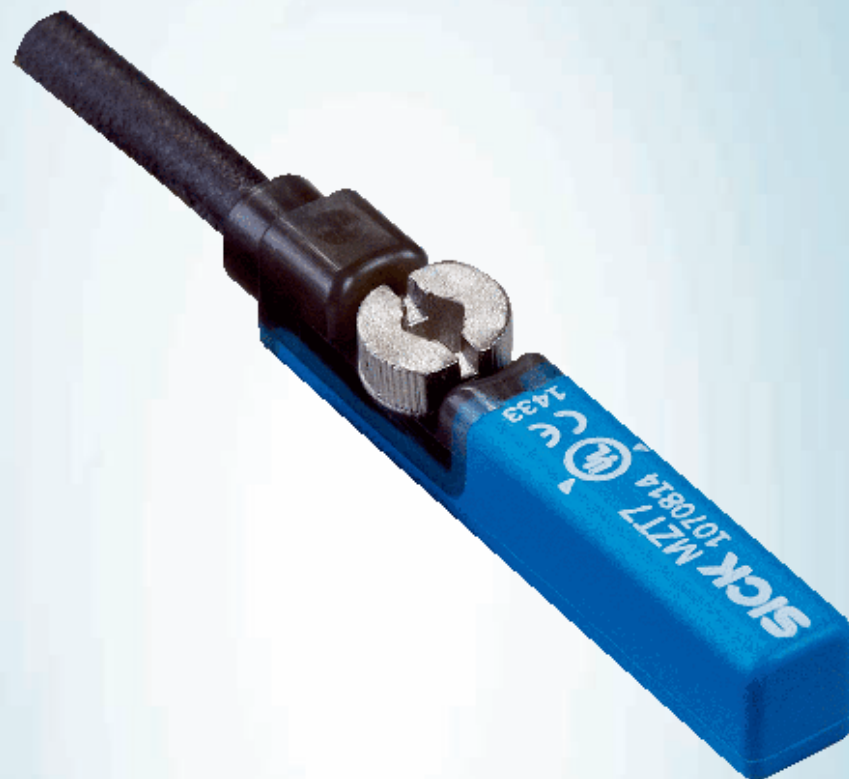




MZT7-03VNS-KQ0

MZT7

CYLINDER SENSORS

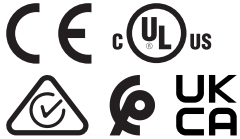
SICK
Sensor Intelligence.



Ordering information

Type	part no.
MZT7-03VNS-KQ0	1070827

Other models and accessories → www.sick.com/MZT7



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	29.5 mm
Switching output	NPN
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP65 ¹⁾ IP67

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Power consumption	8 mA, without load
Voltage drop	≤ 2 V
Continuous current I_a	≤ 100 mA
Protection class	III
Response sensitivity, typ.	3 mT
Overrun distance, typ.	10 mm
Hysteresis, typ.	< 0.8 mT
Reproducibility	≤ 0.1 mT ¹⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

Status indicator LED	Yes
Teach-in	No
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 M12, 3-pin, with knurled nut, drag chain use, 0.3 m
Connection type Detail	
Conductor cross section	0.14 mm ²
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 ²
Cable outlet	Axial
Material	
Housing	Plastic
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	1,300 years
DC_{avg}	0 %
T_M (mission time)	20 years

Certificates

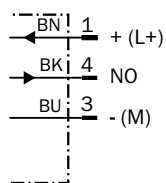
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Classifications

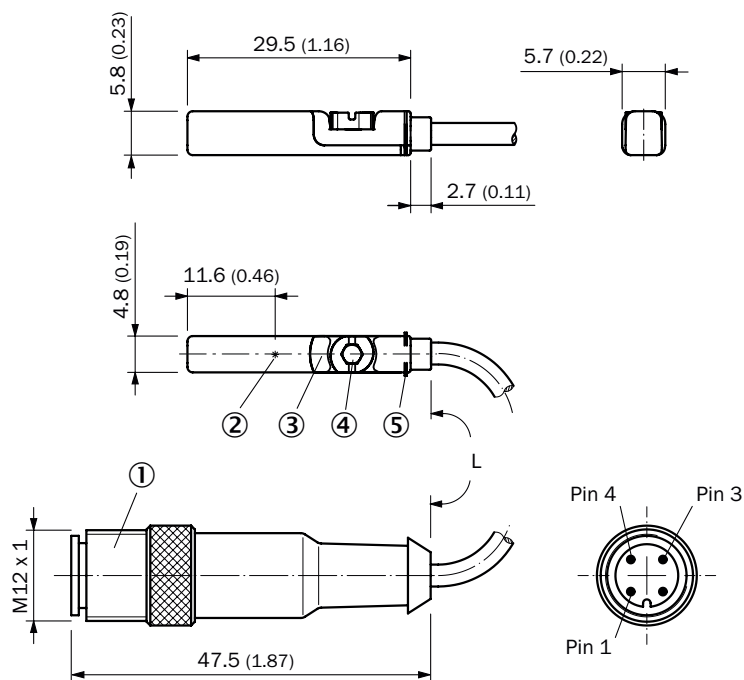
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ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104

ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Connection diagram Cd-002



Dimensional drawing Cable with connector M12, with knurled nut



Dimensions in mm (inch)

- ① Connection
- ② Position sensor element
- ③ Display LED
- ④ Fixing screw SW 2.5
- ⑤ retaining ribs

Part no.	Type	L	Number of cores
1070825	MZT7-03VPS-KQ0	300 mm	3
1070827	MZT7-03VNS-KQ0	300 mm	3

Recommended accessories

Other models and accessories → www.sick.com/MZT7

	Brief description	Type	part no.
Mounting systems			
	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 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 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 12 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 22.4 m 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 16 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 26.6 m 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 20 mm, ambient temperature min 0 °C max 50 °C Dimensions (W x H x L): 30.6 m 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 m 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 m 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 m 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 integrated profile cylinder/tie-rod cylinder Material: Zinc diecast Details: Zinc diecast Items supplied: Mounting hardware included	BEF-KHZ-PT1	2022702
	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
	Description: Mounting bracket for cylinder with dovetail slot Material: Aluminum Details: Aluminum Items supplied: Without mounting hardware	BEF-KHZ-ST1	2022703

device protection and care

	Description: Protective adapter Material: Zinc diecast Items supplied: Mounting hardware included Suitable for: MZT7, RZT7, MZT8	BEF-SG-MRZT	2077201
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connectors and cables

	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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A13-050UB1XLEAX	2095605
	Connection type head A: Female connector, M12, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A13-100UB1XLEAX	2095606
	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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A13-050UB1XLEAX	2095753
	Connection type head A: Female connector, M12, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A13-100UB1XLEAX	2095754

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