



MZT8-03VPS-KQ0

MZT8

SENSORS FOR T-SLOT CYLINDERS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|----------------|----------|
| MZT8-03VPS-KQ0 | 1044460 |

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



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 | 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. | 2.6 mT |
| Overrun distance, typ. | 3 mm |
| Hysteresis, typ. | 0.7 mT |

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Reproducibility | ≤ 0.1 mT ¹⁾ |
| Reverse polarity protection | Yes |
| Short-circuit protection | Yes |
| Status indicator LED | Yes |
| 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, 4-pin, with knurled nuts, 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 |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

Safety-related parameters

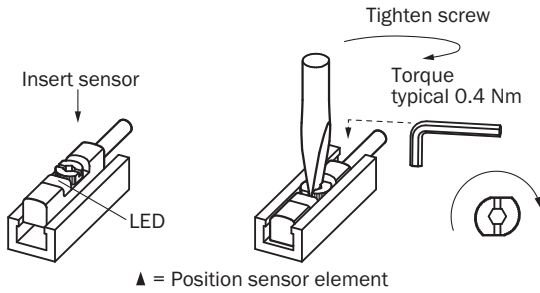
| | |
|-------------------------------------|-------------|
| MTTF_D | 2,289 years |
| DC_{avg} | 0 % |
| T_M (mission time) | 20 years |

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 |

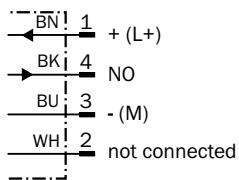
| | |
|-----------------------|----------|
| ETIM 5.0 | EC002544 |
| ETIM 6.0 | EC002544 |
| ETIM 7.0 | EC002544 |
| ETIM 8.0 | EC002544 |
| UNSPSC 16.0901 | 39122230 |

Installation note



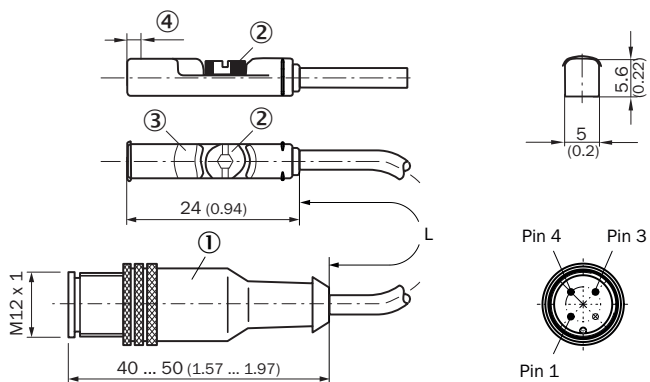
Connection diagram

Cd-011



Dimensional drawing (Dimensions in mm (inch))

Cable with M12 male connector









- 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 | Number of cores |
|----------|-------------------|--------|-----------------|
| 1044460 | MZT8-03VPS-KQ0 | 300 mm | 3 |
| 1048051 | MZT8-28VPS-KQ0 | 300 mm | 3 |
| 1135895 | MZT8-2V8PSWKQ0S40 | 300 mm | 3 |
| 1058311 | MZT8-28VPS-KQD | 500 mm | 3 |
| 1127307 | MZT8-2V8PSWKQDS39 | 500 mm | 3 |
| 1058317 | MZT8-03VPS-KQD | 1 m | 3 |

Recommended accessories

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

| | Brief description | Type | Part no. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Brackets for cylinder sensors | | | |
|  | Mounting bracket for cylinder with dovetail slot, Aluminum, without mounting hardware | BEF-KHZ-ST1 | 2022703 |
|  | Mounting bracket for integrated profile cylinder/tie-rod cylinder, zinc diecast, mounting hardware included | BEF-KHZ-PT1 | 2022702 |
|  | 1 piece, Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-12 | 2077681 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-16 | 2077680 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-20 | 2077679 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-25 | 2077678 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-32 | 2077677 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-40 | 2077676 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-50 | 2077675 |
| | 1 piece, Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum | BEF-KHZ-RT-63 | 2077674 |
| |  | 1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 130 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast | BEF-KHZ-RT1-130 |
| 1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 25 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast | | BEF-KHZ-RT1-25 | 2077682 |
| 1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm ... 63 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Zinc cast | | BEF-KHZ-RT1-63 | 2077683 |
|  | Mounting bracket for mounting on SMC rails CDQ2 (T-slot), Aluminum, without mounting hardware | BEF-KHZ-TT2 | 2046440 |
|  | Mounting bracket for mounting on SMC rails ECDQ2 (T-slot), Aluminum, without mounting hardware | BEF-KHZ-TT1 | 2046439 |

| | Brief description | Type | Part no. |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| Device protection (mechanical) | | | |
|  | Protective adapter, die-cast zinc, mounting hardware included | BEF-SG-MRZT | 2077201 |
| Plug connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-020UB3XLEAX | 2095607 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-050UB3XLEAX | 2095608 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-020UB3XLEAX | 2095766 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-050UB3XLEAX | 2095767 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded, LED function display • Note: Only suitable for PNP sensors • Application: Zones with oils and lubricants, Drag chain operation, Robot | YI2A14-020UB3XLEAX | 2095836 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded, LED function display • Note: Only suitable for PNP sensors • Application: Zones with oils and lubricants, Drag chain operation, Robot | YI2A14-050UB3XLEAX | 2095837 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded, LED function display • Note: Only suitable for PNP sensors • Application: Zones with oils and lubricants, Drag chain operation, Robot | YI2A14-100UB3XLEAX | 2095838 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight • Description: Unshielded, Head A: female connector, M12, 4-pin, straight, unshielded, for power supply, for cable diameter 4 mm ... 6 mm Head B: - • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | DOS-1204-G | 6007302 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled • Description: Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: - • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | DOS-1204-W | 6007303 |

| | Brief description | Type | Part no. |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | STE-1204-G | 6009932 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, angled • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | STE-1204-W | 6022084 |

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