



MZT8-03VPS-KQX

MZT8 ATEX

CYLINDER SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|----------------|----------|
| MZT8-03VPS-KQX | 1073407 |

Other models and accessories → www.sick.com/MZT8_ATEX



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 | PNP |
| Switching frequency | 1,000 Hz |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP67 ¹⁾ |

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

Mechanics/electronics

| | |
|---|--|
| Supply voltage | 10 V DC ... 26 V DC ¹⁾ |
| Power consumption | 10 mA, without load |
| Voltage drop | ≤ 2.2 V |
| Continuous current I_a | ≤ 50 mA ¹⁾ |
| Ex area category | 3G, 3D |
| Device labeling | II 3G Ex nA IIC T4 Gc X, II 3D Ex tc IIIC T135 °C Dc X |
| Response sensitivity, typ. | 2.8 mT |
| Overrun distance, typ. | 3 mm |

¹⁾ Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.

²⁾ Supply voltage U_B and constant ambient temperature T_a.

| | |
|---------------------------------------|--|
| Hysteresis, typ. | ≤ 0.5 mT |
| Reproducibility | ≤ 0.1 mT ²⁾ |
| Reverse polarity protection | Yes |
| Short-circuit protection | Yes |
| Status indicator LED | Yes |
| Teach-in | No |
| Power-up pulse protection | Yes |
| Ambient operating temperature | –20 °C ... +50 °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, PA12 |
| Cable | PUR |
| Items supplied | Safety clip |
| UL File No. | E181493 |

1) Depend on ambient temperature. For details see operating instructions under „performance data of the sensor“.

2) 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

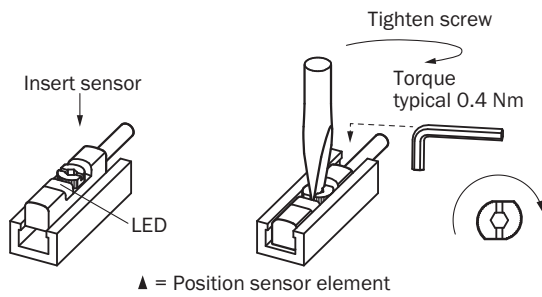
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |

Classifications

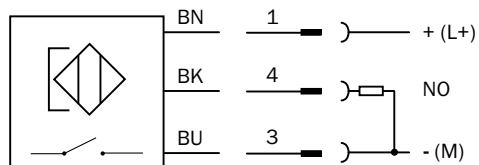
| | |
|-------------------|----------|
| ECLASS 5.0 | 27270104 |
|-------------------|----------|

| | |
|-----------------------|----------|
| 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 |
| ETIM 6.0 | EC002544 |
| ETIM 7.0 | EC002544 |
| ETIM 8.0 | EC002544 |
| UNSPSC 16.0901 | 39122230 |

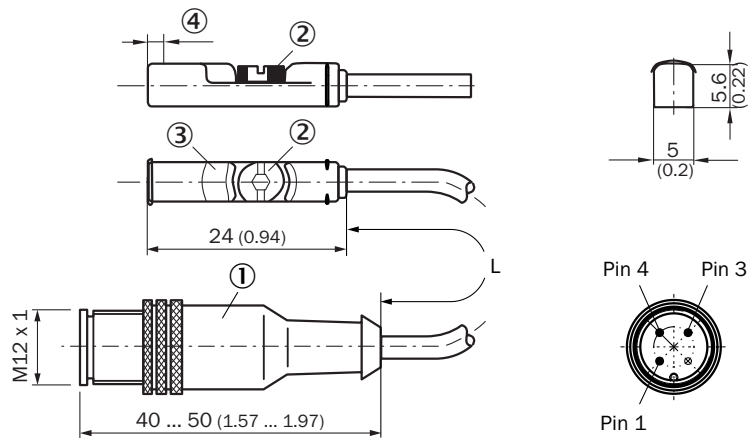
Installation note



Connection diagram Cd-308



Dimensional drawing Cable with M12 male connector



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

| Part no. | Type | L | Number of cores |
|----------|----------------|--------|-----------------|
| 1073407 | MZT8-03VPS-KQX | 300 mm | 3 |

Recommended accessories

Other models and accessories → www.sick.com/MZT8_ATEX

| | Brief description | Type | part no. |
|---|---|-----------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> Description: Mounting bracket for cylinder with dovetail slot Material: Aluminum Details: Aluminum Items supplied: Without mounting hardware | BEF-KHZ-ST1 | 2022703 |
|  | <ul style="list-style-type: none"> Description: Mounting bracket for mounting on SMC rails ECDQ2 (T-slot) Material: Aluminum Details: Aluminum Items supplied: Without mounting hardware | BEF-KHZ-TT1 | 2046439 |
|  | <ul style="list-style-type: none"> Description: Mounting bracket for mounting on SMC rails CDQ2 (T-slot) Material: Aluminum Details: Aluminum Items supplied: Without mounting hardware | BEF-KHZ-TT2 | 2046440 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 | BEF-KHZ-RT-20 | 2077679 |

| | Brief description | Type | part no. |
|---|---|---------------|----------|
|  | <ul style="list-style-type: none"> • Suitable for: T-slot • 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 |
|  | <ul style="list-style-type: none"> • 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 |
|  | <ul style="list-style-type: none"> • 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 • Suitable for: T-slot | BEF-KHZ-RT-40 | 2077676 |
|  | <ul style="list-style-type: none"> • 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 m • Material: Plastic, Aluminum • Details: Plastic, Aluminum • Packing unit: 1 piece • Suitable for: T-slot | BEF-KHZ-RT-50 | 2077675 |
|  | <ul style="list-style-type: none"> • 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 m • Material: Plastic, Aluminum • Details: Plastic, Aluminum • Packing unit: 1 piece • Suitable for: T-slot | BEF-KHZ-RT-63 | 2077674 |
| device protection and care | | | |
|  | <ul style="list-style-type: none"> • Description: Protective adapter • Material: Zinc diecast • Items supplied: Mounting hardware included • Suitable for: MZT7, RZT7, MZT8 | BEF-SG-MRZT | 2077201 |

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