



# MZT8-03VPS-KR0

MZT8

SENSORS FOR T-SLOT CYLINDERS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
MZT8-03VPS-KRO	1044459

Other models and accessories → [www.sick.com/MZT8](http://www.sick.com/MZT8)



## Detailed technical data

### Features

<b>Cylinder type</b>	T-slot
<b>Cylinder types with adapter</b>	Profile cylinder Tie rod cylinder Round body cylinder Dovetail groove cylinder SMC rail CDQ2 SMC rail ECDQ2
<b>Housing length</b>	24 mm
<b>Switching output</b>	PNP
<b>Switching frequency</b>	1,000 Hz
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 3-wire
<b>Enclosure rating</b>	IP68 <sup>1)</sup>

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

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Power consumption</b>	10 mA, without load
<b>Voltage drop</b>	≤ 2.2 V
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA
<b>Protection class</b>	III
<b>Time delay before availability</b>	25 ms
<b>Response sensitivity, typ.</b>	2.6 mT
<b>Overrun distance, typ.</b>	3 mm
<b>Hysteresis, typ.</b>	0.7 mT

<sup>1)</sup> U<sub>b</sub> and T<sub>a</sub> constant.

<b>Reproducibility</b>	≤ 0.1 mT <sup>1)</sup>
<b>Reverse polarity protection</b>	✓
<b>Short-circuit protection</b>	✓
<b>Power-up pulse protection</b>	✓
<b>Ambient operating temperature</b>	-30 °C ... +80 °C
<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 with connector M8, 3-pin, with knurled nuts, drag chain use, 0.5 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 > 10 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	Axial
<b>Material</b>	
Housing	Plastic, PA12
Cable	PUR
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Ub and Ta constant.

### Safety-related parameters

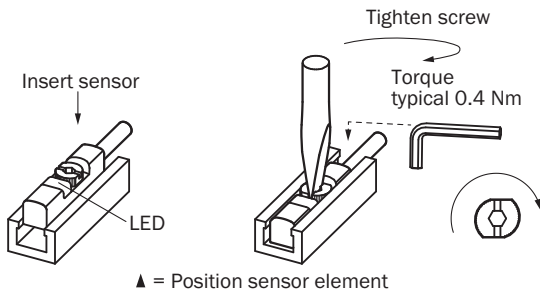
<b>MTTF<sub>D</sub></b>	2,289 years
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	20 years

### Classifications

<b>ECl@ss 5.0</b>	27270104
<b>ECl@ss 5.1.4</b>	27270104
<b>ECl@ss 6.0</b>	27270104
<b>ECl@ss 6.2</b>	27270104
<b>ECl@ss 7.0</b>	27270104
<b>ECl@ss 8.0</b>	27270104
<b>ECl@ss 8.1</b>	27270104
<b>ECl@ss 9.0</b>	27270104
<b>ECl@ss 10.0</b>	27270104
<b>ECl@ss 11.0</b>	27270104
<b>ECl@ss 12.0</b>	27274301
<b>ETIM 5.0</b>	EC002544
<b>ETIM 6.0</b>	EC002544

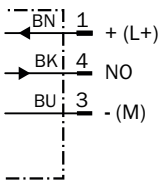
<b>ETIM 7.0</b>	EC002544
<b>ETIM 8.0</b>	EC002544
<b>UNSPSC 16.0901</b>	39122230

## Installation note



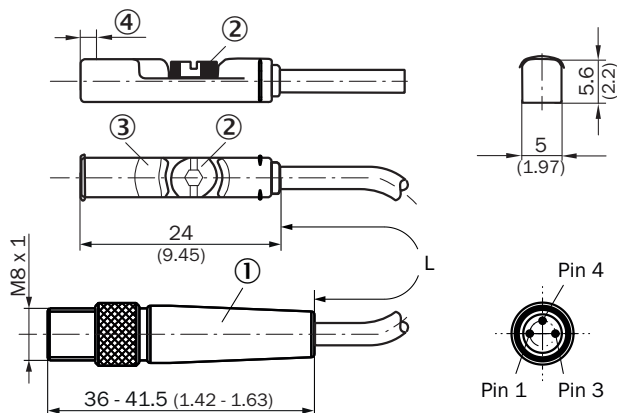
## Connection diagram

Cd-002



## Dimensional drawing (Dimensions in mm (inch))

Cable with connector M8, with knurled nuts



- ① Connection
- ② Fixing screw SW 2.0
- ③ Display LED
- ④ Sensor element position; short overrun distance (3 mm): 2 mm, long overrun distance (9 mm): 1.7 mm

Part no.	Type	L	Number of cores
1044464	MZT8-03VPS-KRD	300 mm	3

Part no.	Type	L	Number of cores
1048502	MZT8-03VPS-KRDS04	300 mm	3
1067400	MZT8-03VPS-KRDS12	300 mm	3
1044459	MZT8-03VPS-KR0	500 mm	3
1044935	MZT8-03VNS-KR0	500 mm	3
1046374	MZT8-03VPS-KROS01	500 mm	3
1048050	MZT8-28VPS-KR0	500 mm	3
1048174	MZT8-28VPS-KROS02	500 mm	3
1048503	MZT8-03VPS-KROS05	500 mm	3
1069392	MZT8-03VPS-KRDS13	500 mm	3
1069393	MZT8-03VPO-KRDS14	500 mm	3
1069394	MZT8-03VNS-KRDS15	500 mm	3
1069395	MZT8-03VNO-KRDS16	500 mm	3
1109451	MZT8-2V8PSWKR0	500 mm	3
1106079	MZT8-03VPS-KRDS35	2 m	3
1044463	MZT8-03VPS-KRB	5 m	3

## Recommended accessories

Other models and accessories → [www.sick.com/MZT8](http://www.sick.com/MZT8)

	Brief description	Type	Part no.
<b>Brackets for cylinder sensors</b>			
	Mounting bracket for cylinder with dovetail slot, Aluminum, without mounting hardware	BEF-KHZ-ST1	2022703
	Mounting bracket for integrated profile cylinder/tie-rod cylinder, zinc diecast, mounting hardware included	BEF-KHZ-PT1	2022702
	1 piece, Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-12	2077681
	1 piece, Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-16	2077680
	1 piece, Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-20	2077679
	1 piece, Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-25	2077678
	1 piece, Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-32	2077677
	1 piece, Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-40	2077676
	1 piece, Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-50	2077675
	1 piece, Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-63	2077674

	Brief description	Type	Part no.
	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 130 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast	BEF-KHZ-RT1-130	2077684
	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 25 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast	BEF-KHZ-RT1-25	2077682
	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 63 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast	BEF-KHZ-RT1-63	2077683
	Mounting bracket for mounting on SMC rails CDQ2 (T-slot), Aluminum, without mounting hardware	BEF-KHZ-TT2	2046440
	Mounting bracket for mounting on SMC rails ECDQ2 (T-slot), Aluminum, without mounting hardware	BEF-KHZ-TT1	2046439
<b>Device protection (mechanical)</b>			
	Protective adapter, die-cast zinc, mounting hardware included	BEF-SG-MRZT	2077201
<b>Plug connectors and cables</b>			
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF8U13-020UA1XLEAX	2094782
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF8U13-020VA1XLEAX	2095860
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 3 m	YF8U13-030UA1XLEAX	2094787
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF8U13-050UA1XLEAX	2094788
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1XLEAX	2095884
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG8U13-020UA1XLEAX	2094794
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG8U13-020VA1XLEAX	2096165
	Head A: female connector, M8, 3-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG8U13-050VA1XLEAX	2096166
	Head A: female connector, M8, 3-pin, straight Cable: unshielded	DOS-0803-G	7902077
	Head A: female connector, M8, 3-pin, angled Cable: unshielded	DOS-0803-W	7902078
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322

## 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)