

RAMO 22 K, M12, round collar, 2 NO, Gold, M12 4-pin A-coded, frontring black, 2 x 40°, momentary contact function, key removal position 0



fields of application

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

special features

- > Precise haptics
- > Safe gold contacts
- > Simple M12 plug&play connection
- > Protected contacts due to sealed housing



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 | no |
| Color | black |
| Collar color | black |
| Front ring color | black |
| Collar shape | round |
| Operating temperature, min. | -40 °C |
| Operating temperature, max. | 85 °C |

direct links

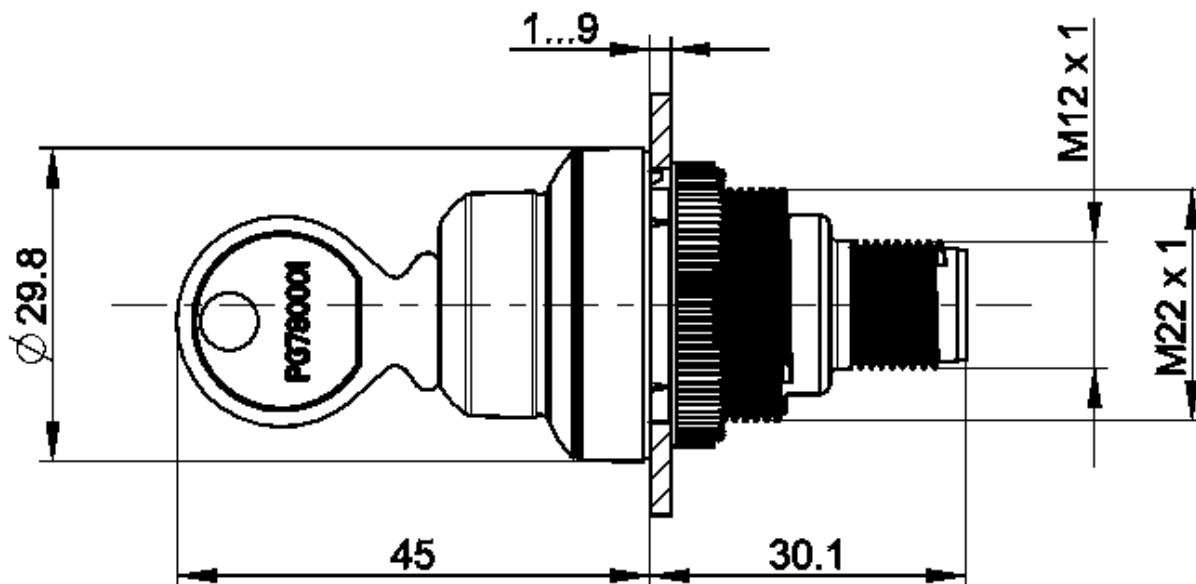
- > RAFI eCatalog

| | |
|--|--|
| Storage temperature, min. | -40 °C |
| Storage temperature, max. | 90 °C |
| illuminated | No |
| Packaging | Box |
| Packaging unit | 2 pcs. |
| net weight | 46.3 g |
| Operating life | 300,000 cycles |
| B10 | 429,962 cycles |
| Degree of protection, front side, according to DIN EN 60529 | IP65 |
| Degree of protection, rear side, according to DIN EN 60529 | IP65 |
| UL Enclosure Type Rating front side | type 4X indoor |
| 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 |
| shock resistance | 02 side 05 frontal |
| oscillation resistance according to standard IEC 60068-2-6 | 5 g at 10...500 Hz |
| 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 | momentary contact function |
| 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 | 2 x 40° |

| | |
|---|--------------------------------------|
| Fixing | Threaded ring |
| Threaded ring torque, max. | 1.2 Nm |
| Terminal on the rear | M12 4-pin A-coded |
| PIN 1 | Normally open contact 1 |
| | Normally open contact 2 |
| PIN 2 | Normally open contact 2 |
| PIN 4 | Normally open contact 1 |
| > 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 |
| Voltage type | DC |
| Rated operating voltage | 1-32 V |
| Rated current, max. | 0.1 A |
| Power loss | 0.00080 W |
| Overtoltage category | 2 |
| Kind of short circuit protective device | fuse 250 V / 0,1 A / 1,5 kA gG quick |
| Conditional short circuit current | 1,000 A |

drawings

Dimensioned drawing



Mounting hole drawing



acc. to IEC 60947-5-1

Schematic diagram

