



 PRODUCT-DETAILS

AF16-22-00-13

AF16-22-00-13 100-250V50/60HZ-DC Contactor



General Information

Extended Product Type:	AF16-22-00-13
Product ID:	1SBL177501R1300
EAN:	3471523116337
Catalog Description:	AF16-22-00-13 100-250V50/60HZ-DC Contactor
Long Description:	The AF16-22-00-13 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 7.5 kW / 400 V AC (AC-3) and switching power circuits up to 30 A (AC-1) or 30 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:	AF16-22-00-13

Ordering

Minimum Order Quantity:	1 piece
Customs Tariff Number:	85364900

Popular Downloads

EPLAN Data:	9AAC159647_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 $\Theta = 40\text{ °C}$ 35 A
Rated Operational Current AC-1 (I_e):	(690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A
Rated Operational Current AC-3 (I_e):	(415 V) 60 °C 18 A (440 V) 60 °C 18 A (500 V) 60 °C 15 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 18 A (220 / 230 / 240 V) 60 °C 18 A
Rated Operational Power AC-3 (P_e):	(400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW (380 / 400 V) 7.5 kW (220 / 230 / 240 V) 4 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 1.2 W at Rated Operating Conditions AC-3 per Pole 0.35 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) 30 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:	9d8a072b-a8f5-4676-b483-01d7b0790faf China
Simplified SCIP:	b78cfaf1-eadb-4bb4-97dc-2a1cdf017461 Hungary d03ecc2e-d359-4279-a453-0b53c3f346f3 Estonia 4c4da815-9e57-4338-b4c2-c7dd6d469ae4 Bulgaria 12215a01-d5d4-487d-ae5c-49a631950c59 Finland 87c60133-0842-409b-8367-9b128052e0c3 Croatia f604823e-18bf-4922-8d45-09f7ae770cf3 Czechia 5dfe0032-f993-48b1-8ef0-af08f8bea918 Belgium f9d37d51-2e64-4d5a-a152-fe4919c49331 France d1b305d9-6f2a-4e41-ade5-46c6357ac787 Sweden 1b6a6cb1-5656-446b-a4c9-f09ef3b838ca Germany f9fd8f69-6fc5-4874-aba0-ae59a8e6cbbb France 50cef61b-b111-48ff-8211-fde63d5ff29e Portugal 54da4f40-0f88-4def-a444-ff7927ba1f07 Germany f4cc6c46-9b79-4964-a25a-b54e14ade8a6 Denmark 95de85cc-dc9e-4048-8fc5-484fa27e66c1 Sweden 0b1aada1-a86d-4aa8-a299-216c2b16c542 Germany 82206802-2db8-4129-9320-194156a7e7aa Germany 31b71a14-e935-43b5-a7fb-b4025b2bd8f9 Poland 5d487ee1-780e-4c73-9d1e-cd9046b9d83c Greece 0be059b6-8df7-49d2-aa16-b7a2201a1640 Poland bba2756c-ccd3-4d1d-b838-e797a4a7c48d Germany 4a077ff3-f7a0-413b-918b-e31b6c07b1e0 Poland 4e4b8581-eb7f-41c4-a428-e52606345475 Netherlands 59401d2b-63eb-484c-a62a-1c06a8b5d0ad Norway ca90f5a0-0ce5-4b0d-9678-e9fb8858a272 Hungary 62e546af-91bc-4db0-a50b-785fd57b2bb6 Belgium 62faea84-9cb9-46e6-be9a-92e0980d1148 Spain
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_HW02016-15008C
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:	3471523116337

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):	3706351
E-Number (Sweden):	3211402

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

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