



MPS-032TSN04

MPS-T

POSITION SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-----------------|----------|
| MPS-032TSNQDS04 | 1073318 |

Other models and accessories → www.sick.com/MPS-T



Detailed technical data

Features

| | |
|------------------------------------|--|
| Cylinder type | T-slot |
| Cylinder types with adapter | Round body cylinder Profile cylinders and tie-rod cylinders Dovetail groove cylinder SMC rail CDQ2 SMC rail ECDQ2 SMC cylinders with C-slot |
| Measuring range | 32 mm ¹⁾ |
| Housing length | 45 mm |
| Output function | Analog |
| Electrical wiring | DC 4-wire |
| Analog output (voltage) | 0 V ... 10 V ²⁾ |
| Analog output (current) | 4 mA ... 20 mA ²⁾ |
| Enclosure rating | IP67 ³⁾ |

¹⁾ ± 1 mm.

²⁾ The sensor only activates the wired output.

³⁾ According to EN 60529.

Mechanics/electronics

| | |
|-----------------------------|-------------------------------|
| Supply voltage | 15 V DC ... 30 V DC |
| Power consumption | 22 mA, without load |
| Max. load resistance | ≤ 500 Ω Power Output, at 24 V |
| Min. load resistance | ≥ 2 kΩ ¹⁾ |
| Protection class | III |

¹⁾ Voltage output.

²⁾ FSR: Full Scale Range; max. measuring range.

³⁾ At 25 ° C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

⁴⁾ At 25 ° C, repeatability magnet movement in one direction.

⁵⁾ Only in standard mode, not in IO-Link mode.

⁶⁾ The analog measured value can deviate for up to 100 ms under transient conditions.

| | |
|--|--|
| Time delay before availability | 1.5 s |
| Required magnetic field sensitivity, typ. | 4 mT ... 30 mT |
| Resolution, typ. | 0.03 % FSR (max. ≥ 0.05 mm) ²⁾ |
| Linearity error, typ. | 0.3 mm ³⁾ |
| Repeat accuracy, typ. | 0.06 % FSR (≥ 0.1 mm) ⁴⁾ |
| Sampling rate, typ. | 1 ms ⁵⁾ |
| Reverse polarity protection | Yes |
| Short-circuit protection | Yes |
| Status indicator LED | Yes |
| Teach-in | No |
| Ambient operating temperature | -20 °C ... +70 °C |
| Shock and vibration resistance | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| EMC | According to EN 60947-5-7 ⁶⁾ |
| Connection type | Cable with M12 male connector, 4-pin, 1 m |
| Connection type Detail | |
| Deep-freeze property | Do not bend below 0 °C |
| Conductor cross section | 0.08 mm ² |
| Cable diameter | Ø 2.6 mm |
| Bending radius | With fixed installation > 5 x cable diameter For flexible use > 10 x cable diameter |
| Cable outlet | Axial |
| Material | |
| Housing | Plastic |
| Cable | PUR |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

1) Voltage output.

2) FSR: Full Scale Range; max. measuring range.

3) At 25 °C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

4) At 25 °C, repeatability magnet movement in one direction.

5) Only in standard mode, not in IO-Link mode.

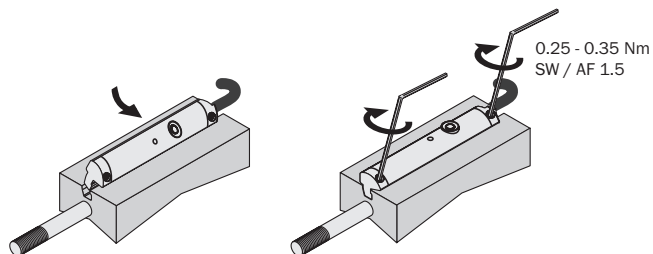
6) The analog measured value can deviate for up to 100 ms under transient conditions.

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

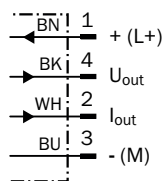


Connection type



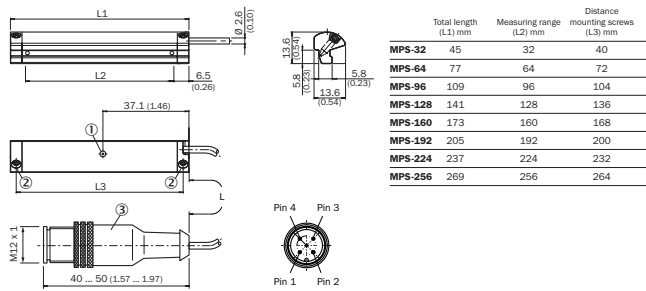
Connection diagram

Cd-034



Dimensional drawing (Dimensions in mm (inch))

Cable with connector M12, with knurled nuts



- ① Function indicator
- ② Fixing screw SW 1.5
- ③ Connection


| | | L | |
|---------|-----------------|----------|---|
| 1073318 | MPS-032TSNQDS04 | 1 m | 4 |
| 1066719 | MPS-128TSNQ0 | 0.3 m | 4 |

Recommended accessories

Other models and accessories → www.sick.com/MPS-T

| | 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 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | 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 | 2077684 |
| | 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 |
| Other mounting accessories | | | |
|  | Cable clips T-slot, 10 pcs./bag | CABLE CLIPS | 2059322 |
|  | 10 pieces, Label Holder, 2.5 mm to 3.5 mm, 10 pcs., TPU | LABEL HOLDER | 2086019 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • 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: Male connector, M12, 4-pin, straight, A-coded • 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: Female connector, M12, 4-pin, angled, A-coded • 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 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, angled, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | STE-1204-W | 6022084 |
|  | <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 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <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 |

SICK AT A GLANCE

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