



MZCG-1Z7NS-KQ0

MZCG

CYLINDER SENSORS

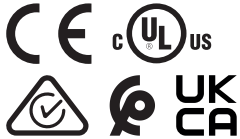
SICK
Sensor Intelligence.



Ordering information

Type	part no.
MZCG-1Z7NS-KQ0	1083709

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



Detailed technical data

Features

Cylinder type	C-slot
Cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2
Housing length	12.2 mm
Switching output	NPN
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Power consumption	7 mA, without load
Voltage drop	≤ 2.5 V
Continuous current I_a	≤ 100 mA
Protection class	III
Response sensitivity, typ.	1.7 mT
Overrun distance, typ.	2 mm ¹⁾
Hysteresis, typ.	≤ 0.4 mT
Reproducibility	≤ 0.1 mT ²⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No
Power-up pulse protection	Yes
Ambient operating temperature	-30 °C ... +80 °C

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.

Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Connection type	Cable with connector M12, 3-pin, drag chain use, 0.3 m
Connection type Detail	
Conductor cross section	0.14 mm²
Cable diameter	Ø 2.9 mm
Bending radius	With fixed installation > 3 x cable diameter
	For flexible use > 10 x cable diameter
Torsion force	± 270° / 10 cm
Torsion cycles	2,000,000
Drag chain cycles	> 2,000,000
Drag chain parameters	Permissible acceleration max. 5 m/s
	Permissible product travel path horizontal 5 m at acceleration max. 5 m/s²
	Permissible product travel path vertical 2 m at acceleration max. 5 m/s²
	Permissible traversing speed at 5 m at horizontal product travel path max. 200 m/min
Cable outlet	Radial
Material	
Housing	Plastic
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	1,432 years
DC_{avg}	0 %
T_M (mission time)	20 years

Certificates

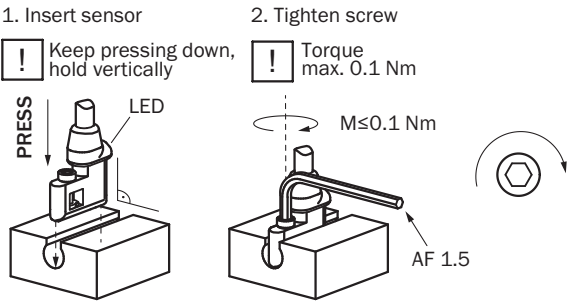
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

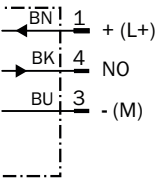
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ECLASS 8.1	27270104

ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
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ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

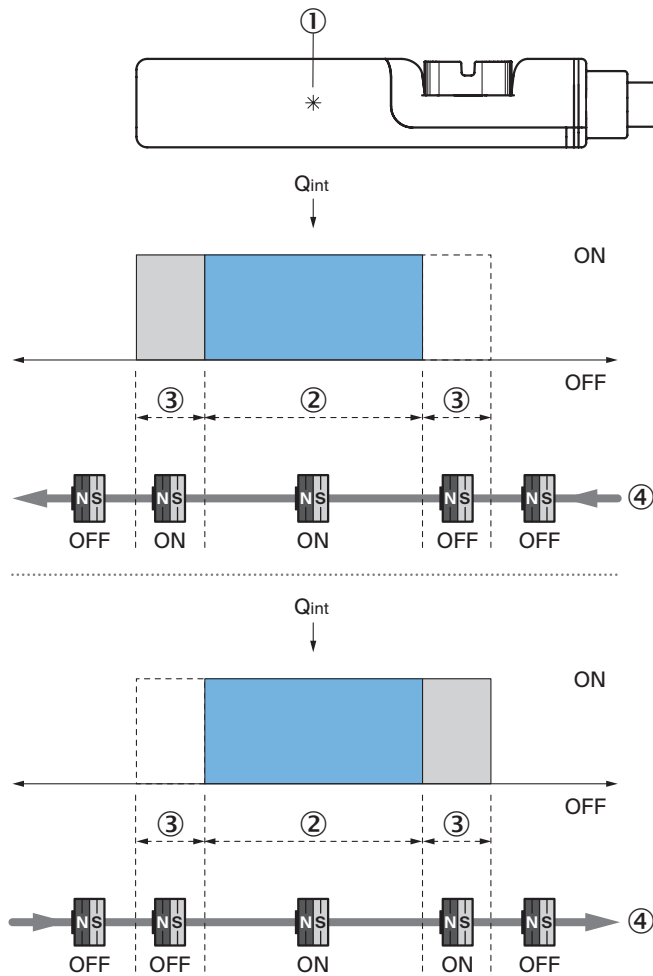
Installation note



Connection diagram Cd-002



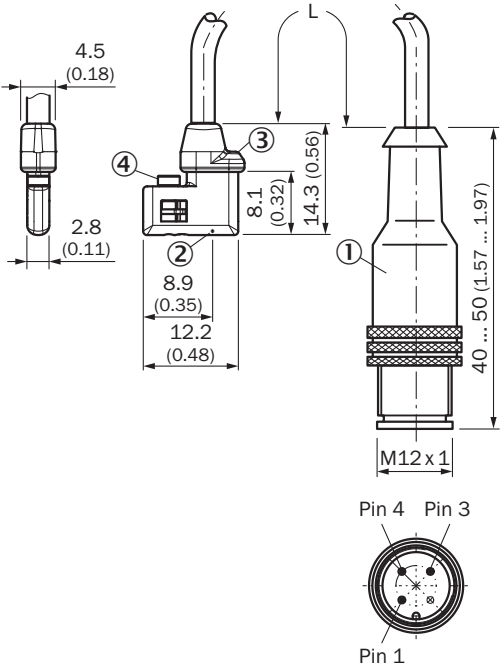
Functional principle Overrun distance



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 plug M12, with knurled nut













Dimensions in mm (inch)

- ① Connection
- ② Position sensor element
- ③ Display LED
- ④ Fixing screw SW 1.5

Part no.	Type	L	Number of cores
1083707	MZCG-1Z7PS-KQ0	300 mm	3
1083709	MZCG-1Z7NS-KQ0	300 mm	3

Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A13-020UB1XLEAX	2095604
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A13-020UB1XLEAX	2095752
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A13-050UB1XLEAX	2095753
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A13-050UB1XLEAX	2095605
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A13-C60UB1XLEAX	2145767
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A13-030UB1XLEAX	2145769
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A13-010UB1XLEAX	2145768
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 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 Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A13-C60UB1XLEAX	2145770
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A13-010UB1XLEAX	2145771
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A13-030UB1XLEAX	2145772

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.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com