# RAMO 30 K, M12, round collar, 2 NO, Gold, M12 4-pin A-coded, frontring stainless steel, 1 x 90°, 1 x 40°, latching / momentary, 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 | stainless steel |
| Collar shape | round |
| Operating temperature, min. | -40 °C |
| Operating temperature, max. | 85 °C |

### direct links

- RAFI eCatalog

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| | |
|---|---|
| Storage temperature, min. | -40 °C |
| Storage temperature, max. | 90 °C |
| illuminated | No |
| Packaging | Box |
| Packaging unit | 2 pcs. |
| net weight | 56.1 g |
| Operating life | 50,000 cycles |
| B10 | 62,627 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<br>IEC 60068-2-30<br>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 | 05 side<br>04 frontal |
| oscillation restistance 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 | 34.5 mm |
| Outside dimension, width | 34.5 mm |
| Outside dimension, height | 75.1 mm |
| Mounting hole | 30.3 mm |
| Mounting depth | 36.3 mm |
| Installation height | 13.7 mm |
| Grid, min. | 35 mm |

**mechanical data**

| | |
|---|---|
| Actuation function | latching / momentary |
| Operating force, max. | 1.3 N |
| Resistance to force on the side | 300 N |
| Contact function | 2 NO |
| Contact material | Gold |
| Locking position | 019 |
| Key removal position | 0 |
| Rotating angle | 1 x 90°, 1 x 40° |
| 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<br>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)<br>35 V (DC-13) |
| Rated voltage, min. | 1 V |
| Rated voltage, max. | 32 V |
| Voltage type | DC |
| Rated operating current | 0.1 A |
| Rated operating voltage | 1-32 V |
| Rated current, max. | 0.1 A |
| Power loss | 0.00080 W |
| Overvoltage 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 |

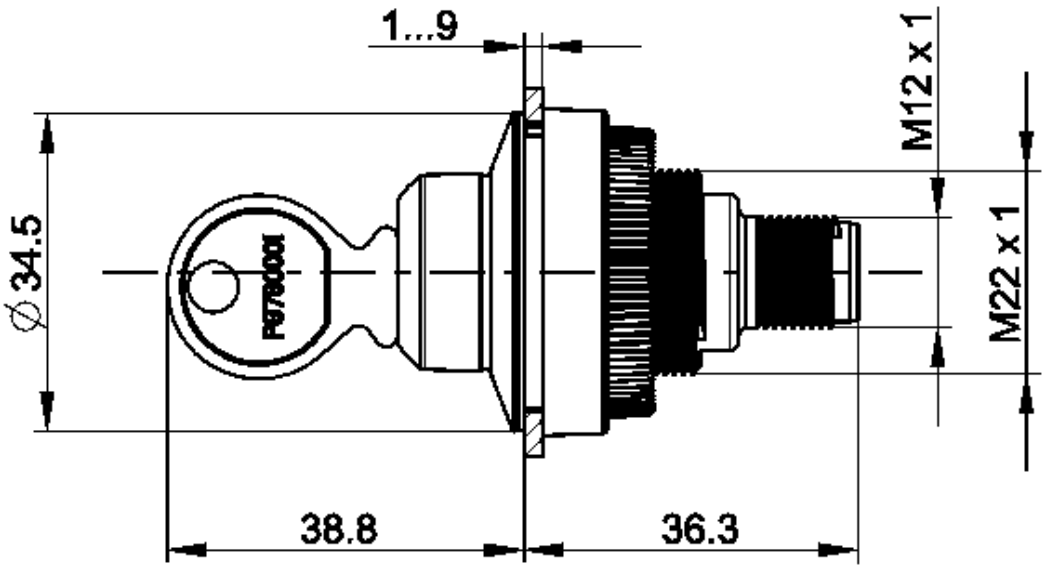
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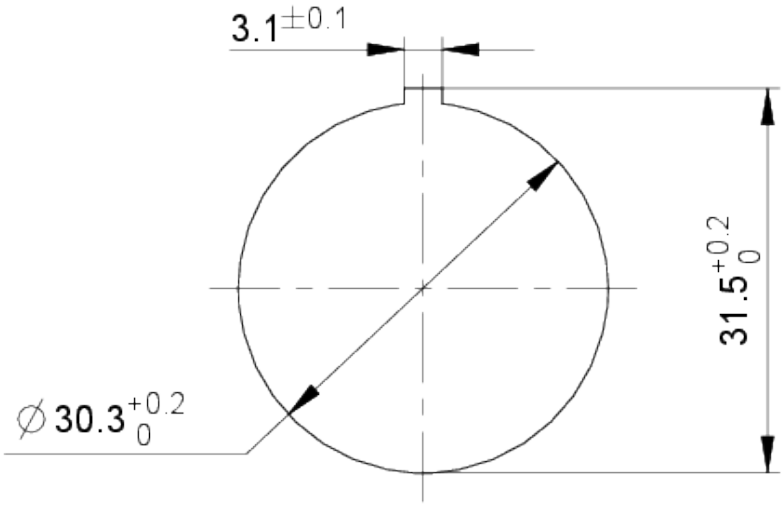
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## drawings

### Dimensioned drawing




### Mounting hole drawing

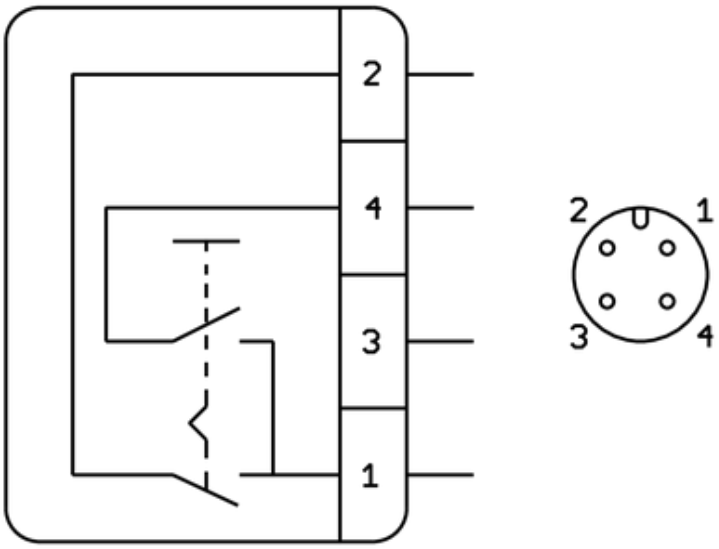



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## Schematic diagram




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