



English



AF38Z-30-00-20

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General Information

Extended Product Type:

AF38Z-30-00-20

Product ID:

1SBL296001R2000

EAN:

3471523114708

Catalog Description:

AF38Z-30-00-20 12-20VDC Contactor

Long Description:

The AF38Z-30-00-20 is a 3 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 18.5 kW / 400 V AC (AC-3) or 25 hp / 480 V UL and switching power circuits up to 50 A (AC-1) or 50 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage ran... [Show more](#)

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Data Sheet

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Ordering

Minimum Order Quantity:

1 piece

Popular Downloads

Data Sheet, Technical Information:

[1SBC100214C0202 - Main catalog Motor protection and control Manual motor starters, contactors and overload relays \(PDF\) - Edition 2024](#)

Instructions and Manuals:

[Installation instructions AF\(C\)09...38\(Z\)\(B\) Contactors, NE\(C\)\(Z\)\(B\)22...80E Contactor relays and CA4, CAL4, CAT4, CC4, LDC4 Accessories](#)

Instructions and Manuals (Part 2):

[Contactors and Overload relays guide](#)

CAD Dimensional Drawing:

[Information - 2D and 3D files for CAD systems](#)

Dimensions

Product Net Width:

45 mm

Product Net Depth / Length:

86 mm

Product Net Height:

86 mm

Product Net Weight:

0.35 kg

Technical

Number of Main Contacts NO:

3

Number of Main Contacts NC:

0

Number of Auxiliary Contacts NO:

0

Number of Auxiliary Contacts NC:

0

Number of Poles:

3P

Standards:

IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60335-2-40 LZGH2 A2L, UL 60947-4-1, CSA C22.2 No. 60335-2-40 LZGH2 A2L, 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 $\Theta = 40\text{ °C}$ 50 A**Rated Operational Current AC-1 (I_e):**

(690 V) 40 °C 50 A

(690 V) 60 °C 42 A

(690 V) 70 °C 37 A

Rated Operational Current AC-3 (I_e):

(415 V) 60 °C 38 A

(440 V) 60 °C 38 A

(500 V) 60 °C 33 A

(690 V) 60 °C 24 A

(380 / 400 V) 60 °C 38 A

(220 / 230 / 240 V) 60 °C 40 A

Rated Operational Current AC-3e (I_e):

(415 V) 60 °C 38 A

(440 V) 60 °C 38 A

(500 V) 60 °C 33 A

(690 V) 60 °C 24 A

(380 / 400 V) 60 °C 38 A

(220 / 230 / 240 V) 60 °C 40 A

Rated Operational Current DC-1 (I_e):

(110 V) 2 Poles in Series, 40 °C 50 A

(110 V) 2 Poles in Series, 60 °C 42 A

(110 V) 2 Poles in Series, 70 °C 37 A

(110 V) 3 Poles in Series, 40 °C 50 A

(110 V) 3 Poles in Series, 60 °C 42 A

(110 V) 3 Poles in Series, 70 °C 37 A

(220 V) 3 Poles in Series, 40 °C 50 A

(220 V) 3 Poles in Series, 60 °C 42 A

(220 V) 3 Poles in Series, 70 °C 37 A

(72 V) 1-Pole, 40 °C 50 A

(72 V) 1-Pole, 60 °C 42 A

(72 V) 1-Pole, 70 °C 37 A

(72 V) 2 Poles in Series, 40 °C 50 A

(72 V) 2 Poles in Series, 60 °C 42 A

(72 V) 2 Poles in Series, 70 °C 37 A

(72 V) 3 Poles in Series, 40 °C 50 A

(72 V) 3 Poles in Series, 60 °C 42 A

(72 V) 3 Poles in Series, 70 °C 37 A

Rated Operational Current DC-3 (I_e):

(110 V) 2 Poles in Series, 40 °C 50 A

(110 V) 2 Poles in Series, 60 °C 42 A

(110 V) 2 Poles in Series, 70 °C 37 A

(110 V) 3 Poles in Series, 40 °C 50 A

(110 V) 3 Poles in Series, 60 °C 42 A

(110 V) 3 Poles in Series, 70 °C 37 A

(220 V) 3 Poles in Series, 40 °C 50 A

(220 V) 3 Poles in Series, 60 °C 42 A

(220 V) 3 Poles in Series, 70 °C 37 A
(72 V) 1-Pole, 40 °C 50 A
(72 V) 1-Pole, 60 °C 42 A
(72 V) 1-Pole, 70 °C 37 A
(72 V) 2 Poles in Series, 40 °C 50 A
(72 V) 2 Poles in Series, 60 °C 42 A
(72 V) 2 Poles in Series, 70 °C 37 A
(72 V) 3 Poles in Series, 40 °C 50 A
(72 V) 3 Poles in Series, 60 °C 42 A
(72 V) 3 Poles in Series, 70 °C 37 A

Rated Operational Current DC-5 (I_e):

(110 V) 2 Poles in Series, 40 °C 50 A
(110 V) 2 Poles in Series, 60 °C 42 A
(110 V) 2 Poles in Series, 70 °C 37 A
(110 V) 3 Poles in Series, 40 °C 50 A
(110 V) 3 Poles in Series, 60 °C 42 A
(110 V) 3 Poles in Series, 70 °C 37 A
(220 V) 3 Poles in Series, 40 °C 25 A
(220 V) 3 Poles in Series, 60 °C 25 A
(220 V) 3 Poles in Series, 70 °C 25 A
(72 V) 1-Pole, 40 °C 25 A
(72 V) 1-Pole, 60 °C 25 A
(72 V) 1-Pole, 70 °C 25 A
(72 V) 2 Poles in Series, 40 °C 50 A
(72 V) 2 Poles in Series, 60 °C 42 A
(72 V) 2 Poles in Series, 70 °C 37 A
(72 V) 3 Poles in Series, 40 °C 50 A
(72 V) 3 Poles in Series, 60 °C 42 A
(72 V) 3 Poles in Series, 70 °C 37 A

Rated Operational Power AC-3 (P_e):

(400 V) 18.5 kW
(415 V) 18.5 kW
(440 V) 22 kW
(500 V) 22 kW
(690 V) 22 kW
(380 / 400 V) 18.5 kW
(220 / 230 / 240 V) 11 kW

Rated Operational Power AC-3e (P_e):

(415 V) 18.5 kW
(440 V) 22 kW
(500 V) 22 kW
(690 V) 22 kW
(380 / 400 V) 18.5 kW
(220 / 230 / 240 V) 11 kW

Rated Short-time Withstand Current Low Voltage (I_{cw}):

at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 350 A
at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 50 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 700 A
at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 225 A

Maximum Breaking Capacity:

cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 500 A
cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 200 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

(AC-2 / AC-4) 150 cycles per hour

(AC-3) 1200 cycles per hour

Maximum Mechanical Switching Frequency:

3600 cycles per hour

Rated Control Circuit Voltage (U_c):

DC Operation 12 ... 20 V

Power Loss:

at Rated Operating Conditions AC-1 per Pole 2.4 W

at Rated Operating Conditions AC-3 per Pole 1.3 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 1.5 ... 10 mm²

Flexible with Insulated Ferrule 1x 1.5 ... 10 mm²

Flexible with Insulated Ferrule 2x 1.5 ... 4 mm²

Rigid Solid 1/2x 2.5 ... 4 mm²

Rigid Stranded 1/2x 2.5 ... 10 mm²

Connecting Capacity Control Circuit:

Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²

Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²

Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²

Rigid Solid 1/2x 1 ... 2.5 mm²

Rigid Stranded 1/2x 1 ... 2.5 mm²

Wire Stripping Length:

Control Circuit 10 mm

Main Circuit 14 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 2.5 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) 50 A

Horsepower Rating UL/CSA:

(120 V AC) Single Phase 2 hp

(200 ... 208 V AC) Three Phase 10 hp

(220 ... 240 V AC) Three Phase 10 hp
(240 V AC) Single Phase 5 hp
(440 ... 480 V AC) Three Phase 25 hp
(550 ... 600 V AC) Three Phase 30 hp

Connecting Capacity Main Circuit UL/CSA:

Rigid Solid 1/2x 14-10 AWG
Rigid Stranded 1/2x 14-8 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

Full Load Amps Motor Use:

(120 V AC) Single Phase 24 A
(200 ... 208 V AC) Three Phase 32.2 A
(220 ... 240 V AC) Three Phase 28 A
(240 V AC) Single Phase 28 A
(440 ... 480 V AC) Three Phase 34 A
(550 ... 600 V AC) Three Phase 32 A

Environmental

Ambient Air Temperature:

Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °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: 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):

[CMRT - Conflict Minerals Reporting Template](#)

REACH Declaration:

[REACH - Letter of Confirmation for block contactors, contactor relays, installation contactors, mini contactors, mini contactor relays, thermal overload relays, electronic overload relays and related accessories](#)

RoHS Information:

[RoHS II declaration for block contactors, installation contactors, mini contactors, mini contactor relays, thermal overload relays, electronic overload relays and related accessories](#)

RoHS Status:

Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Toxic Substances Control Act - TSCA:Toxic Substances Control Act (TSCA) declaration for Contactors**WEEE B2C / B2B:**

Business To Business

WEEE Category:

5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions**End Of Life Disassembling Instructions:**End of life instruction AF(S)09/12/16/26/30/38(Z)(B)(K)(RT) Contactors & NF(Z)(B)(K)(RT) Contactors relays**Environmental Product Declaration - EPD:**Environmental Product Declaration AF(S)26/30/38(Z)(B) Contactors (FR)Environmental Product Declaration AF26/30/38(Z)(B) Contactors (CN)**Sustainable Material Content in Packaging (wt. %):**

Recycled Cardboard - 86 %

Sustainable Material Content in Product (wt. %):

Recycled Metal - 28 %

Certificates and Declarations**A2L Certificate – UL:**UL-US A2L LZGH2 Certificate of Compliance AF09 ... AF38 3-pole contactors with screw terminals - UL 60335-2-40 Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and DehumidifiersUL-CA A2L LZGH2 Certificate of Compliance AF09 ... AF38 3-pole contactors with screw terminals - CSA C22.2 No. 60335-2-40 Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers**ABS Certificate:**ABS Certificate, AF(S)09 to AF(S)96 contactors, NF contactor relays and CA4, CC4, CAL4, CAT4 auxiliary contact blocks, TEF4 electronic timers**BV Certificate:**BV Certificate AF(C)09...AF(C)38 3-pole and 4-pole contactors with screw and Push-in Spring terminals**CB Certificate:**CB Certificate AF26(Z)(B), AF30(Z)(B), AF(Z)(B)38 3-pole contactors, AFS26, AFS30, AFS38 safety contactors**CCC Certificate:**CCC Certificate AF26, AF30, AF38, AF26(Z)B, AF30(Z)B, AF38(Z)B 3 and 4-pole contactors, AFS26, AFS30, AFS38 safety contactors**CQC Certificate:**CQC Certificate, Contactor, AF*26, AF*30, AF*38, Made in FranceCQC Certificate, Contactor, AF26, AF30, AF38, Made in China**Declaration of Conformity - CCC:**CCC Declaration of Conformity, Contactor, AF26, AF30, AF38, AFS26, AFS30, AFS38 Made in FranceCCC Declaration of Conformity, Contactor, AF26, AF30, AF38, Made in China**Declaration of Conformity - CE:**EU Declaration of Conformity AF09... AF96-30-..., AF09...38(Z)-30..K 3-pole Contactors**Declaration of Conformity - UKCA:**UK Declaration of Conformity AF09... AF96-30-..., AF09...38(Z)-30..K 3-pole Contactors**DNV Certificate:**DNV Certificate AF(S)09...96 3-pole & AF09...80 4-pole contactors with screw, spring, push-in terminals**GOST Certificate:**GOST_POCCFR.ME77.B07175.pdf**KC Certificate:**KC Certificate AF26...AF38 3-pole contactors

LR Certificate:
LRS Certificate AF(S)09..(K) ... AF96 3 and 4-pole contactors and CA(L)4..(K), CAT4, CC4 auxiliary contact blocks
RINA Certificate:
Rina Certificate for AF(S)09...AF(S)96 contactors, NF contactor relays and accessories with screw, spring and push-in terminals
RMRS Certificate:
RMRS Certificate AF(S)09(S)...AF(S)38 3-pole and 4-pole, AF(S)40..96 3-pole contactors with screw, push-in and spring terminals
UL Certificate:
UL-US Certificate of Compliance AF(C)(S)09(R/M/N)-..(L)(S)(K)...AF(C)(S)38(R/M/N)..(K) 3-pole contactors screw, spring and push-in spring terminals; LDC4 additional coil terminal block; LF16-4, LG16-4, LF38-4 and LH38-4 connecting strips, LD38-4 additional terminal block
UL-CA Certificate of Compliance AF(C)(S)09(R/M/N)-..(L)(S)(K)...AF(C)(S)38(R/M/N)..(K) 3-pole contactors screw, spring and push-in spring terminals; LDC4 additional coil terminal block; LF16-4, LG16-4, LF38-4 and LH38-4 connecting strips, LD38-4 additional terminal block
UL Listing Card:
E312527

Container Information

Package Level 1 Units:
box 1 piece
Package Level 1 Width:
87 mm
Package Level 1 Depth / Length:
87 mm
Package Level 1 Height:
47 mm
Package Level 1 Gross Weight:
0.35 kg
Package Level 1 EAN:
3471523114708
Package Level 2 Units:
box 21 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:
15.75 kg
Package Level 3 Units:
1080 piece

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 >> Iec Contactors

E-Number (Finland):

3706317



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