



# RZN-03ZWS-KWD

RZN

CYLINDER SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
RZN-03ZWS-KWD	1117645

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



### Detailed technical data

#### Features

<b>Cylinder type</b>	IMI Norgren slot
<b>Cylinder types with adapter</b>	Round body cylinder
<b>Housing length</b>	29.5 mm
<b>Switching output</b>	Reed
<b>Switching frequency</b>	400 Hz
<b>Output function</b>	NO
<b>Electrical wiring</b>	AC/DC 2-wire
<b>Enclosure rating</b>	IP67 <sup>1)</sup>

<sup>1)</sup> According to EN 60529.

#### Mechanics/electronics

<b>Supply voltage</b>	5 V AC/DC ... 240 V AC/DC <sup>1)</sup>
<b>Rated insulation voltage <math>U_i</math></b>	240 V
<b>Rated impulse withstand voltage <math>U_{imp}</math></b>	4 kV
<b>Voltage drop</b>	≤ 3.5 V
<b>Continuous current <math>I_a</math></b>	≤ 100 mA <sup>2)</sup>
<b>Switching capacity</b>	≤ 10 W
<b>Protection class</b>	II
<b>Response sensitivity, typ.</b>	3 mT
<b>Overrun distance, typ.</b>	10 mm <sup>3)</sup>
<b>Reproducibility</b>	≤ 0.1 mT <sup>4)</sup>
<b>Status indicator LED</b>	Yes
<b>Teach-in</b>	No

<sup>1)</sup> Mains fuse F < 0.5 A IEC60127-2 sheet 1.

<sup>2)</sup> AC.

<sup>3)</sup> Distance covered by the encoder magnet while the sensor outputs a switching signal.

<sup>4)</sup> Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

<b>Ambient operating temperature</b>	-40 °C ... +80 °C
<b>Shock and vibration resistance</b>	50 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>EMC</b>	According to EN 60947-5-2
<b>Connection type</b>	Cable, 2-wire, stripped, drag chain use, 10 m
<b>Connection type Detail</b>	
Conductor cross section	0.12 mm <sup>2</sup>
Cable diameter	Ø 3 mm
Bending radius	With fixed installation > 10 x cable diameter For flexible use > 15 x cable diameter
Cable outlet	Axial
<b>Material</b>	
Housing	Plastic
Cable	PVC
<b>Items supplied</b>	1 x mounting clip plugged in

- 1) Mains fuse F < 0.5 A IEC60127-2 sheet 1.  
 2) AC.  
 3) Distance covered by the encoder magnet while the sensor outputs a switching signal.  
 4) Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	23,876 years
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	20 years
<b>B<sub>10D</sub></b>	790,000 Switching cycles <sup>1)</sup>

<sup>1)</sup> Only for devices containing electro-mechanical components. In this case, the MTTFD value of the entire device must be calculated from the given B<sub>10D</sub> value, the number of switching cycles and the given MTTFD value.

### Certificates

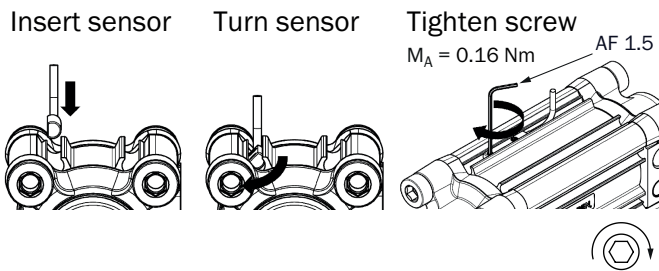
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓

### Classifications

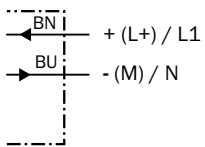
<b>ECLASS 5.0</b>	27270104
<b>ECLASS 5.1.4</b>	27270104
<b>ECLASS 6.0</b>	27270104
<b>ECLASS 6.2</b>	27270104
<b>ECLASS 7.0</b>	27270104
<b>ECLASS 8.0</b>	27270104
<b>ECLASS 8.1</b>	27270104
<b>ECLASS 9.0</b>	27270104
<b>ECLASS 10.0</b>	27270104

<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



### Connection diagram Cd-037



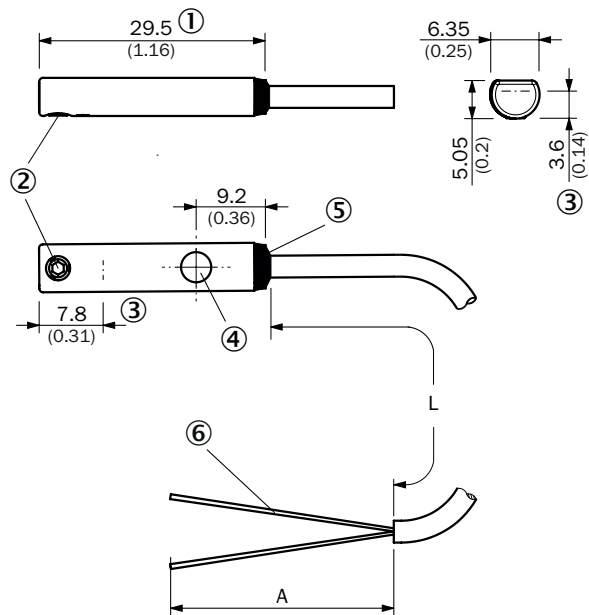
Functional principle Overrun distance



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 housing
- ② Fixing screw M3; width across 1.5 mm
- ③ Position sensor element
- ④ Display LED
- ⑤ Delo-Duopox sleeve
- ⑥ Connection

		<b>L</b>	<b>A</b>	
1117647	RZN-03ZWS-KWO	2 m	31.5 mm	2
1117646	RZN-03ZWS-KWB	5 m	31.5 mm	2
1117648	RZN-03ZWS-KUB	5 m	31.5 mm	2
1117645	RZN-03ZWS-KWD	10 m	31.5 mm	2

## Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 9.2 mm to 10 mm, for piston rod diameter of 8 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-08	7902337
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 10.9 mm to 12 mm, for piston rod diameter of 10 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-10	7901753
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 12.9 mm to 41 mm, for piston rod diameter of 12 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-12	7901754
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 16.9 mm to 18 mm, for piston rod diameter of 16 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-16	7901755
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 21 mm to 22 mm, for piston rod diameter of 20 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-20	7901756
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 26.1 mm to 27.2 mm, for piston rod diameter of 25 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-25	7901757
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 33 mm to 35 mm, for piston rod diameter of 32 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-32	7901758
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting clip for round body cylinder, clamping range 41.4 mm to 42.5 mm, for piston rod diameter of 40 mm</li> <li><b>Material:</b> Plastic</li> <li><b>Details:</b> Plastic</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-S-R1-40	7901759



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