

## General Information

Extended Product Type:	AF09Z-40-00-21
Product ID:	1SBL136201R2100
EAN:	3471523115811
Catalog Description:	AF09Z-40-00-21 24-60V50/60HZ 20-60VDC Contactor
Long Description:	<p>AF09Z 4-pole contactors are used for controlling power circuits up to 690 V AC and 440 V DC. They are mainly used for controlling non-inductive or slightly inductive loads (i.e. resistance furnaces...). AF..Z contactors include an electronic coil interface accepting a wide control voltage <math>U_c</math> min. ... <math>U_c</math> max. Only four coils cover control voltages between 24...250 V 50/60 Hz or 12...250 V DC. AF..Z contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF..Z contactors allow direct control by PLC-output <math>\geq 24</math> V DC 500 mA and obtain a reduced holding coil consumption. AF..Z contactors withstand short voltage dips and voltage sags (SEMI F47-0706 compliance) between 24...250 V 50/60 Hz AF..Z contactors have built-in surge protection and do not require additional surge suppressors The AF... series 4-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 4 N.O. main poles, front and side-mounted add-on auxiliary contact blocks. (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available.</p>

## Categories

Products » Low Voltage Products and Systems » Control Products » Contactors » Block Contactors

## Ordering

Minimum Order Quantity:	1 piece
Customs Tariff Number:	85369085
EAN:	3471523115811

## Dimensions

Product Net Depth:	77 mm
Product Net Height:	86 mm
Product Net Weight:	0.310 kg
Product Net Width:	45 mm

## Container Information

Package Level 1 Width:	87 mm
Package Level 1 Length:	79 mm
Package Level 1 Height:	47 mm
Package Level 1 Gross Weight:	0.31 kg
Package Level 1 EAN:	3471523115811
Package Level 2 Units:	54 piece
Package Level 2 Width:	250 mm
Package Level 2 Length:	300 mm
Package Level 2 Height:	315 mm
Package Level 3 Units:	1296 piece
Package Level 1 Units:	1 piece

## Technical

Number of Main Contacts NC:	0
Number of Auxiliary Contacts NO:	0
Number of Auxiliary Contacts NC:	0
Standards:	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14
Rated Operational Voltage:	Main Circuit 690 V
Rated Frequency (f):	Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I <sub>th</sub> ):	acc. to IEC 60947-4-1, Open Contactors $q = 40$ °C 35 A
Rated Operational Current AC-1 (I <sub>e</sub> ):	(690 V) 40 °C 25 A (690 V) 60 °C 25 A (690 V) 70 °C 22 A
Rated Operational Current AC-3 (I <sub>e</sub> ):	(220 / 230 / 240 V) 60 °C 9 A (380 / 400 V) 60 °C 9 A (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

<b>Rated Operational Power AC-3 (P<sub>e</sub>):</b>	(220 / 230 / 240 V) 2.2 kW
	(380 / 400 V) 4 kW
	(400 V) 4 kW
	(415 V) 4 kW
	(440 V) 4 kW
	(500 V) 5.5 kW
	(690 V) 5.5 kW

<b>Rated Short-time Withstand Current (I<sub>sw</sub>):</b>	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

<b>Maximum Breaking Capacity:</b>	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 250 A
	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 690 V 106 A

<b>Maximum Electrical Switching Frequency:</b>	AC-1 600 cycles per hour
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<b>Rated Insulation Voltage (U<sub>i</sub>):</b>	acc. to UL/CSA 600 V
	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V

<b>Rated Impulse Withstand Voltage (U<sub>imp</sub>):</b>	6 kV
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<b>Maximum Mechanical Switching Frequency:</b>	3600 cycles per hour
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<b>Rated Control Circuit Voltage (U<sub>c</sub>):</b>	50 Hz 24 ... 60 V
	60 Hz 24 ... 60 V
	DC Operation 20 ... 60 V

<b>Operate Time:</b>	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

<b>Connecting Capacity Main Circuit:</b>	Flexible with Insulated Ferrule 1x 0.75...4 mm <sup>2</sup>
	Flexible with Insulated Ferrule 2x 0.75...2.5 mm <sup>2</sup>
	Flexible with Ferrule 1/2x 0.75...6 mm <sup>2</sup>
	Rigid 1/2x 1...6 mm <sup>2</sup>

<b>Connecting Capacity Control Circuit:</b>	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup>
	Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup>
	Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup>
	Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>

<b>Wire Stripping Length:</b>	Control Circuit 10 mm
	Main Circuit 10 mm

<b>Degree of Protection:</b>	acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20
	acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20

<b>Terminal Type:</b>	Screw Terminals
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<b>Number of Main Contacts NO:</b>	4
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## Environmental

<b>Climatic Withstand:</b>	Category B according to IEC 60947-1 Annex Q
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<b>Maximum Operating Altitude Permissible:</b>	3000 m
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<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5 ... 300 Hz 4 g closed position / 2 g open position
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<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	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
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<b>RoHS Status:</b>	Planned to follow EU Directive 2002/95/EC August 18, 2005 and amendment after 2008 Q1
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<b>Ambient Air Temperature:</b>	Close to Contactor for Storage -60...+80 °C Near Contactor for Operation in Free Air -40 ... +70 °C
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## Technical UL/CSA

<b>General Use Rating UL/CSA:</b>	(600 V AC) 25 A
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<b>Tightening Torque UL/CSA:</b>	Control Circuit 11 in·lb Main Circuit 13 in·lb
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## Certificates and Declarations (Document Number)

<b>Instructions and Manuals:</b>	1SBC101027M6801
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<b>ABS Certificate:</b>	ABS_15-GE1349500-PDA_90682247
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<b>CB Certificate:</b>	CB_SE_70857M1
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<b>CCC Certificate:</b>	CCC_2010010304445624
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<b>Data Sheet, Technical Information:</b>	1SBC101419D0201
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<b>Declaration of Conformity - CE:</b>	1SBD250001U1000
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<b>DNV Certificate:</b>	DNV-GL_E13871
<b>EAC Certificate:</b>	EAC_RU C-FR ME77 B01010
<b>GL Certificate:</b>	DNV-GL_E13871
<b>GOST Certificate:</b>	GOST_POCCFR.ME77.B07175.pdf
<b>LR Certificate:</b>	LRS_1300087E1
<b>RINA Certificate:</b>	RINA_ELE084013XG
<b>RMRS Certificate:</b>	RMRS_1400682124
<b>RoHS Information:</b>	1SBD251011E1000
<b>UL Certificate:</b>	UL_20120918-E319322-3-1
<b>UL Listing Card:</b>	UL_E319322

## Classifications

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<b>E-nummer:</b>	3211388
<b>ETIM 4:</b>	EC000066 - Magnet contactor, AC-switching
<b>ETIM 5:</b>	EC000066 - Magnet contactor, AC-switching
<b>ETIM 6:</b>	EC000066 - Power contactor, AC switching
<b>UNSPSC:</b>	39121529
<b>Object Classification Code:</b>	Q

