2x 16-10 AWG Rigid Stranded 1/2x 16-10 AWG
Connecting Capacity Auxiliary Circuit UL/CSA:	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG

Connecting Capacity Control Circuit UL/CSA:	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
Tightening Torque UL/CSA:	Control Circuit 11 in-lb Main Circuit 13 in-lb

Environmental

Ambient Air Temperature:	Close to Contactor for Storage -60 ... +80 °C Near Contactor for Operation in Free Air -40 ... 70 °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: 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:	4g Closed Position & 2g Open position 5 ... 300 Hz
Pollution Degree:	3

Material Compliance

Conflict Minerals Reporting Template (CMRT):	9AKK108467A5658
REACH Declaration:	2CMT2021-006202
RoHS Declaration:	2CMT2021-006277
RoHS Information:	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
SCIP:	f842df04-657f-4c58-9f9f-1205d881cc64 China
Simplified SCIP:	7a50f1ae-36ac-4865-92b8-4b55709573df Czechia 1dca78aa-7884-4494-8b5b-f4404a3ab937 Spain c9be017e-fc61-478e-a492-bcc9c06397cc Croatia d37e94d5-3609-419b-87b5-318cdb051e6e Poland 8ccf9eb8-e975-4b63-bc07-41218530e8c1 Germany c10a5b6b-d352-488a-ad08-b39b422618de Belgium 32a7c0aa-a4c3-4c6b-bf71-034866f4606b Denmark ee096501-5985-4b71-8905-26c428d2b4d0 Germany 43498125-99ee-48de-b543-99c5391b0118 Greece eb6f8d9c-9e62-4581-b334-681dd9313a55 Finland bbe9eaf4-f502-4334-bea0-64c7a6541967 Belgium 29f5e32d-90d1-44d6-ada0-01703a563387 Bulgaria 6d82ea9b-cfc7-46ee-90a2-6ae06dc393da Germany d0888840-ee2c-4ff2-9357-46e779868ec9 Portugal c28fd335-b6ae-48b2-8f92-2ecb421ef843 Norway 628d5705-c89e-4b61-9121-70eeaea8663a Netherlands b16ccef0-bb3f-4549-903f-0ad66f8d3dc7 Hungary d8cc386d-9ed1-48b6-91ec-3b02983d21ec Hungary 245a655f-e616-4787-913d-8df76d45c49e Poland 3e05f9ef-e350-48df-b6ea-521e1f083fea Estonia fe8cae12-85ae-4c3e-95b5-4472db6a1aef Poland 42b30871-5b4b-4337-adbe-5884a562127f France fab5c7be-e64b-4fe4-9ec4-fc3e31ab2ad5 Sweden 2586979e-ae23-44d7-9eaa-ad240951212f Germany 076a4d02-400e-4858-843e-e0e45bc41fa2 France 1f2b7dbb-ed99-4372-9456-3d1e08ca8009 Sweden ac557e6f-4684-4366-bc8b-89e6743b6c85 Germany
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)

ABB EcoSolutions

ABB EcoSolutions:	Yes
ABB Site Meeting Group Waste To Landfill Target:	No non-hazardous waste is sent to a landfill
EcoSolutions Profile:	1SBC100156C0308
End Of Life Disassembling Instructions:	1SBC101080M6801
Environmental Product Declaration - EPD:	1SBD250584E3000
Improved Energy Efficiency for Customers:	Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line
Recyclability Rate of the Product acc. to EN45555:	Design for Closing Resource Loops - Standard EN45555 - 92.7 %

Certificates and Declarations

A2L Certificate – UL:	9AKK108469A4875 9AKK108469A4879
ABS Certificate:	ABS_20-2060694-PDA
BV Certificate:	BV_2634H24898C1
CB Certificate:	CB_SE-117714
CCC Certificate:	CCC_2024010304656669
CQC Certificate:	CQC2010010304445624 CQC2020010304298240
Declaration of Conformity - CCC:	2020980304001253 2020980304001082
Declaration of Conformity - CE:	1SBD250001U1000
Declaration of Conformity - UKCA:	1SBD250032U1000
DNV Certificate:	DNV_TAE00001AF-4
KC Certificate:	KC_HW02016-15007C
LR Certificate:	LRS_LR23403517TA-02
RINA Certificate:	RINA_ELE084013XG
RMRS Certificate:	RMRS_1802705280
UL Certificate:	UL-US-L319322-13-72119002-5 UL-CA-L319322-43-72119002-6
UL Listing Card:	UL_E319322

Container Information

Package Level 1 Units:	box 1 piece
Package Level 1 Width:	87 mm
Package Level 1 Depth / Length:	79 mm
Package Level 1 Height:	47 mm

Package Level 1 Gross Weight:	0.27 kg
Package Level 1 EAN:	3471523116238

External Classifications and Standards

Object Classification Code:	Q
ETIM 7:	EC000066 - Power contactor, AC switching
ETIM 8:	EC000066 - Power contactor, AC switching
ETIM 9:	EC000066 - Power contactor, AC switching
eClass:	V11.0 : 27371003
UNSPSC:	39121529
IDEA Granular Category Code (IGCC):	4758 >> lec Contactors
E-Number (Finland):	3706344
E-Number (Sweden):	3211394

Accessories

Identifier	Description	Type	Qty	Unit Of Measure
1SBN010015R1001	CE5-01D0.1 Auxiliary Contact Block	CE5-01D0.1	1	piece
1SBN010015R1010	CE5-10D0.1 Auxiliary Contact Block	CE5-10D0.1	1	piece
1SBN010016R1001	CE5-01W0.1 Auxiliary Contact Block	CE5-01W0.1	1	piece
1SBN010016R1010	CE5-10W0.1 Auxiliary Contact Block	CE5-10W0.1	1	piece
1SBN010017R1001	CE5-01D2 Auxiliary Contact Block	CE5-01D2	1	piece
1SBN010017R1010	CE5-10D2 Auxiliary Contact Block	CE5-10D2	1	piece
1SBN010018R1001	CE5-01W2 Auxiliary Contact Block	CE5-01W2	1	piece
1SBN010018R1010	CE5-10W2 Auxiliary Contact Block	CE5-10W2	1	piece
1SBN010013R1010	CB5-10 Impulse Contact Block	CB5-10	1	piece
1SBN010013R1001	CB5-01 Impulse Contact Block	CB5-01	1	piece
1SBN010110R1010	CA4-10 Auxiliary Contact Block	CA4-10	1	piece
1SBN010110T1010	CA4-10-T Auxiliary Contact Block	CA4-10-T	1	piece
1SBN010110R1001	CA4-01 Auxiliary Contact Block	CA4-01	1	piece
1SBN010110T1001	CA4-01-T Auxiliary Contact Block	CA4-01-T	1	piece
1SBN010111R1010	CC4-10 Leading Auxiliary Contact Block	CC4-10	1	piece
1SBN010111R1001	CC4-01 Lagging Auxiliary Contact Block	CC4-01	1	piece
1SBN010120R1011	CAL4-11 Auxiliary Contact Block	CAL4-11	1	piece
1SBN010120T1011	CAL4-11-T Auxiliary Contact Block	CAL4-11-T	1	piece
1SBN010140R1022	CA4-22E Auxiliary Contact Block	CA4-22E	1	piece
1SBN010140R1031	CA4-31E Auxiliary Contact Block	CA4-31E	1	piece
1SBN010140R1040	CA4-40E Auxiliary Contact Block	CA4-40E	1	piece
1SBN010140R1004	CA4-04E Auxiliary Contact Block	CA4-04E	1	piece
1SBN010140R1322	CA4-22U Auxiliary Contact Block	CA4-22U	1	piece
1SBN010140R1122	CA4-22M Auxiliary Contact Block	CA4-22M	1	piece

Identifier	Description	Type	Qty	Unit Of Measure
1SBN010151R1011	CAT4-11E Auxiliary Contact / Coil Terminal Block	CAT4-11E	1	piece
1SBN010140R1331	CA4-31U Auxiliary Contact Block	CA4-31U	1	piece
1SBN010140R1131	CA4-31M Auxiliary Contact Block	CA4-31M	1	piece
1SBN010151R1111	CAT4-11M Auxiliary Contact / Coil Terminal Block	CAT4-11M	1	piece
1SBN010140R1340	CA4-40U Auxiliary Contact Block	CA4-40U	1	piece
1SBN010140R1113	CA4-13M Auxiliary Contact Block	CA4-13M	1	piece
1SBN010151R1311	CAT4-11U Auxiliary Contact / Coil Terminal Block	CAT4-11U	1	piece
1SBN070156T1000	LDC4 Additional Coil Terminal Block	LDC4	1	piece
1SBN030105T1000	VM4 Mechanical Interlock Unit	VM4	1	piece
1SBN081306T1000	BEA16-4 Connecting Link with Manual Motor Starter	BEA16-4	1	piece
1SBN010140R1104	CA4-04M Auxiliary Contact Block	CA4-04M	1	piece
1SBN030111R1000	VEM4 Mechanical and Electrical Interlock Set	VEM4	1	piece
1SBN020112R1000	TEF4-ON Frontal Electronic Timer	TEF4-ON	1	piece
1SBN020113R1000	TEF4S-ON Frontal Electronic Timer	TEF4S-ON	1	piece
1SBN010134R1011	CAL4-11K Auxiliary Contact Block	CAL4-11K	1	piece
1SBN020114R1000	TEF4-OFF Frontal Electronic Timer	TEF4-OFF	1	piece
1SBN081311R1000	BER16-4 Connection Set for Reversing Contactors	BER16-4	1	piece
1SBN020115R1000	TEF4S-OFF Frontal Electronic Timer	TEF4S-OFF	1	piece
1SBN081313R2000	BEY16-4 Connection Set for Star-Delta Starter	BEY16-4	1	piece
1SBN071303T1000	LY16-4 Connecting Strip	LY16-4	1	piece
1SBN071305R1000	LF16-4 Connecting Strip	LF16-4	1	piece
1SBN110108T1000	BX4 Protective Cover	BX4	1	piece
1SBN072304R1000	LH38-4 Connecting Strip	LH38-4	1	piece
1SBN071306R1000	LG16-4 Connecting Strip	LG16-4	1	piece
1SBN040100R1011	WA4-11 24-60V50/60HZ-DC Mechanical Latching Unit	WA4-11	1	piece
1SBN040100R1014	WA4-14 250-500V50/60HZ-DC Mechanical Latching Unit	WA4-14	1	piece
1SBN110122T1000	BDT4 Test Block	BDT4	1	piece
1SBN040100R1010	WA4-10 24VDC Mechanical Latching Unit	WA4-10	1	piece
1SBN040100R1012	WA4-12 48-130V50/60HZ-DC Mechanical Latching Unit	WA4-12	1	piece
1SBN060100R1000	RA4 Interface Relay	RA4	1	piece
1SBN010146R1104	CA4-04MK Auxiliary Contact Block	CA4-04MK	1	piece
1SBN040100R1013	WA4-13 100-250V50/60HZ-DC Mechanical Latching Unit	WA4-13	1	piece
1SBN081322R1000	BER16-4KF Connection Set for Reversing Contactors	BER16-4KF	1	piece
1SBN010146R1113	CA4-13MK Auxiliary Contact Block	CA4-13MK	1	piece
1SBN081323R2000	BEY16-4KF Connection Set for Star-Delta Starter	BEY16-4KF	1	piece
1SBN070159T1000	LDC4K Additional Coil Terminal Block	LDC4K	1	piece
1SBN010160R1001	CA4-01K Auxiliary Contact Block	CA4-01K	1	piece
1SBN010146R1022	CA4-22EK Auxiliary Contact Block	CA4-22EK	1	piece
1SBN081314R1000	BEP16-30 Phase to phase connection	BEP16-30	1	piece
1SBN010160R1010	CA4-10K Auxiliary Contact Block	CA4-10K	1	piece
1SBN010146R1122	CA4-22MK Auxiliary Contact Block	CA4-22MK	1	piece

Identifier	Description	Type	Qty	Unit Of Measure
1SBN010160T1001	CA4-01K-T Auxiliary Contact Block	CA4-01K-T	1	piece
1SBN010160T1010	CA4-10K-T Auxiliary Contact Block	CA4-10K-T	1	piece
1SBN030113R1000	VEM4K Mechanical and Electrical Interlock Set	VEM4K	1	piece
1SBN010146R1031	CA4-31EK Auxiliary Contact Block	CA4-31EK	1	piece
1SBN010146R1131	CA4-31MK Auxiliary Contact Block	CA4-31MK	1	piece
1SBN010146R1040	CA4-40EK Auxiliary Contact Block	CA4-40EK	1	piece

Categories

Products > Low Voltage Products and Systems > Control Products > Contactors > Block Contactors > AF Contactors > AF09

