



RZC1-04ZRS-KP0

RZC1

CYLINDER SENSORS

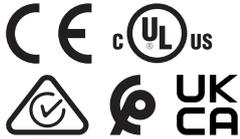
SICK
Sensor Intelligence.



Ordering information

Type	part no.
RZC1-04ZRS-KPO	1059747

Other models and accessories → www.sick.com/RZC1



Detailed technical data

Features

Cylinder type	C-slot
Cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2
Housing length	26.3 mm
Switching output	Reed
Switching frequency	500 Hz
Output function	NO
Electrical wiring	AC/DC 3-wire
Enclosure rating	IP67 ¹⁾

¹⁾ According to EN 60529 (IP 67 / IP 68).

Mechanics/electronics

Supply voltage	5 V AC/DC ... 30 V AC/DC
Power consumption	5 mA, without load
Voltage drop	< 0.5 V
Continuous current I_a	≤ 500 mA
Switching capacity	≤ 10 W
Protection class	III
Overrun distance, typ.	7 mm ¹⁾
Reproducibility	≤ 0.1 mT ²⁾
Status indicator LED	Yes
Teach-in	No
Ambient operating temperature	-30 °C ... +80 °C
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm

¹⁾ Distance covered by the encoder magnet while the sensor outputs a switching signal.

²⁾ Supply voltage U_B and constant ambient temperature T_a.

EMC	According to EN 60947-5-2	
Connection type	Cable with connector M8, 3-pin, drag chain use, 0.3 m	
Connection type Detail		
	Conductor cross section	0.09 mm ²
	Cable diameter	Ø 2.2 mm
	Bending radius	With fixed installation > 2 x cable diameter For flexible use > 5 x cable diameter
	Torsion force	± 270° / 0.1 m
	Torsion cycles	300,000
	Drag chain cycles	5,000,000
	Drag chain parameters	Traversing speed max. 3 m/s Acceleration max. 10 m/s ² Bending cycles in the drag chain min. 5 million
	Cable outlet	Axial
Material		
	Housing	Plastic, PA, strengthened
	Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493	

¹⁾ Distance covered by the encoder magnet while the sensor outputs a switching signal.

²⁾ Supply voltage U_B and constant ambient temperature T_a .

Safety-related parameters

MTTF_D	41,230 years
DC_{avg}	0 %
T_M (mission time)	20 years
B_{10D}	5,000,000 Switching cycles ¹⁾

¹⁾ Only for devices containing electro-mechanical components. In this case, the MTTFD value of the entire device must be calculated from the given B_{10D} value, the number of switching cycles and the given MTTFD value.

Certificates

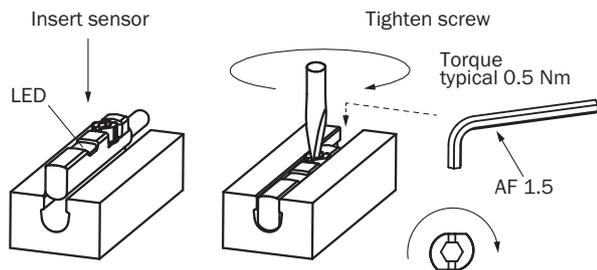
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

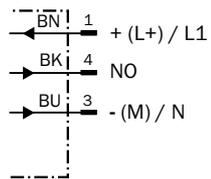
ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
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ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
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ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

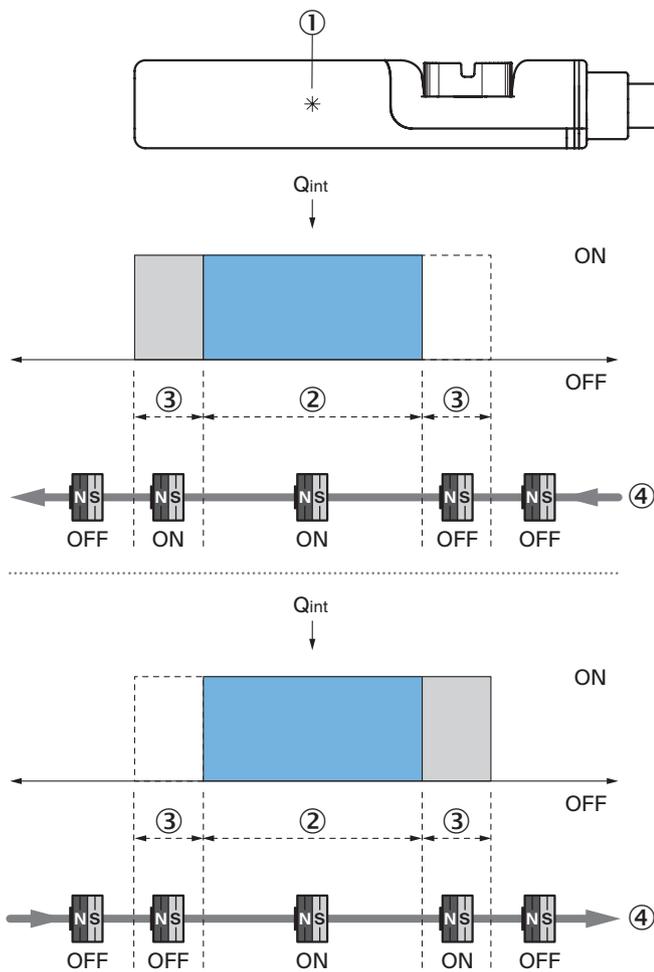
Installation note



Connection diagram Cd-036



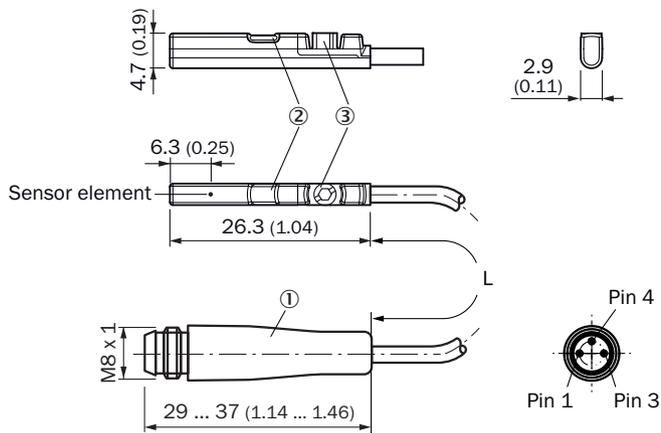
Functional principle Overrun distance



Note: Sensor housing may differ; representation corresponds to “NO contact” output function; overrun distance = switching point width + hysteresis

- ① Position sensor element
- ② Width of the switching point
- ③ Hysteresis
- ④ Direction of movement of the magnet

Dimensional drawing Cable with connector M8



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fixing screw SW 1.5

Part no.	Type	L	Number of cores
1059751	RZC1-04ZUS-KPO	300 mm	2
1059747	RZC1-04ZRS-KPO	300 mm	3

Recommended accessories

Other models and accessories → www.sick.com/RZC1

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 1 mm ... 130 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Aluminum Details: Stainless steel, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC1-130	2077686
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-12	2077673
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 1 mm ... 25 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Aluminum Details: Stainless steel, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC1-25	2077685
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-16	2077672
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-20	2077671
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-25	2077670
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-32	2077669
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-40	2077668
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-50	2077667
	<ul style="list-style-type: none"> Description: Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot 	BEF-KHZ-RC-63	2077666
	<ul style="list-style-type: none"> Description: Mounting bracket for integrated profile cylinder/tie-rod cylinder Material: Zinc diecast Details: Zinc diecast Items supplied: Mounting hardware included 	BEF-KHZ-PC1	2076170

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² 	DOS-0803-G	7902077
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm² 	DOS-0803-W	7902078
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-020VA1XLEAX	2095860
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-050VA1XLEAX	2095884
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG8U13-020VA1XLEAX	2096165
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG8U13-050VA1XLEAX	2096166
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-020UA1XLEAX	2094794
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-050UA1XLEAX	2095586
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-C60UA1XLEAX	2145889
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-030UA1XLEAX	2145891
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF8U13-C60VA1XLEAX	2146368

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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For us, that is “Sensor Intelligence.”

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