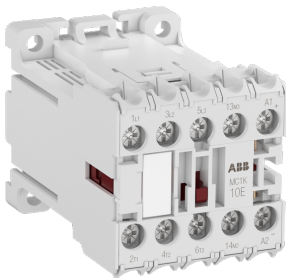




PRODUCT-DETAILS

# MC1K310ARD

## MC1K310ARD Mini Contactor 24 V DC - 3 NO - 0 NC - Ring-Tongue Terminals



General Information

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| Extended Product Type | MC1K310ARD                                                              |
| Product ID            | 1SAL103446R9901                                                         |
| EAN                   | 4013614543975                                                           |
| Catalog Description   | MC1K310ARD Mini Contactor 24 V DC - 3 NO - 0 NC - Ring-Tongue Terminals |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long Description | The MC1K310ARD mini contactor is a dimension optimized 3 pole contactor with 1 NO auxiliary contact and special screw terminals for a connection with ring tongue ferrules. 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. Thanks to the very low energy consumption coil, this product can be directly controlled by a PLC. The product is suitable for wall or rail mounting. |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85365080 |

Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 2CDC103061M6801 |
|--------------------------|-----------------|

Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 45 mm   |
| Product Net Height         | 48 mm   |
| Product Net Depth / Length | 68 mm   |
| Product Net Weight         | 0.25 kg |

Technical

|                                                                   |                                                                                                                                                                              |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Poles                                                   | 3                                                                                                                                                                            |
| Mini Contactor Type                                               | Mini Contactor                                                                                                                                                               |
| Rated Operational Voltage                                         | Auxiliary Circuit 690 V AC<br>Auxiliary Circuit 440 V DC<br>Main Circuit 690 V AC<br>Main Circuit 440 V DC                                                                   |
| Rated Frequency (f)                                               | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Auxiliary Circuit DC<br>Control Circuit DC<br>Main Circuit 50 Hz<br>Main Circuit 60 Hz<br>Main Circuit DC              |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> )               | Auxiliary Circuit 6 kV<br>Main Circuit 6 kV                                                                                                                                  |
| Rated Insulation Voltage (U <sub>i</sub> )                        | 750 V                                                                                                                                                                        |
| Number of Main Contacts NC                                        | 0                                                                                                                                                                            |
| Number of Main Contacts NO                                        | 3                                                                                                                                                                            |
| Rated Operational Current AC-1 (I <sub>e</sub> )                  | (690 V) 55 °C 20 A<br>(690 V) 70 °C 16 A<br>(230 V) 55 °C 20 A<br>(230 V) 70 °C 16 A<br>(400 V) 55 °C 20 A<br>(400 V) 70 °C 16 A<br>(500 V) 55 °C 20 A<br>(500 V) 70 °C 16 A |
| Rated Operational Power AC-3 (P <sub>e</sub> )                    | (230 V) Three Phase 2.2 kW<br>(400 V) Three Phase 4 kW<br>(500 V) Three Phase 4 kW<br>(690 V) Three Phase, NO 4 kW                                                           |
| Rated Short-time Withstand Current Low Voltage (I <sub>cw</sub> ) | 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 <sub>e</sub> )                 | (240 V) 6 A<br>(400 V) 4 A<br>(500 V) 2.5 A<br>(690 V) 1.5 A                                                                                                                 |
| Rated Operational Current DC-13 (I <sub>e</sub> )                 | (24 V) 5 A<br>(48 V) 2.5 A<br>(125 V) 0.55 A<br>(250 V) 0.3 A<br>(440 V) 0.15 A                                                                                              |
| Conventional Free-air Thermal Current (I <sub>th</sub> )          | Auxiliary Circuit 10 A<br>Main Circuit 20 A                                                                                                                                  |
| Rated Control Circuit Voltage (U <sub>c</sub> )                   | 24 V DC                                                                                                                                                                      |
| Coil Operating Limits                                             | (acc. to IEC 60947-4-1) for DC supply 0.85 ... 1.1 x U <sub>c</sub> (at θ ≤ 55 °C)                                                                                           |

|                                        |                                                                                                                                                                                     |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Degree of Protection                   | Auxiliary Circuit Terminals IP20<br>Control Circuit Terminals IP20<br>Main Circuit Terminals IP20                                                                                   |
| Mechanical Durability                  | 10000000 cycle                                                                                                                                                                      |
| Minimum Switching Capacity             | Auxiliary Circuit 17 V<br>Auxiliary Circuit 5 mA                                                                                                                                    |
| Maximum Electrical Switching Frequency | (AC-1) 300 cycles per hour<br>(AC-15) 360 cycles per hour<br>(AC-3) 1200 cycles per hour<br>(DC-1) 600 cycles per hour<br>(DC-13) 360 cycles per hour<br>(DC-3) 600 cycles per hour |
| Connecting Capacity Main Circuit       | Flexible 1/2x 0.75 ... 2.5 mm²<br>Rigid 1/2x 0.75 ... 2.5 mm²                                                                                                                       |
| Connecting Capacity Auxiliary Circuit  | Flexible 1/2x 0.75 ... 2.5 mm²<br>Rigid 1/2x 0.75 ... 2.5 mm²                                                                                                                       |
| Connecting Capacity Control Circuit    | Flexible 1/2x 0.75 ... 2.5 mm²<br>Rigid 1/2x 0.75 ... 2.5 mm²                                                                                                                       |
| Wire Stripping Length                  | Auxiliary Circuit 9 mm<br>Control Circuit 9 mm<br>Main Circuit 9 mm                                                                                                                 |
| Tightening Torque                      | Auxiliary Circuit 0.8 ... 1.0 N·m<br>Control Circuit 0.8 N·m<br>Main Circuit 0.8 ... 1.0 N·m                                                                                        |
| Recommended Screw Driver               | Pozidriv 2                                                                                                                                                                          |
| Mounting on DIN Rail                   | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715                                                                      |
| Power Loss Standards                   | at Rated Operating Conditions AC-1 per Pole 0.7 W<br>IEC/EN 60947-1<br>IEC/EN 60947-4-1<br>IEC/EN 60947-5-1<br>UL 60947-1<br>UL 60947-4-1<br>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<br>(200 V AC) Three Phase 11 A<br>(220 ... 240 V AC) Three Phase 9.6 A<br>(230 V AC) Single Phase 10 A<br>(440 ... 480 V AC) Three Phase 7.6 A<br>(550 ... 600 V AC) Three Phase 6.1 A |
| Horsepower Rating UL/CSA                     | (115 V AC) Single Phase 0.5 Hp<br>(200 V AC) Three Phase 3 Hp<br>(220 ... 240 V AC) Three Phase 3 Hp<br>(230 V AC) Single Phase 1.5 Hp<br>(440 ... 480 V AC) Three Phase 5 Hp<br>(550 ... 600 V AC) Three Phase 5 Hp |
| General Use Rating UL/CSA                    | (600 V AC) 20 A                                                                                                                                                                                                      |
| Contact Rating UL/CSA                        | A600<br>Q600                                                                                                                                                                                                         |
| Connecting Capacity Main Circuit UL/CSA      | Stranded 1/2x 18-12 AWG                                                                                                                                                                                              |
| Connecting Capacity Auxiliary Circuit UL/CSA | Stranded 1/2x 18-12 AWG                                                                                                                                                                                              |
| Tightening Torque UL/CSA                     | Auxiliary Circuit 7 in·lb<br>Control Circuit 7 in·lb<br>Main Circuit 7 in·lb                                                                                                                                         |

Environmental

|                         |                                                    |
|-------------------------|----------------------------------------------------|
| Ambient Air Temperature | Operation -40 ... +70 °C<br>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                   | 5g 3 ... 150 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 and Amendment 2015/863 July 22, 2019 |
| WEEE B2C / B2B                              | Business To Business                                                   |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm)             |

Certificates and Declarations

|                                  |                     |
|----------------------------------|---------------------|
| CB Certificate                   | 1SAA971000-2001     |
| CQC Certificate                  | CQC2019010304197131 |
| Declaration of Conformity - CCC  | 2020980304001602    |
| Declaration of Conformity - CE   | 1SAD101100-3201     |
| Declaration of Conformity - UKCA | 1SAD201100-3201     |
| RINA Certificate                 | 1SAA971000-0801     |
| UL Certificate                   | E191658-19880826    |

Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 46 mm         |
| Package Level 1 Height         | 70 mm         |
| Package Level 1 Depth / Length | 49 mm         |
| Package Level 1 Gross Weight   | 0.255 kg      |
| Package Level 1 EAN            | 4013614543975 |
| Package Level 2 Units          | box 10 piece  |
| Package Level 2 Width          | 243 mm        |
| Package Level 2 Height         | 80 mm         |
| Package Level 2 Depth / Length | 106 mm        |
| Package Level 2 Gross Weight   | 2.61 kg       |
| Package Level 2 EAN            | 4013614544033 |

Classifications

|                            |                                           |
|----------------------------|-------------------------------------------|
| 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  |
| ETIM 8                     | EC000066 - Power contactor, AC switching  |
| eClass                     | V11.0 : 27371003                          |
| UNSPSC                     | 39121529                                  |
| E-Number (Finland)         | 3709640                                   |

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## Categories

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

