AbN
automation

Data sheet

# MZT8-1V9NO-KUA

## MZT8

**CYLINDER SENSORS**

SICK
Sensor Intelligence.

## Ordering information

| Type | part no. |
|---|---|
| MZT8-1V9N0-KUA | 1094836 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Cylinder type** | T-slot |
| **Cylinder types with adapter** | Profile cylinder<br>Tie rod cylinder<br>Round body cylinder<br>Dovetail groove cylinder<br>SMC rail CDQ2<br>SMC rail ECDQ2 |
| **Housing length** | 24 mm |
| **Switching output** | NPN |
| **Switching frequency** | 1,000 Hz |
| **Output function** | NC |
| **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.** | 1.9 mT |
| **Overrun distance, typ.** | 9 mm |
| **Hysteresis, typ.** | 0.7 mT |

[1] Supply voltage $U_B$ and constant ambient temperature Ta.

| | |
|---|---|
| **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, 3-wire, ferrules, drag chain use, 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 > 5 x cable diameter |
| Torsion force | ± 180° / 1 m |
| 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 Ta.

## Safety-related parameters

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

## Certificates

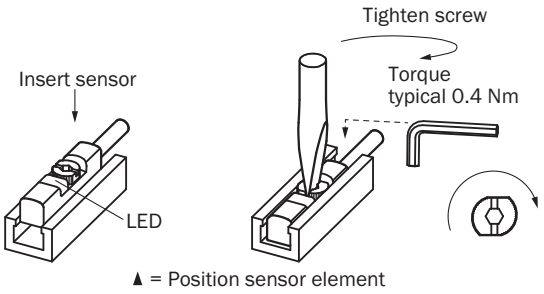
| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China-RoHS** | ✓ |
| **cULus certificate** | ✓ |

## Classifications

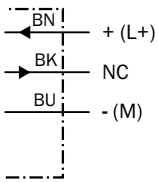
| | |
|---|---|
| **ECLASS 5.0** | 27270104 |
| **ECLASS 5.1.4** | 27270104 |
| **ECLASS 6.0** | 27270104 |

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

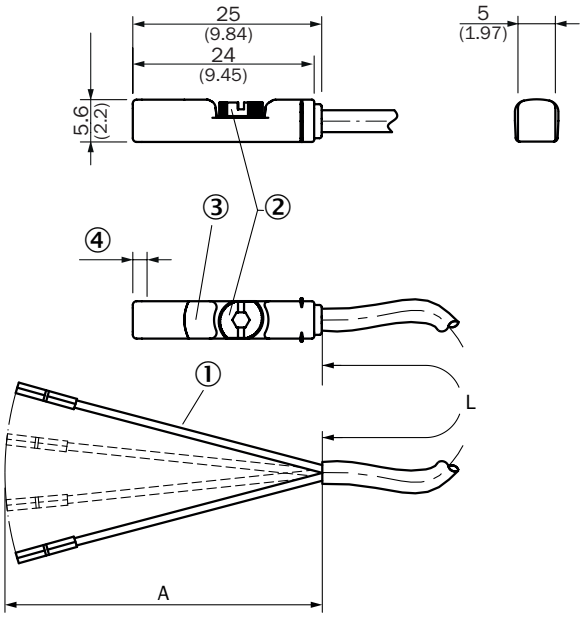
## Installation note




## Connection diagram Cd-003



## Dimensional drawing Cable




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 | A | Number of cores |
|---|---|---|---|---|
| 1044349 | MZT8-03VPS-KW0 | 2 m | 42 mm | 3 |
| 1044468 | MZT8-03VNS-KW0 | 2 m | 42 mm | 3 |
| 1044469 | MZT8-03VPS-KU0 | 2 m | 42 mm | 3 |
| 1044931 | MZT8-03VPO-KU0 | 2 m | 42 mm | 3 |
| 1044934 | MZT8-03VNS-KU0 | 2 m | 42 mm | 3 |
| 1048049 | MZT8-28VPS-KU0 | 2 m | 42 mm | 3 |
| 1073269 | MZT8-2V6PSTKW0 | 2 m | 42 mm | 3 |
| 1088313 | MZT8-2V6NSTKW0 | 2 m | 42 mm | 3 |
| 1054237 | MZT8-03VPS-KUDS08 | 2.5 m | 42 mm | 3 |
| 1044466 | MZT8-03VPS-KUA | 3 m | 42 mm | 3 |
| 1068535 | MZT8-28VNS-KUA | 3 m | 42 mm | 3 |
| 1068912 | MZT8-03VNS-KUA | 3 m | 42 mm | 3 |
| 1092766 | MZT8-2V8NS-KUAS31 | 3 m | 42 mm | 3 |
| 1093836 | MZT8-1V9NS-KUA | 3 m | 42 mm | 3 |
| 1094836 | MZT8-1V9NO-KUA | 3 m | 42 mm | 3 |
| 1054238 | MZT8-03VPS-KUDS09 | 3.6 m | 42 mm | 3 |
| 1044470 | MZT8-03VPS-KUB | 5 m | 42 mm | 3 |
| 1048314 | MZT8-03VPS-KWB | 5 m | 42 mm | 3 |
| 1057030 | MZT8-28VPS-KWB | 5 m | 42 mm | 3 |
| 1071438 | MZT8-1V9PS-KUB | 5 m | 42 mm | 3 |
| 1075262 | MZT8-28VPS-KUB | 5 m | 42 mm | 3 |
| 1073270 | MZT8-2V6PSTKWB | 5 m | 42 mm | 3 |

| Part no. | Type | L | A | Number of cores |
|---|---|---|---|---|
| 1091033 | MZT8-03VNS-KUDS28 | 9 m | 42 mm | 3 |
| 1054051 | MZT8-03VPS-KUD | 10 m | 42 mm | 3 |
| 1060429 | MZT8-03VPO-KUD | 10 m | 42 mm | 3 |
| 1073271 | MZT8-2V6PSTKWD | 10 m | 42 mm | 3 |

## Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|---|---|
| device protection and care | | | |
| | • **Description:** Protective adapter<br>• **Material:** Zinc diecast<br>• **Items supplied:** Mounting hardware included<br>• **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<br>• **Material:** Zinc diecast<br>• **Details:** Zinc diecast<br>• **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<br>• **Material:** Stainless steel, Zinc cast<br>• **Details:** Stainless steel, Zinc cast<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 22.4 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Material:** Stainless steel, Zinc cast<br>• **Details:** Stainless steel, Zinc cast<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 26.6 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Material:** Stainless steel, Zinc cast<br>• **Details:** Stainless steel, Zinc cast<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 30.6 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 35.7 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 42.9 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 50.9 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **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<br>• **Dimensions (W x H x L):** 61.8 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **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<br>• **Dimensions (W x H x L):** 73.9 m<br>• **Material:** Plastic, Aluminum<br>• **Details:** Plastic, Aluminum<br>• **Packing unit:** 1 piece<br>• **Suitable for:** T-slot | BEF-KHZ-RT-63 | 2077674 |
| | • **Description:** Mounting bracket for cylinder with dovetail slot<br>• **Material:** Aluminum<br>• **Details:** Aluminum<br>• **Items supplied:** Without mounting hardware | BEF-KHZ-ST1 | 2022703 |
| | • **Description:** Mounting bracket for mounting on SMC rails ECDQ2 (T-slot)<br>• **Material:** Aluminum<br>• **Details:** Aluminum<br>• **Items supplied:** Without mounting hardware | BEF-KHZ-TT1 | 2046439 |
| | • **Description:** Mounting bracket for mounting on SMC rails CDQ2 (T-slot)<br>• **Material:** Aluminum<br>• **Details:** Aluminum<br>• **Items supplied:** Without mounting hardware | BEF-KHZ-TT2 | 2046440 |

# SICK AT A GLANCE

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