

special features

> Precise haptics

> Safe gold contacts

Simple M12 plug&play connection

> Protected contacts due to sealed housing

RAMO 22 K, M12, round collar, potential free, 2 NO, Gold, M12 4-pin A-coded, frontring metallic silver, 1 x 90°, shape L, latching, key removal position 0



fields of application

- > Measurement-control-regulation
- > Electrical engineering
- > Mechanical and system engineering
- > Signalling systems
- > Vehicle construction
- Chemical industry
- > Industrial robots



description

The locking systems we use were created according to the DIN EN 1303 standard by well-known lock manufacturers. They are open, mechanical systems which, depending on the environmental conditions, require occasional maintenance (e.g. greasing & oiling) by the machine or system operator.

RAMO K key switches offer a solution for every application thanks to a wide variety of contact functions, rotation angles, actuation functions, trigger positions and closures. Just like all RAMO actuators, connection is simple using Plug&Play and without any manual wiring - with M12 sensor cables.

Additional information according to UL certificate:

For Class 2 Power Source or Limited Voltage / Limited Current only

Installation only by trained specialist personnel.

Type 4x Indoor only with cable "Cat. No. 7000-08061-0210100 PUR 4x0.25mm² with M8 connector, rated max. 30VAC/DC 4A,

manufactured by Murrelektronik GmbH" and "Cat. No. 7000-12221-0340100 PUR 4x0.34mm² with M12 connector, rated max. 30VAC/ DC 4A, manufactured by Murrelektronik GmbH"

For Use on a Flat Surface of a Type 1 or 4x indoor only Enclosure.

technical data

| > | general | | |
|---|-----------------------------|-----------------|-----------------|
| | Potential free | yes | direct links |
| | Color | black | > RAFI eCatalog |
| | Collar color | black | |
| | Front ring color | metallic silver | |
| | Collar shape | round | |
| | Operating temperature, min. | -40 °C | |
| | Operating temperature, max. | 85 °C | |

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technical data sheet

1.10.051.433/0001



| | Storage temperature, min. | -40 °C |
|---|---|---|
| | Storage temperature, max. | 90 °C |
| | illuminated | No |
| | Packaging | Box |
| | Packaging unit | 2 pcs. |
| | Operating life | 50,000 cycles |
| | B10 | 62,627 cycles |
| | Degree of protection, front side, | IP65 |
| | according to DIN EN 60529 | 11 00 |
| | Degree of protection, rear side, | IP65 |
| | according to DIN EN 60529 | |
| | UL Enclosure Type Rating front | type 4X indoor |
| | side | |
| | Environment resistance | IEC 60068-2-14 |
| | | IEC 60068-2-30 |
| | | IEC 60068-2-78 |
| | Shock resistance according to standard IEC 60068-2-27 | 30 g at 11 ms amplitude semi-sinusoidal |
| | Salt-spray resistance according to standard | IEC 60068-2-11 |
| | Impact resistance IK | 02 side |
| | | 05 frontal |
| | oscillation restistance according | 5 g at 10500 Hz |
| | to standard IEC 60068-2-6 | |
| | MOQ order | 2 pcs. |
| | Pollution degree acc. to DIN EN 61010-1 | Pollution degree 2 |
| | RoHS compliant | Yes |
| | REACH compliant | Yes |
| > | mounting diameters | |
| | Outside dimension, length | 29.8 mm |
| | Outside dimension, width | 29.8 mm |
| | Outside dimension, height | 75.1 mm |
| | Mounting hole | 22.3 mm |
| | Mounting depth | 30.1 mm |
| | Installation height | 20 mm |
| | Grid, min. | 30 mm |
| | Collar dimension | 29.8 mm |
| > | mechanical data | |
| | Actuation function | latching |
| | Operating force, max. | 1.3 N |
| | Resistance to force on the side | 300 N |
| | Contact function | 2 NO |
| | Contact material | Gold |
| | Locking position | 001 |
| | Key removal position | 0 |
| | Rotating angle | 1 x 90°, shape L |
| | Fixing | Threaded ring |

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| Threaded ring torque, max. | 1.2 Nm |
|-----------------------------------|--------------------------------------|
| Terminal on the rear | M12 4-pin A-coded |
| PIN 1 | Normally open contact 1 |
| PIN 2 | Normally open contact 1 |
| PIN 3 | Normally open contact 2 |
| PIN 4 | Normally open contact 2 |
| electrical data | |
| Rated insulation voltage | 250 V |
| Rated surge voltage | 2,500 V |
| Rated operating voltage | 35 V (AC-15) |
| | 35 V (DC-13) |
| Rated voltage, min. | 1 V |
| Rated voltage, max. | 32 V |
| Rated current, max. | 0.1 A |
| Power loss | 0.00080 W |
| Overvoltage category | 2 |
| Kind of short circuit protective | fuse 250 V / 0,1 A / 1,5 kA gG quick |
| device | |
| Conditional short circuit current | 1,000 A |
| | |

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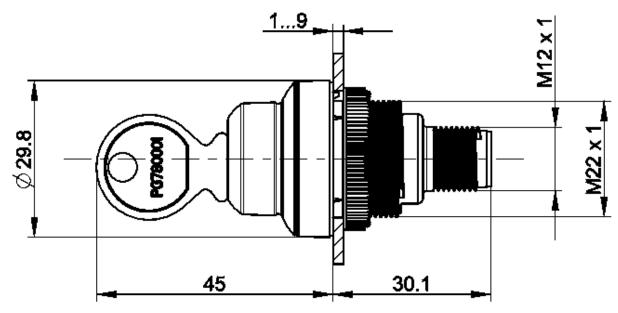
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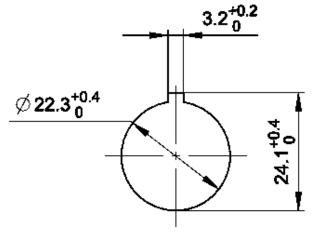


drawings

Dimensioned drawing



Mounting hole drawing



acc. to IEC 60947-5-1

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