



MZT8-2V6PSAKQ0

MZT8 VIA

CYLINDER SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|---------------|----------|
| MZT8-2V6PSAQ0 | 1090059 |

Other models and accessories → www.sick.com/MZT8_VIA



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, IO-Link |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP68 ¹⁾ ²⁾ |
| Special features | Visual installation aid/LED indicator (yellow) Power LED (green) Interior housing temperature (via IO-Link) Counter function (via IO-Link) |

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

²⁾ According to DIN 40050 (IP 69K).

Mechanics/electronics

| | |
|--------------------------|---------------------|
| Supply voltage | 10 V DC ... 30 V DC |
| Power consumption | 10 mA, without load |
| Voltage drop | ≤ 2.2 V |

¹⁾ Distance covered by the encoder magnet while the sensor outputs a switching signal.

²⁾ Supply voltage U_B and constant ambient temperature T_a .

³⁾ PVC-cable without UL-Certificate.

| | |
|--|---|
| Continuous current I_a | ≤ 200 mA |
| Protection class | III |
| Response sensitivity, typ. | 2.6 mT |
| Overrun distance, typ. | 3 mm ¹⁾ |
| Hysteresis, typ. | 0.7 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 | -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, 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 ³⁾ |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

¹⁾ Distance covered by the encoder magnet while the sensor outputs a switching signal.

²⁾ Supply voltage U_B and constant ambient temperature T_a .

³⁾ PVC-cable without UL-Certificate.

Safety-related parameters

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

Communication interface

| | |
|---------------------------------------|-------------------|
| Communication interface | IO-Link V1.0 |
| Communication Interface detail | COM2 (38,4 kBaud) |
| Cycle time | 10.4 ms |

| | |
|-------------------------------|---|
| Process data length | 8 Bit |
| Process data structure | Bit 0 = switching signal Q _{L1} Bit 1 = switching signal Q _{L2} Bit 2 ... 7 = empty |
| VendorID | 26 |
| DeviceID HEX | 0x80015D |
| DeviceID DEC | 8388957 |

Certificates

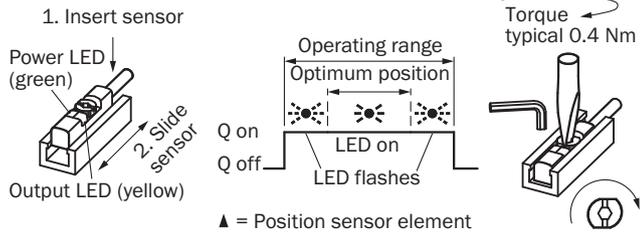
| | |
|--|---|
| EU declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

Classifications

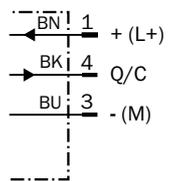
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270104 |
| ECLASS 5.1.4 | 27270104 |
| ECLASS 6.0 | 27270104 |
| ECLASS 6.2 | 27270104 |
| ECLASS 7.0 | 27270104 |
| ECLASS 8.0 | 27270104 |
| ECLASS 8.1 | 27270104 |
| ECLASS 9.0 | 27270104 |
| ECLASS 10.0 | 27270104 |
| ECLASS 11.0 | 27270104 |
| 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

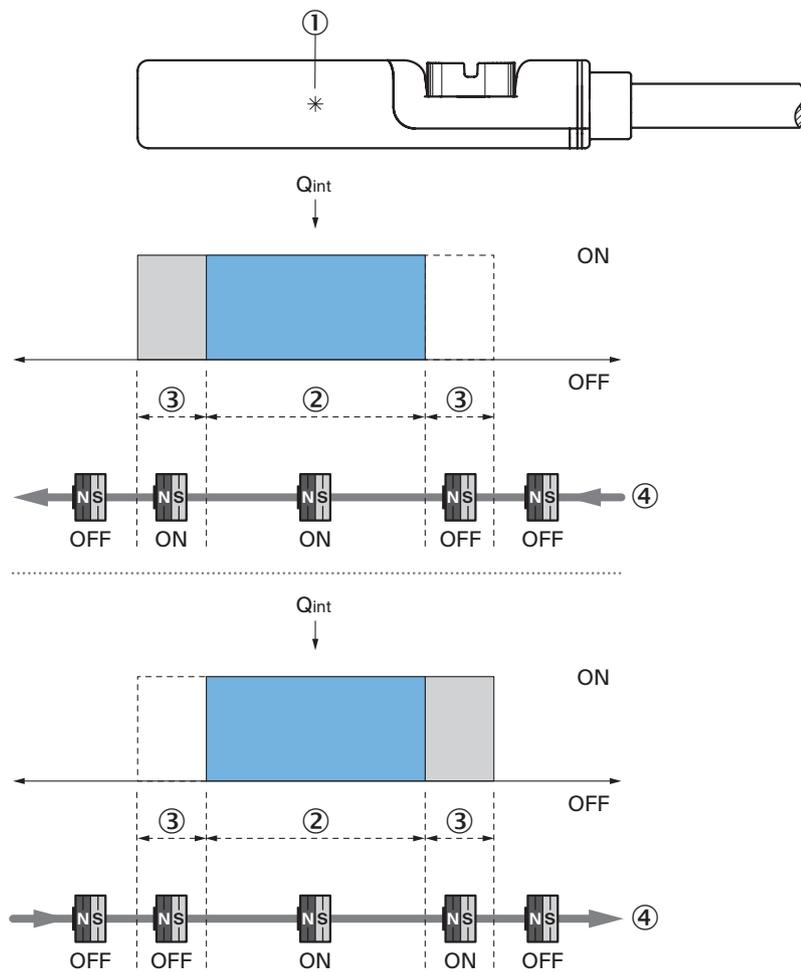
Visual installation aid (yellow LED)



Connection diagram Cd-401



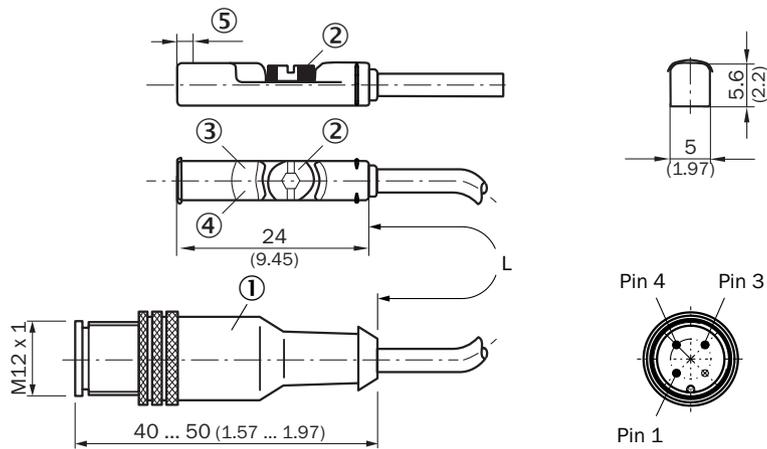
Functional principle Overrun distance



Note: Sensor housing may differ; representation corresponds to “NO contact” output function; overrun distance = switching point width + hysteresis

- ① Position sensor element
- ② Width of the switching point
- ③ Hysteresis
- ④ Direction of movement of the magnet

Dimensional drawing Cable with M12 male connector



Dimensions in mm (inch)

- ① Connection
- ② Fixing screw SW 2.0
- ③ visual installation aid/LED indicator (yellow)
- ④ Power LED (green)
- ⑤ 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 |
|----------|----------------|--------|-----------------|
| 1090059 | MZT8-2V6PSAKQ0 | 300 mm | 3 |
| 1092945 | MZT8-1V6PSAKQ0 | 300 mm | 3 |

Recommended accessories

Other models and accessories → www.sick.com/MZT8_VIA

| | 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 m 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 m 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 m 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 |

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.

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Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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