



PRODUCT-DETAILS

AF38Z-40-00-20

AF38Z-40-00-20 12-20VDC Contactor



General Information	
Extended Product Type	AF38Z-40-00-20
Product ID	1SBL296201R2000
EAN	3471523116108
Catalog Description	AF38Z-40-00-20 12-20VDC Contactor
Long Description	The AF38Z-40-00-20 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 11 kW / 400 V AC (AC-3) and switching power circuits up to 55 A (AC-1) or 55 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (12-20 V 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.

Ordering	
Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads	
Instructions and Manuals	1SBC101027M6801
CAD Dimensional Drawing	2CDC001079B0201

Dimensions	
Product Net Width	45 mm
Product Net Depth / Length	101 mm
Product Net Height	86 mm
Product Net Weight	0.4 kg

Technical	
Number of Main Contacts NO	4
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	0
Number of Auxiliary Contacts NC	0
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, 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)	Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I _{th})	acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 55 A
Rated Operational Current AC-1 (I _e)	(690 V) 40 °C 55 A (690 V) 60 °C 45 A (690 V) 70 °C 37 A
Rated Operational Current AC-3 (I _e)	(415 V) 60 °C 21.2 A (440 V) 60 °C 20 A (500 V) 60 °C 17.6 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 22 A (220 / 230 / 240 V) 60 °C 23.2 A
Rated Operational Power AC-3 (P _e)	(400 V) 11 kW (415 V) 11 kW (440 V) 11 kW (500 V) 11 kW (690 V) 9 kW (220 / 230 / 240 V) 5.5 kW
Rated Short-time Withstand Current Low Voltage (I _{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 300 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 55 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 450 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour
Rated Operational Current DC-1 (I _e)	(110 V) 2 Poles in Series, 40 °C 55 A (110 V) 2 Poles in Series, 60 °C 45 A (110 V) 2 Poles in Series, 70 °C 37 A (110 V) 3 Poles in Series, 40 °C 55 A (110 V) 3 Poles in Series, 60 °C 45 A (110 V) 3 Poles in Series, 70 °C 37 A (110 V) 4 Poles in Series, 40 °C 55 A (110 V) 4 Poles in Series, 60 °C 45 A

	(110 V) 4 Poles in Series, 70 °C 37 A (220 V) 3 Poles in Series, 40 °C 55 A (220 V) 3 Poles in Series, 60 °C 45 A (220 V) 3 Poles in Series, 70 °C 37 A (220 V) 4 Poles in Series, 40 °C 55 A (220 V) 4 Poles in Series, 60 °C 45 A (220 V) 4 Poles in Series, 70 °C 37 A (72 V) 1-Pole, 40 °C 55 A (72 V) 1-Pole, 60 °C 45 A (72 V) 1-Pole, 70 °C 37 A (72 V) 2 Poles in Series, 40 °C 55 A (72 V) 2 Poles in Series, 60 °C 45 A (72 V) 2 Poles in Series, 70 °C 37 A (72 V) 3 Poles in Series, 40 °C 55 A (72 V) 3 Poles in Series, 60 °C 45 A (72 V) 3 Poles in Series, 70 °C 37 A (72 V) 4 Poles in Series, 40 °C 55 A (72 V) 4 Poles in Series, 60 °C 45 A (72 V) 4 Poles in Series, 70 °C 37 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 Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage (U _c)	DC Operation 12 ... 20 V
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 1.5 ... 16 mm ² Flexible with Insulated Ferrule 1/2x 1.5 ... 16 mm ² Rigid Solid 1/2x 1.5 ... 4 mm ² Rigid Stranded 1/2x 1.5 ... 16 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 12 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
Terminal Type	Screw Terminals

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 55 A
Connecting Capacity Main Circuit UL/CSA	Rigid Solid 1/2x 16-10 AWG Rigid Stranded 1/2x 16-6 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 22 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

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_2634H24898C0
CB Certificate	CB_SE-96553M1
CCC Certificate	CCC_2010010304445623
CQC Certificate	CQC2010010304445623 CQC2020010304294316
Declaration of Conformity - CCC	2020980304001254 2020980304001052
Declaration of Conformity - CE	1SBD250001U1000
Declaration of Conformity - UKCA	1SBD250032U1000
DNV Certificate	DNV_TAE00001AF-4
EAC Certificate	EAC_RU_FRME77B03447
GOST Certificate	GOST_POCCFR.ME77.B07175.pdf
KC Certificate	KC_HW02016-15002C
LR Certificate	LRS_LR23403517TA-02
RINA Certificate	RINA_ELE240318XG
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
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Package Level 1 Width	87 mm
Package Level 1 Depth / Length	103 mm
Package Level 1 Height	47 mm
Package Level 1 Gross Weight	0.4 kg
Package Level 1 EAN	3471523116108
Package Level 2 Units	box 18 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	315 mm
Package Level 2 Gross Weight	14.4 kg
Package Level 3 Units	864 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 >> Iec Contactors	
E-Number (Finland)		3705840

Categories
Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF38

