



MZT8-2V8-N-KWDS01

MZT8 ATEX

CYLINDER SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|-------------------|----------|
| MZT8-2V8-N-KWDS01 | 1070462 |

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 | NAMUR |
| Output characteristic | Control current depending on switching state according to NAMUR EN 60947-5-6 |
| Switching frequency | 1,000 Hz |
| Electrical wiring | DC 2-wire |
| Enclosure rating | IP67 ¹⁾ |

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

Mechanics/electronics

| | |
|-----------------------------------|--|
| Ex area category | 1G, 1D |
| Device labeling | II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T ₂₀₀ 135 °C Da |
| Response sensitivity, typ. | 2.8 mT |
| Overrun distance, typ. | 9 mm |
| Hysteresis, typ. | ≤ 0.5 mT |
| Reproducibility | ≤ 0.1 mT ¹⁾ |

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

²⁾ PVC-cable without UL-Certificate.

³⁾ For connection to a separately certified intrinsically safe circuit only.

| | |
|--|--|
| Reverse polarity protection | Yes |
| Short-circuit protection | Yes |
| Status indicator LED | Yes |
| Teach-In | No |
| Power-up pulse protection | Yes |
| Ambient operating temperature | -25 °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, 2-wire, ferrules, 6 m |
| Connection type Detail | |
| Conductor cross section | 0.12 mm² |
| Cable diameter | Ø 2.9 mm |
| Bending radius | With fixed installation > 3 x cable diameter |
| | For flexible use > 5 x cable diameter |
| Cable outlet | Axial |
| Material | |
| Housing | Plastic, PA12 |
| Cable | PVC ²⁾ |
| EC-Type examination certificate | TÜV 14 ATEX 143125 |
| UK type examination certificate | UL22UKEX2384 |
| Certificate (IECEX) | IECEX TUN 14.0038 |
| Input voltage U_i max. | 20 V ³⁾ |
| Input power P_i max. | 100 mW ³⁾ |
| Input current I_i max. | 60 mA ³⁾ |
| Internal capacitance C_i max. | 130 nF ³⁾ |
| Internal inductance L_i max. | 30 µH ³⁾ |
| Nominal voltage | 8.2 V DC |

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

²⁾ PVC-cable without UL-Certificate.

³⁾ For connection to a separately certified intrinsically safe circuit only.

Certificates

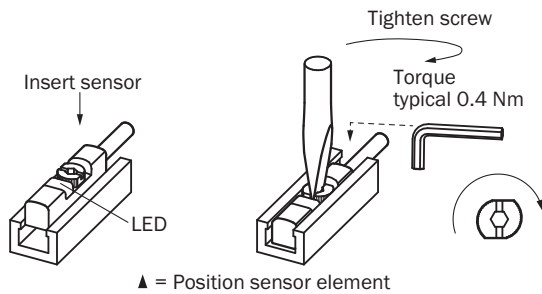
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| ATEX certificate | ✓ |
| IECEX certificate | ✓ |

Classifications

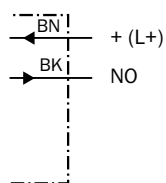
| | |
|---------------------|----------|
| ECLASS 5.0 | 27270104 |
| ECLASS 5.1.4 | 27270104 |

| | |
|-----------------------|----------|
| 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 |

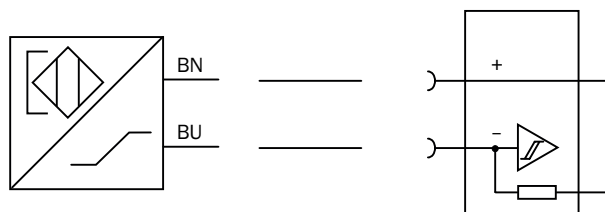
Installation note



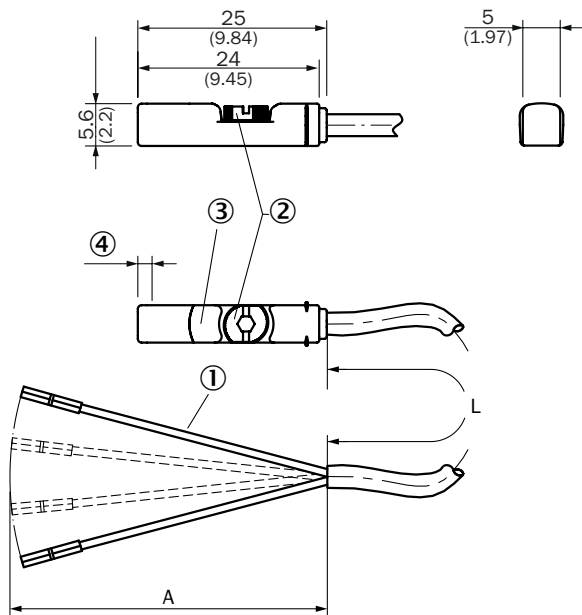
Connection diagram Cd-304



Connection diagram Cd-305



Dimensional drawing Cable



Dimensions in mm (inch)



- ① Connection
- ② Fixing screw SW 2.0
- ③ Display LED
- ④ sensor element position = long overrun distance (9 mm): 1.6 mm

| Part no. | Type | L | A | Number of cores |
|----------|-------------------|-----|-------|-----------------|
| 1069424 | MZT8-2V8-N-KW0 | 2 m | 42 mm | 2 |
| 1070456 | MZT8-2V8-N-KWA | 3 m | 42 mm | 2 |
| 1070461 | MZT8-2V8-N-KWB | 5 m | 42 mm | 2 |
| 1070462 | MZT8-2V8-N-KWDS01 | 6 m | 42 mm | 2 |
| 1070463 | MZT8-2V8-N-KWDS02 | 7 m | 42 mm | 2 |
| 1070464 | MZT8-2V8-N-KWDS03 | 7 m | 42 mm | 2 |

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: MZZT7, RZZT7, MZZT8 | BEF-SG-MRZT | 2077201 |
| integration modules and adapters | | | |
|  | <ul style="list-style-type: none"> Description: NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 24 V ... 230 V, Voltage type: AC/DC | EN2-2EX1 | 6041096 |
|  | <ul style="list-style-type: none"> Description: NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 19,2 V ... 30 V, Voltage type: DC | EN2-2EX3 | 6041095 |

SICK AT A GLANCE

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For us, that is “Sensor Intelligence.”

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