



# MZCG-1Z7NS-KU0

MZCG

CYLINDER SENSORS

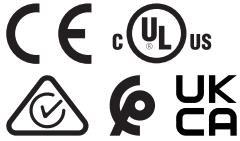
**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
MZCG-1Z7NS-KU0	1083713

Other models and accessories → [www.sick.com/MZCG](http://www.sick.com/MZCG)



### Detailed technical data

#### Features

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

#### Mechanics/electronics

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

<sup>1)</sup> Distance covered by the encoder magnet while the sensor outputs a switching signal.

<sup>2)</sup> Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.

<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>EMC</b>	According to EN 60947-5-2
<b>Connection type</b>	Cable, 3-wire, stripped, drag chain use, 2 m
<b>Connection type Detail</b>	
Conductor cross section	0.14 mm <sup>2</sup>
Cable diameter	Ø 2.9 mm
Bending radius	With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter
Torsion force	± 270° / 10 cm
Torsion cycles	2,000,000
Drag chain cycles	> 2,000,000
Drag chain parameters	Traversing speed max. 3.3 m/s at 5 m horizontal traversing length Acceleration max. 5 m/s <sup>2</sup>
Cable outlet	Radial
<b>Material</b>	
Housing	Plastic
Cable	PUR
<b>UL File No.</b>	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

<b>MTTF<sub>D</sub></b>	1,432 years
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	20 years

### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

### Classifications

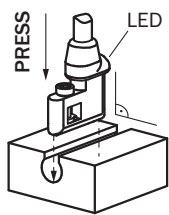
<b>ECLASS 5.0</b>	27270104
<b>ECLASS 5.1.4</b>	27270104
<b>ECLASS 6.0</b>	27270104
<b>ECLASS 6.2</b>	27270104
<b>ECLASS 7.0</b>	27270104
<b>ECLASS 8.0</b>	27270104
<b>ECLASS 8.1</b>	27270104
<b>ECLASS 9.0</b>	27270104
<b>ECLASS 10.0</b>	27270104

<b>ECLASS 11.0</b>	27270104
<b>ECLASS 12.0</b>	27274301
<b>ETIM 5.0</b>	EC002544
<b>ETIM 6.0</b>	EC002544
<b>ETIM 7.0</b>	EC002544
<b>ETIM 8.0</b>	EC002544
<b>UNSPSC 16.0901</b>	39122230

### Installation note

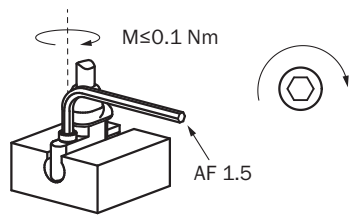
#### 1. Insert sensor

! Keep pressing down, hold vertically

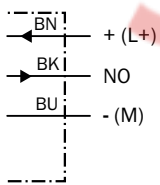


#### 2. Tighten screw

! Torque max. 0.1 Nm



### Connection diagram Cd-001



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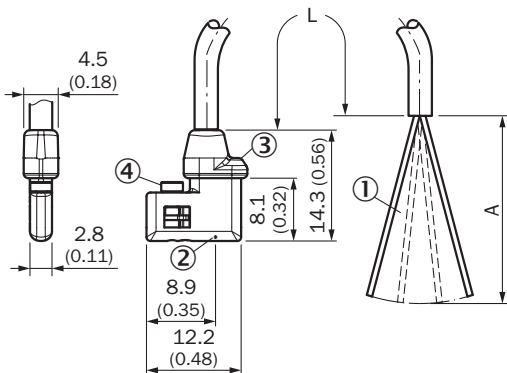
Functional principle Overrun distance



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





Dimensions in mm (inch)

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

		L	A	
1083711	MZCG-1Z7PS-KU0	2 m	31.5	3
1083713	MZCG-1Z7NS-KU0	2 m	31.5	3
1083715	MZCG-1Z7PS-KUB	5 m	31.5	3
1083717	MZCG-1Z7NS-KUB	5 m	31.5	3

### Recommended accessories

Other models and accessories → [www.sick.com/MZCG](http://www.sick.com/MZCG)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>	DOS-0803-G	7902077
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Solder connection</li> <li>• <b>Permitted cross-section:</b> ≤ 0.25 mm<sup>2</sup></li> </ul>	DOS-0803-W	7902078

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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](http://www.sick.com)

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