



PRODUCT-DETAILS

# K6-31Z-03

## K6-31Z-03 Mini Contactor Relay 48V 40-450Hz



General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | K6-31Z-03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product ID            | GJH1211001R0313                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| EAN                   | 4013614049019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Catalog Description   | K6-31Z-03 Mini Contactor Relay 48V 40-450Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Long Description      | The K6-31Z mini contactor relay is a compact 4 pole contactor relay with screw terminals. They are ideally suited for applications where reliability is a must and space is at a premium. Mini contactors relays are used in residential buildings, commercial buildings and industrial applications for switching of control signals up to 3 A / 400 V (AC-15). Further features are the silent coil, a switch position indication and the integrated possibility for rail or wall mounting. |

Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85365080 |
| Product Main Type      | K6       |

Popular Downloads

|                       |                 |
|-----------------------|-----------------|
| Data Sheet, Technical | 1SBC100214C0202 |
|-----------------------|-----------------|

|                          |                 |
|--------------------------|-----------------|
| Information              |                 |
| Instructions and Manuals | 2CDC102047M6801 |
| CAD Dimensional Drawing  | 2CDC001079B0201 |
| Dimension Diagram        | GJL1200436F0001 |

Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 52.5 mm  |
| Product Net Depth / Length | 46.5 mm  |
| Product Net Height         | 57.5 mm  |
| Product Net Weight         | 0.175 kg |

Technical

|                                                     |                                                                                                                                                                                                                       |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil Consumption                                    | Average Holding Value 50 Hz 3.5 V·A<br>Average Pull-in Value 50 Hz 3.5 V·A                                                                                                                                            |
| Coil Operating Limits                               | (acc. to IEC 60947-5-1) for AC supply 0.85 ... 1.1 x U <sub>c</sub> (at $\theta \leq 55^\circ\text{C}$ )                                                                                                              |
| Connecting Capacity Auxiliary Circuit               | Flexible with Ferrule 1/2x 1 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 1 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 4 mm <sup>2</sup>               |
| Connecting Capacity Control Circuit                 | Flexible with Ferrule 1/2x 1 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 1 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 4 mm <sup>2</sup>               |
| Maximum Electrical Switching Frequency              | (AC-15) 600 cycles per hour<br>(DC-13) 600 cycles per hour                                                                                                                                                            |
| Mechanical Durability                               | 10000000 cycle                                                                                                                                                                                                        |
| Mini Contactor Type                                 | Mini Contactor Relay                                                                                                                                                                                                  |
| Minimum Mounting Distance                           | Other Device Same Type, Horizontal 0 mm                                                                                                                                                                               |
| Minimum Switching Capacity                          | 17 V<br>5 mA                                                                                                                                                                                                          |
| Mounting Position                                   | 1 ... 6                                                                                                                                                                                                               |
| Mounting Type                                       | DIN-Rail<br>Screw                                                                                                                                                                                                     |
| 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                                                                                                        |
| Number of Auxiliary Contacts NC                     | 1                                                                                                                                                                                                                     |
| Number of Auxiliary Contacts NO                     | 3                                                                                                                                                                                                                     |
| Number of Main Contacts NC                          | 0                                                                                                                                                                                                                     |
| Number of Main Contacts NO                          | 0                                                                                                                                                                                                                     |
| Number of Poles                                     | 4                                                                                                                                                                                                                     |
| Power Loss                                          | at Rated Operating Conditions per Pole 0.32 W                                                                                                                                                                         |
| Rated Control Circuit Voltage (U <sub>c</sub> )     | 48 V AC                                                                                                                                                                                                               |
| Rated Frequency (f)                                 | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Auxiliary Circuit DC<br>Control Circuit 400 Hz<br>Control Circuit 50 Hz<br>Control Circuit 60 Hz<br>Main Circuit 60 Hz<br>Main Circuit 50 Hz<br>Main Circuit DC |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | Auxiliary Circuit 6 kV                                                                                                                                                                                                |
| Rated Insulation Voltage (U <sub>i</sub> )          | 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                         |

|                                                      |                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Rated Operational Current<br>AC-15 (I <sub>e</sub> ) | (24 V) 4 A<br>(120 V) 4 A<br>(240 V) 4 A<br>(400 V) 3 A<br>(500 V) 2 A                               |
| Rated Operational Current<br>DC-13 (I <sub>e</sub> ) | (24 V) 2.5 A<br>(110 V) 0.7 A<br>(220 / 240 V) 0.4 A                                                 |
| Rated Operational Voltage                            | Auxiliary Circuit 690 V AC<br>Auxiliary Circuit 250 V DC                                             |
| Recommended Screw<br>Driver                          | M3<br>Pozidriv 1                                                                                     |
| Short-Circuit Protective<br>Devices                  | gG Type Fuses 6 A                                                                                    |
| Standards                                            | 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                 |
| Terminal Type                                        | Screw Terminals                                                                                      |
| Tightening Torque                                    | Auxiliary Circuit 0.8 ... 1.1 N·m<br>Control Circuit 0.8 ... 1.1 N·m<br>Main Circuit 0.8 ... 1.1 N·m |
| Wire Stripping Length                                | Auxiliary Circuit 9 mm                                                                               |

Technical UL/CSA

|                                                 |                                                      |
|-------------------------------------------------|------------------------------------------------------|
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Stranded 1/2x 22-10 AWG                              |
| Contact Rating UL/CSA                           | A600                                                 |
| General Use Rating<br>UL/CSA                    | (600 V AC) 5 A                                       |
| Maximum Operating<br>Voltage UL/CSA             | 600 V AC                                             |
| Pilot Duty UL/CSA                               | A600                                                 |
| Tightening Torque<br>UL/CSA                     | Auxiliary Circuit 7 in·lb<br>Control Circuit 7 in·lb |

Environmental

|                                                             |                                                                    |
|-------------------------------------------------------------|--------------------------------------------------------------------|
| Ambient Air Temperature                                     | Operation -25 ... +55 °C<br>Storage -40 ... +80 °C                 |
| Conventional Free-air<br>Thermal Current (I <sub>th</sub> ) | Auxiliary Circuit 6 A                                              |
| Degree of Protection                                        | Auxiliary Circuit Terminals IP20<br>Control Circuit Terminals IP20 |
| Maximum Operating<br>Altitude Permissible                   | 2000 m                                                             |
| Resistance to Shock acc.<br>to IEC 60068-2-27               | 11 ms Pulse 15g                                                    |
| Resistance to Vibrations                                    | 3g 3 ... 150 Hz                                                    |

Material Compliance

|                                                   |                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals<br>Reporting Template<br>(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 |
| Toxic Substances Control<br>Act - TSCA            | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                                    | Business To Business                                                   |
| WEEE Category                                     | 5. Small Equipment (No External Dimension More Than 50 cm)             |

Certificates and Declarations

|                                     |                     |
|-------------------------------------|---------------------|
| CB Certificate                      | 1SAA938001-2001     |
| CQC Certificate                     | CQC2003010304064035 |
| Declaration of Conformity<br>- CCC  | 2020980304001309    |
| Declaration of Conformity<br>- CE   | 1SAD101100-3101     |
| Declaration of Conformity<br>- UKCA | 1SAD201100-3101     |
| EAC Certificate                     | 1SAA938001-2701     |
| RMRS Certificate                    | 1SAA938001-0704     |
| UL Certificate                      | E48139-19881213     |

Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | 10 piece      |
| Package Level 1 Width             | 115 mm        |
| Package Level 1 Depth /<br>Length | 280 mm        |
| Package Level 1 Height            | 54 mm         |
| Package Level 1 Gross<br>Weight   | 1.82 kg       |
| Package Level 1 EAN               | 4013614410161 |

Classifications

|                            |                            |
|----------------------------|----------------------------|
| eClass                     | V11.0 : 27371001           |
| ETIM 6                     | EC000196 - Contactor relay |
| ETIM 7                     | EC000196 - Contactor relay |
| ETIM 8                     | EC000196 - Contactor relay |
| ETIM 9                     | EC000196 - Contactor relay |
| Object Classification Code | K                          |
| UNSPSC                     | 39121500                   |

Categories

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

