

PRODUCT-DETAILS

# AL9-30-10 110V DC

## AL9-30-10 110V DC Contactor



General Information	
Extended Product Type	AL9-30-10 110V DC
Product ID	1SBL143001R8610
EAN	3471522268860
Catalog Description	AL9-30-10 110V DC Contactor
Long Description	<p>AL 9 contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V AC or 220 V DC. The contactors can also be used for many other applications such as isolation, capacitor switching, lighting. The AL... series 1-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles, 1 built-in auxiliary contact, front and side-mounted add-on auxiliary contact blocks - Control circuit: DC operated with solid core magnet circuit. The polarity on the coil terminals (A1+ and A2-) must be respected - Accessories: a wide range of accessories is available. AL... contactors are fitted with low consumption DC coils and are suitable for a direct control by PLC outputs.</p>

Ordering	
Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads	
Data Sheet, Technical Information	1SBC100122C0202_Ch02
Instructions and Manuals	1SBC101003M5501
Dimension Diagram	FPTE307872

Dimensions	
Product Net Width	44 mm
Product Net Depth / Length	97 mm
Product Net Height	78 mm
Product Net Weight	0.52 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	0
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 $\Theta = 40\text{ }^{\circ}\text{C}$ 26 A acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A
Rated Operational Current AC-1 ( $I_e$ )	(690 V) 40 °C 25 A (690 V) 55 °C 22 A (690 V) 70 °C 18 A
Rated Operational Current AC-3 ( $I_e$ )	(415 V) 55 °C 9 A (440 V) 55 °C 9 A (500 V) 55 °C 9 A (690 V) 55 °C 7 A (380 / 400 V) 55 °C 9 A (220 / 230 / 240 V) 55 °C 9
Rated Operational Power AC-3 ( $P_e$ )	(415 V) 4 kW (440 V) 4 kW (500 V) 5.5 kW (690 V) 5.5 kW (380 / 400 V) 4 kW (220 / 230 / 240 V) 2.2 kW
Rated Breaking Capacity AC-3	8 x $I_e$ AC-3
Rated Making Capacity AC-3	10 x $I_e$ AC-3
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
Short-Circuit Protective Devices	Auxiliary Circuit - gG Type Fuses 10 A gG Type Fuses 25 A
Rated Short-time Withstand Current Low Voltage ( $I_{cw}$ )	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 100 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 26 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 50 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 250 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 60 A for 0.1 s 140 A for 1 s 100 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 100 A
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-2 / AC-4) 300 cycles per hour (AC-3) 1200 cycles per hour
Rated Operational Current DC-13 ( $I_e$ )	(24 V) 6 / 144 A (48 V) 2.8 / 134 A (72 V) 2 / 144 W (125 V) 1.1 / 138 W (250 V) 0.55 / 138 W
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
Mechanical Durability	10 million
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage ( $U_c$ )	DC Operation 110 V
Coil Consumption	Average Holding Value, from Warm State 3 W Average Pull-in Value, from Cold State 3 W
Operate Time	Between Coil De-energization and NC Contact Closing 16 ... 27 ms Between Coil De-energization and NO Contact Opening 10 ... 17 ms Between Coil Energization and NO Contact Closing 50 ... 100 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 Cable End 0.75 ... 2.5 mm <sup>2</sup> Rigid Cable 1 ... 4 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Cable End 0.75 ... 2.5 mm <sup>2</sup> Rigid Cable 1 ... 4 mm <sup>2</sup>
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 IP20
Connecting Terminals (delivered in open position) Main Poles	M 3.5 (+,-) pozidriv 2 screw with cable clamp
Terminal Type	Screw Terminals

## Technical UL/CSA

General Use Rating UL/CSA	(600 V AC) 21 A
---------------------------	-----------------

Horsepower Rating	(200 ... 208 V AC) Three Phase 2 hp
UL/CSA	(220 ... 240 V AC) Three Phase 2 hp
	(440 ... 480 V AC) Three Phase 5 hp
	(550 ... 600 V AC) Three Phase 7-1/2 hp

## Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -25 ... 55 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 55 °C Close to Contactor without Thermal O/L Relay (Uc) -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
Resistance to Shock acc. to IEC 60068-2-27	Closed, Shock Direction: A 20 g Closed, Shock Direction: B1 15 g Closed, Shock Direction: C1 20 g Closed, Shock Direction: C2 14 g Open, Shock Direction: A 10 g Open, Shock Direction: B1 5 g Open, Shock Direction: C1 8 g Open, Shock Direction: C2 8 g Shock Direction: B2 10 g

## Material Compliance

REACH Declaration	2CMT2021-006202
RoHS Information	2CMT2021-006277
RoHS Status	Following EU Directive 2011/65/EU
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

## Certificates and Declarations

ASEFA Certificate	ASEFA_05003BT
CB Certificate	CB_FR_617239A
CCC Certificate	CCC_2012010304534830
CQC Certificate	CQC2012010304534830
Declaration of Conformity - CCC	2020980304001613
Declaration of Conformity - CE	1SBD250804U1000
Declaration of Conformity - UKCA	1SBD250821U1000
DNV Certificate	DNV_GL_TAE00001UN-1
DNV GL Certificate	DNV_GL_TAE00001UN-1
GL Certificate	GL_26144_05HH
GOST Certificate	GOST_POCCFRME77B07175
LOVAG Certificate	LOVAG_FR03021-FR03027
UL Certificate	UL-US-L312527-1102-51017991-2 UL-CA-L312527-4102-51017991-2

Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	86 mm
Package Level 1 Depth / Length	141 mm
Package Level 1 Height	51 mm
Package Level 1 Gross Weight	0.52 kg
Package Level 1 EAN	3471522268860
Package Level 2 Units	box 28 piece
Package Level 2 Gross Weight	14.56 kg
Package Level 3 Units	336 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
E-Number (Finland)	3709156

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → A Contactors

