



MZT8-03VNS-KP0

MZT8

CYLINDER SENSORS

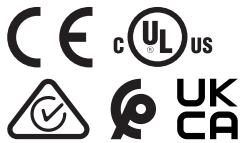
SICK
Sensor Intelligence.



Ordering information

Type	part no.
MZT8-03VNS-KPO	1044932

Other models and accessories → www.sick.com/MZT8



Detailed technical data

Features

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

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

Mechanics/electronics

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

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

Reproducibility	≤ 0.1 mT ¹⁾
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
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 M8, 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	Traversing speed max. 3.3 m/s at 5 m horizontal traversing length Acceleration max. 5 m/s²
Cable outlet	Axial
Material	
Housing	Plastic, PA12
Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Supply voltage U_B and constant ambient temperature T_a .

Safety-related parameters

MTTF_D	2,289 years
DC_{avg}	0 %
T_M (mission time)	20 years

Certificates

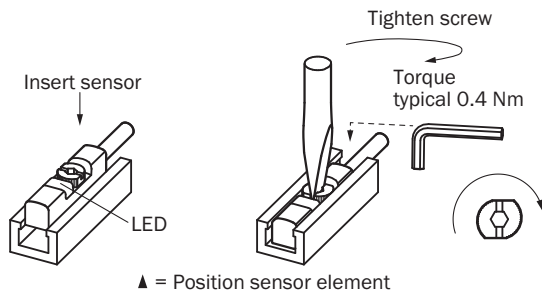
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Classifications

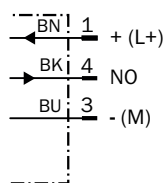
ECLASS 5.0	27270104
ECLASS 5.1.4	27270104

ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
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

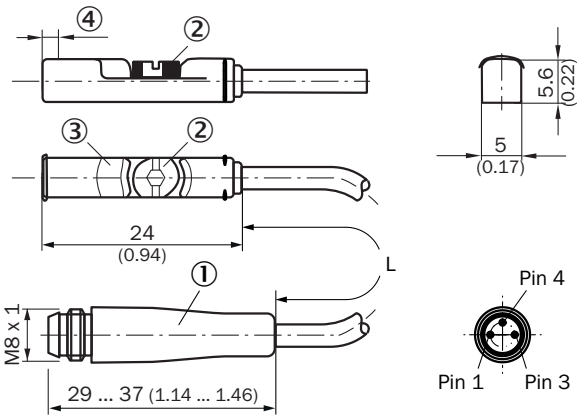
Installation note



Connection diagram Cd-002



Dimensional drawing Cable with connector M8



Dimensions in mm (inch)

- ① Connection
- ② Fixing screw SW 2.0
- ③ Display LED
- ④ Sensor element position; short overrun distance (3 mm): 2.25 mm, long overrun distance (9 mm): 1.5 mm

Part no.	Type	L	Number of cores
1121966	MZT8-03VPS-KPDS38	120 mm	3
1044458	MZT8-03VPS-KP0	300 mm	3
1044930	MZT8-03VPO-KP0	300 mm	3
1044932	MZT8-03VNS-KP0	300 mm	3
1048048	MZT8-28VPS-KP0	300 mm	3
1053014	MZT8-19VPS-KP0	300 mm	3
1053415	MZT8-03VPS-KP0S06	300 mm	3
1054250	MZT8-28VPS-KP0S10	300 mm	3
1073268	MZT8-2V6PSTKP0	300 mm	3
1044461	MZT8-03VPS-KPD	750 mm	3

Recommended accessories

Other models and accessories → www.sick.com/MZT8

	Brief description	Type	part no.
device protection and care			
	• Description: Protective adapter • Material: Zinc diecast • Items supplied: Mounting hardware included • Suitable for: MZT7, RZT7, MZT8	BEF-SG-MRZT	2077201

	Brief description	Type	part no.
Mounting systems			
	Description: Mounting bracket for integrated profile cylinder/tie-rod cylinder Material: Zinc diecast Details: Zinc diecast Items supplied: Mounting hardware included	BEF-KHZ-PT1	2022702
	Description: Mounting bracket on round body cylinder with piston diameter of 8 mm ... 130 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Zinc cast Details: Stainless steel, Zinc cast Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT1-130	2077684
	Description: Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 22.4 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT-12	2077681
	Description: Mounting bracket on round body cylinder with piston diameter of 8 mm ... 25 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Zinc cast Details: Stainless steel, Zinc cast Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT1-25	2077682
	Description: Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 26.6 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT-16	2077680
	Description: Mounting bracket on round body cylinder with piston diameter of 8 mm ... 63 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Zinc cast Details: Stainless steel, Zinc cast Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT1-63	2077683
	Description: Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 30.6 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT-20	2077679
	Description: Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 35.7 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT-25	2077678
	Description: Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 42.9 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: T-slot	BEF-KHZ-RT-32	2077677
	Description: Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 50.9 mm Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece	BEF-KHZ-RT-40	2077676

	Brief description	Type	part no.
	• Suitable for: T-slot • Description: Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C • Dimensions (W x H x L): 61.8 mm • Material: Plastic, Aluminum • Details: Plastic, Aluminum • Packing unit: 1 piece • Suitable for: T-slot	BEF-KHZ-RT-50	2077675
	• Description: Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C • Dimensions (W x H x L): 73.9 mm • Material: Plastic, Aluminum • Details: Plastic, Aluminum • Packing unit: 1 piece • Suitable for: T-slot	BEF-KHZ-RT-63	2077674
	• Description: Mounting bracket for cylinder with dovetail slot • Material: Aluminum • Details: Aluminum • Items supplied: Without mounting hardware	BEF-KHZ-ST1	2022703
	• Description: Mounting bracket for mounting on SMC rails ECDQ2 (T-slot) • Material: Aluminum • Details: Aluminum • Items supplied: Without mounting hardware	BEF-KHZ-TT1	2046439
	• Description: Mounting bracket for mounting on SMC rails CDQ2 (T-slot) • Material: Aluminum • Details: Aluminum • Items supplied: Without mounting hardware	BEF-KHZ-TT2	2046440

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	DOS-0803-G	7902077
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Description: Unshielded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm²	DOS-0803-W	7902078
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-020VA1XLEAX	2095860
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG8U13-020VA1XLEAX	2096165
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG8U13-050VA1XLEAX	2096166
	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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-020UA1XLEAX	2094782
	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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-050UA1XLEAX	2094788
	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 Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1XLEAX	2094794
	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 Description: Sensor/actuator cable, unshielded	YG8U13-050UA1XLEAX	2095586

	Brief description	Type	part no.
	• Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation • 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 • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-C60UA1XLEAX	2145889
	• 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 • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-030UA1XLEAX	2145891
	• 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 • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF8U13-C60VA1XLEAX	2146368

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