

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, 1 NC + 1 NO, Gold, M12 4-pin A-coded, frontring black, 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	black	
Collar shape	round	
Operating temperature, min.	-40 °C	
Operating temperature, max.	85 °C	

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technical data sheet

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	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	50,000 cycles
	B10	62,627 cycles
	Degree of protection, front side,	IP65
	according to DIN EN 60529	
	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	IEC 60068-2-11
	standard	
	Impact resistance IK	02 side
		05 frontal
	oscillation restistance according to standard IEC 60068-2-6	5 g at 10500 Hz
	MOQ order	2 222
	Pollution degree acc. to DIN EN	2 pcs. Pollution degree 2
	61010-1	rollation 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	1 NC + 1 NO
	Contact material	Gold
	Locking position	019
	Key removal position	0
	Rotating angle	1 x 90°, shape L

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	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
	PIN 2	Normally open contact 1
	PIN 3	Normally closed contact 1
	PIN 4	Normally closed 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
	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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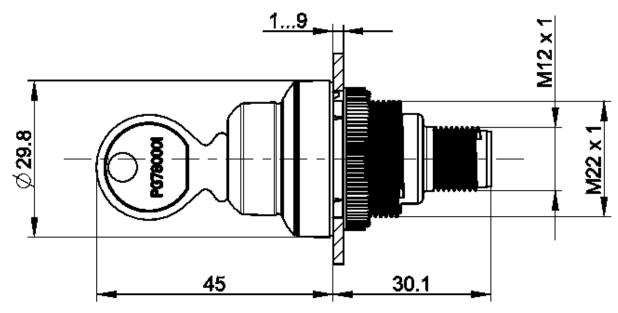
technical data sheet



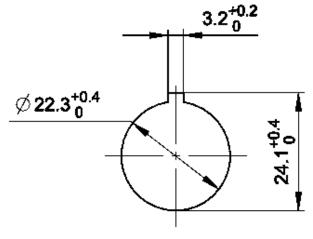


drawings

Dimensioned drawing



Mounting hole drawing



acc. to IEC 60947-5-1

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