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## PRODUCT-DETAILS

# MC1A310AT9

## MC1A310AT9 Mini Contactor 3NO AUX 1NO

### 48V 50/60Hz

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#### General Information

Extended Product Type	MC1A310AT9
Product ID	1SAL100298R9901
EAN	4013614541353
Catalog Description	MC1A310AT9 Mini Contactor 3NO AUX 1NO 48V 50/60Hz

#### Long Description

The MC1A310AT9 mini contactor is a dimension optimized 3 pole contactor with 1 NO auxiliary contact and screw terminals. This device is a great solution when high performances are needed but the space is limited. Mini contactors are used in residential buildings, commercial buildings and industrial applications for the control of single or three-phase loads up to 4 kW (AC-3) and 20 A / 690 V (AC-1) or switching of control signals. The product is suitable for wall or rail mounting.

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#### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85365080

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#### Popular Downloads

Instructions and Manuals	2CDC103061M6801
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#### Dimensions

Product Net Width	45 mm
Product Net Height	48 mm
Product Net Depth / Length	56 mm
Product Net Weight	0.17 kg

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#### Technical

Number of Poles	3
Mini Contactor Type	Mini Contactor
Rated Operational Voltage	Auxiliary Circuit 690 V AC

	Auxiliary Circuit 440 V DC Main Circuit 690 V AC Main Circuit 440 V DC
Rated Frequency (f)	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Control Circuit 50 Hz Control Circuit 60 Hz Main Circuit 50 Hz Main Circuit 60 Hz Main Circuit DC
Rated Impulse Withstand Voltage ( $U_{imp}$ )	Auxiliary Circuit 6 kV Main Circuit 6 kV
Rated Insulation Voltage ( $U_i$ )	750 V
Number of Main Contacts NC	0
Number of Main Contacts NO	3
Rated Operational Current AC-1 ( $I_e$ )	(230 V) 55 °C 20 A (230 V) 70 °C 16 A (400 V) 55 °C 20 A (400 V) 70 °C 16 A (500 V) 55 °C 20 A (500 V) 70 °C 16 A (690 V) 55 °C 20 A (690 V) 70 °C 16 A
Rated Operational Power AC-3 ( $P_e$ )	(230 V) Single Phase 1.1 kW (230 V) Three Phase 2.2 kW (400 V) Three Phase 4 kW (500 V) Three Phase 4 kW (690 V) Three Phase, NC 3 kW (690 V) Three Phase, NO 4 kW
Rated Short-time Withstand Current ( $I_{cw}$ )	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 72 A
Number of Auxiliary Contacts NC	0
Number of Auxiliary Contacts NO	1
Rated Operational Current AC-15 ( $I_e$ )	(240 V) 6 A (400 V) 4 A (500 V) 2.5 A (690 V) 1.5 A
Rated Operational Current DC-13 ( $I_e$ )	(125 V) 0.7 A (24 V) 5 A (250 V) 0.3 A (440 V) 0.15 A (48 V) 2.5 A
Conventional Free-air Thermal Current ( $I_{th}$ )	Auxiliary Circuit 16 A Main Circuit 20 A
Rated Control Circuit Voltage ( $U_c$ )	48 V AC
Coil Operating Limits	(acc. to IEC 60947-4-1) for AC supply 0.85 ... 1.1 x $U_c$ (at $\theta \leq 55$ °C)
Degree of Protection	Auxiliary Circuit Terminals IP20 Control Circuit Terminals IP20 Main Circuit Terminals IP20
Mechanical Durability	10000000 cycle
Minimum Switching Capacity	Auxiliary Circuit 17 V Auxiliary Circuit 5 mA
Maximum Electrical Switching Frequency	AC-1 300 cycles per hour AC-15 360 cycles per hour

	AC-3 1200 cycles per hour DC-1 600 cycles per hour DC-13 360 cycles per hour DC-3 600 cycles per hour
Connecting Capacity Main Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 2x 0.75 ... 1.5 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> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1x 0.75 ... 4 mm <sup>2</sup> Rigid 2x 0.75 ... 2.5 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Flexible with Ferrule 1x 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> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1x 0.75 ... 4 mm <sup>2</sup> Rigid 2x 0.75 ... 2.5 mm <sup>2</sup>
Connecting Capacity Control Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 2x 0.75 ... 1.5 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> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1/2x 0.75 ... 2.5 mm <sup>2</sup>
Wire Stripping Length	Auxiliary Circuit 9 mm Control Circuit 9 mm Main Circuit 9 mm
Tightening Torque	Auxiliary Circuit 0.8 ... 1.0 N·m Control Circuit 0.8 N·m Main Circuit 0.8 ... 1.0 N·m
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
Power Loss	at Rated Operating Conditions AC-1 per Pole 0.7 W
Standards	IEC 60947-5-1 IEC/EN 60947-1 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1 UL 60947-5-1

## Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Full Load Amps Motor Use	(115 V AC) Single Phase 9.8 A (200 V AC) Three Phase 11 A (230 V AC) Single Phase 10 A (240 V AC) Three Phase 9.6 A (380 ... 415 V AC) Three Phase 6.1 A (440 ... 480 V AC) Three Phase 7.6 A (550 ... 600 V AC) Three Phase 6.1 A
Horsepower Rating UL/CSA	(115 V AC) Single Phase 0.5 Hp (200 V AC) Three Phase 3 Hp (230 V AC) Single Phase 1.5 Hp (240 V AC) Three Phase 3 Hp (380 ... 415 V AC) Three Phase 3 Hp (440 ... 480 V AC) Three Phase 5 Hp (550 ... 600 V AC) Three Phase 5 Hp
General Use Rating UL/CSA	(600 V AC) 20 A
Connecting Capacity Main Circuit UL/CSA	Stranded 1/2x 18-12 AWG
Connecting Capacity	Stranded 1/2x 18-12 AWG

## Auxiliary Circuit UL/CSA

Tightening Torque  
UL/CSAAuxiliary Circuit 7 in-lb  
Control Circuit 7 in-lb  
Main Circuit 7 in-lb

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**Environmental**

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Ambient Air Temperature	Operation -40 ... +55 °C Storage -55 ... +80 °C
Maximum Operating Altitude Permissible	3000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 25g
Resistance to Vibrations acc. to IEC 60068-2-6	5g / 3 ... 150 Hz
RoHS Status	Following EU Directive 2011/65/EU

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**Certificates and Declarations (Document Number)**

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BV Certificate	BV_M_Range
CB Certificate	1SAA971000-2001
CCC Certificate	CCC_MC1_MC2
cULus Certificate	cUL_E191658
Declaration of Conformity - CE	1SAD938502-0305
EAC Certificate	1SAA971000-2701
Instructions and Manuals	2CDC103061M6801
RINA Certificate	1SAA971000-0201
RoHS Information	1SAD038501-0305

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**Container Information**

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Package Level 1 Units	box 1 piece
Package Level 1 Width	46 mm
Package Level 1 Height	58 mm
Package Level 1 Depth / Length	49 mm
Package Level 1 Gross Weight	0.175 kg
Package Level 1 EAN	4013614541353
Package Level 2 Units	box 20 piece
Package Level 2 Width	237 mm
Package Level 2 Height	120 mm
Package Level 2 Depth / Length	102 mm
Package Level 2 Gross Weight	3.55 kg
Package Level 2 EAN	4013614542015

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**Classifications**

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Object Classification Code	Q
ETIM 5	EC000066 - Magnet contactor, AC-switching
ETIM 6	EC000066 - Power contactor, AC switching
ETIM 7	EC000066 - Power contactor, AC switching
eClass	7.0 27371003
UNSPSC	39121529

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## Categories

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Low Voltage Products and Systems → Control Products → Contactors → Mini Contactors