PRODUCT-DETAILS

AF63-30-11 20-60V DC

AF63-30-11 20-60V DC Contactor

General Information

Extended Product Type	AF63-30-11 20-60V DC
Product ID	1SBL377001R7211
EAN	3471522115027
Catalog Description	AF63-30-11 20-60V DC Contactor
Long Description	AF63 contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V AC and 220 V DC. The contactors can also be used for many other applications such as bypass, capacitor switching, lighting, DC power circuits... The AF... contactors are fitted with an electronic coil interface which accepts a wide control voltage range, on AC 50/60 Hz or DC supplies. The same contactor can accept various supply voltages according to the different countries where the electrical equipment will be installed, or some fluctuation in the control voltage due to the local supply or network. The AF... contactors are also fully suitable for operation in AC or DC control circuit liable to voltage interruptions or voltage dip risks. Advantages: - Wide voltage range, e.g. 100 ... 250 V AC and DC - Can manage large voltage variations - Reduced power consumption - Very distinct closing and opening - Noise free - Can withstand voltage interruptions or voltage dips in the control supply (≤ 20 ms). The AF... series 1-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles and 2 built-in auxiliary contacts, front and side-mounted add-on auxiliary contact blocks - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads

Data Sheet, Technical Information	1SNC001003C0202
Instructions and Manuals	FPTC407734P0003
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	82 mm
Product Net Depth / Length	108 mm
Product Net Height	110 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	1
Number of Auxiliary Contacts NC	1
Number of Poles	3P
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 508, CSA C22.2 No. 14, IEC 60077-1 (applicable parts), IEC 60077-2 (applicable parts), EN 50155 (applicable parts), TR CU 001/2011 (on request), IEC 61373, For compliance confirmation on applicable parts based on your application and combination, please consult your ABB sales representatives.
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 Θ = 40 °C 125 A acc. to IEC 60947-5-1, Θ = 40 °C 16 A
Rated Operational Current AC-1 (I_e)	(690 V) 40 °C 115 A (690 V) 55 °C 95 A (690 V) 70 °C 80 A
Rated Operational Current AC-3 (I_e)	(415 V) 55 °C 65 A (440 V) 55 °C 65 A (500 V) 55 °C 55 A (690 V) 55 °C 43 A (380 / 400 V) 55 °C 65 A (220 / 230 / 240 V) 55 °C 65
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 (380 / 400 V) 3 A
Rated Operational	(110 V) 2 Poles in Series, 40 °C 110 A

Current DC-1 (I_e)	(110 V) 2 Poles in Series, 55 °C 95 A (110 V) 2 Poles in Series, 70 °C 80 A (110 V) 3 Poles in Series, 40 °C 110 A (110 V) 3 Poles in Series, 55 °C 95 A (110 V) 3 Poles in Series, 70 °C 80 A (220 V) 3 Poles in Series, 40 °C 110 A (220 V) 3 Poles in Series, 55 °C 95 A (220 V) 3 Poles in Series, 70 °C 80 A (72 V) 1-Pole, 40 °C 110 A (72 V) 1-Pole, 55 °C 95 A (72 V) 1-Pole, 70 °C 80 A (72 V) 2 Poles in Series, 40 °C 110 A (72 V) 2 Poles in Series, 55 °C 95 A (72 V) 2 Poles in Series, 70 °C 80 A (72 V) 3 Poles in Series, 40 °C 110 A (72 V) 3 Poles in Series, 55 °C 95 A (72 V) 3 Poles in Series, 70 °C 80 A
Rated Operational Current DC-3 (I_e)	(110 V) 2 Poles in Series, 40 °C 110 A (110 V) 2 Poles in Series, 55 °C 95 A (110 V) 2 Poles in Series, 70 °C 80 A (110 V) 3 Poles in Series, 40 °C 110 A (110 V) 3 Poles in Series, 55 °C 95 A (110 V) 3 Poles in Series, 70 °C 80 A (220 V) 3 Poles in Series, 40 °C 110 A (220 V) 3 Poles in Series, 55 °C 95 A (220 V) 3 Poles in Series, 70 °C 80 A (72 V) 1-Pole, 40 °C 110 A (72 V) 1-Pole, 55 °C 95 A (72 V) 1-Pole, 70 °C 80 A (72 V) 2 Poles in Series, 40 °C 110 A (72 V) 2 Poles in Series, 55 °C 95 A (72 V) 2 Poles in Series, 70 °C 80 A (72 V) 3 Poles in Series, 40 °C 110 A (72 V) 3 Poles in Series, 55 °C 95 A (72 V) 3 Poles in Series, 70 °C 80 A
Rated Operational Current DC-5 (I_e)	(110 V) 2 Poles in Series, 40 °C 90 A (110 V) 2 Poles in Series, 55 °C 90 A (110 V) 2 Poles in Series, 70 °C 80 A (110 V) 3 Poles in Series, 40 °C 110 A (110 V) 3 Poles in Series, 55 °C 95 A (110 V) 3 Poles in Series, 70 °C 80 A (220 V) 3 Poles in Series, 40 °C 63 A (220 V) 3 Poles in Series, 55 °C 63 A (220 V) 3 Poles in Series, 70 °C 63 A (72 V) 1-Pole, 40 °C 63 A (72 V) 1-Pole, 55 °C 63 A (72 V) 1-Pole, 70 °C 63 A (72 V) 2 Poles in Series, 40 °C 110 A (72 V) 2 Poles in Series, 55 °C 95 A (72 V) 2 Poles in Series, 70 °C 80 A (72 V) 3 Poles in Series, 40 °C 110 A (72 V) 3 Poles in Series, 55 °C 95 A (72 V) 3 Poles in Series, 70 °C 80 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) 0.30 A / 66 W (250 V) 0.3 / 75 W
Rated Operational Power AC-3 (P_e)	(415 V) 37 kW (440 V) 37 kW (500 V) 37 kW (690 V) 37 kW (380 / 400 V) 30 kW (220 / 230 / 240 V) 18.5 kW
Rated Operational Power AC-6b (P_e)	(230 / 240 V) 40 °C, 50 / 60 Hz 25 kvar (230 / 240 V) 55 °C, 50 / 60 Hz 25 kvar (230 / 240 V) 70 °C, 50 / 60 Hz 23 kvar (400 / 415 V) 40 °C, 50 / 60 Hz 43 kvar

	(400 / 415 V) 70 °C, 50 / 60 Hz 39 kvar (400 / 415 V) 55 °C, 50 / 60 Hz 43 kvar (440 V) 40 °C, 50 / 60 Hz 47 kvar (440 V) 55 °C, 50 / 60 Hz 47 kvar (440 V) 70 °C, 50 / 60 Hz 42.5 kvar (500 / 550 V), 40 °C, 50 / 60 Hz 54 kvar (500 / 550 V) 55 °C, 50 / 60 Hz 54 kvar (500 / 550 V) 70 °C, 50 / 60 Hz 48.5 kvar (690 V) 40 °C, 50 / 60 Hz 74 kvar (690 V) 55 °C, 50 / 60 Hz 74 kvar (690 V) 70 °C, 50 / 60 Hz 67 kvar
Rated Breaking Capacity AC-3	8 x Ie AC-3
Rated Making Capacity AC-3	10 x Ie AC-3
Short-Circuit Protective Devices	Auxiliary Circuit - gG Type Fuses 10 A gG Type Fuses 125 A
Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 650 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 135 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 370 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 1300 A cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 630 A
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 Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour
Mechanical Durability	10 million
Maximum Mechanical Switching Frequency	300 cycles per hour
Minimum Switching Capacity	17 / 5 VLT4K
Rated Control Circuit Voltage (U_c)	DC Operation 20 ... 60 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage 50 Hz 2.8 W Holding at Max. Rated Control Circuit Voltage 60 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 2.8 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 210 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 210 V·A
Power Loss	at Rated Operating Conditions per Pole 0.1 W at 6 A per Pole 0.1 W at Rated Operating Conditions AC-1 per Pole 6.5 W at Rated Operating Conditions AC-3 per Pole 1.5 W
Operate Time	Between Coil De-energization and NC Contact Closing 35 ... 115 ms Between Coil De-energization and NO Contact Opening 30 ... 110 ms Between Coil Energization and NC Contact Opening 27 ... 95 ms Between Coil Energization and NO Contact Closing 30 ... 100 ms
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH75-25 (75 x 25 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M6 screws placed diagonally
Connecting Capacity Main Circuit	Flexible with Cable End 6 ... 16 mm² Rigid Cable 6 ... 25 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Cable End 0.75 ... 2.5 mm² Rigid Cable 1 ... 4 mm²
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
Connecting Terminals (delivered in open position) Main Poles	M 6 (+,-) pozidriv 2 screws with 1x (13 x 10 mm) connector
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) 90 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 5 hp (200 ... 208 V AC) Three Phase 20 hp (220 ... 240 V AC) Three Phase 25 hp (240 V AC) Single Phase 10 hp (440 ... 480 V AC) Three Phase 60 hp (550 ... 600 V AC) Three Phase 75 hp
Full Load Amps Motor Use	(120 V AC) Single Phase 56 A (200 ... 208 V AC) Three Phase 62.1 A (220 ... 240 V AC) Three Phase 68 A (240 V AC) Single Phase 50 A (440 ... 480 V AC) Three Phase 77 A (550 ... 600 V AC) Three Phase 77 A

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -25 ... 55 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C
Climatic Withstand	acc. to IEC 60068-2-30 and 60068-2-11 - UTE C 63-100 specification II
Maximum Operating Altitude Permissible	Without Derating 3000 m
Shock and Vibration Withstand acc. to IEC 61373	Category 1, Class B
Pollution Degree	3

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS Information	2CMT2021-006277
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
SCIP	39492c2f-af70-4d44-b816-86f8109176c9 China (CN)
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

Certificates and Declarations

CB Certificate	CB_CN45489
CCC Certificate	CCC_2018010304134049 CCC_2010010304402983
CQC Certificate	CQC2018010304134049

	CQC2010010304402983
Declaration of Conformity - CCC	2020980304001624 2020980304001225
Declaration of Conformity - CE	1SBD250803U1000
Declaration of Conformity - UKCA	1SBD250820U1000
EAC Certificate	EAC_RU C-FR ME77 B01010
GOST Certificate	GOST_POCCFRME77B07175
KC Certificate	KC_HW02032-21002B
UL Certificate	UL-US-L312527-1101-21215991-6 UL-CA-2139468-4
UL Listing Card	UL_E312527

Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	140 mm
Package Level 1 Depth / Length	146 mm
Package Level 1 Height	96 mm
Package Level 1 Gross Weight	1.22 kg
Package Level 1 EAN	3471522115027
Package Level 2 Units	box 20 piece
Package Level 2 Gross Weight	24.4 kg

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)	4756 >> Capacitor magnet contactor

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF63