



MPS-096TSTRDS04

MPS-T

CYLINDER SENSORS

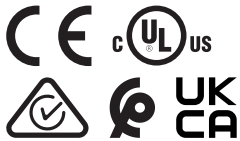
SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|-----------------|----------|
| MPS-096TSTRDS04 | 1097992 |

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 |
| Measuring range | 96 mm ¹⁾ |
| Housing length | 109 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⁾ |
| Adjustment | |
| Teach-in control panel | Teaching in analog outputs Resetting the measuring range to factory settings |

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⁾ |

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.

| | |
|--|--|
| Protection class | III |
| 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 | Yes |
| 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 male connector, M8, 4-pin, angled, with knurled screws, 0.14 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.

Certificates

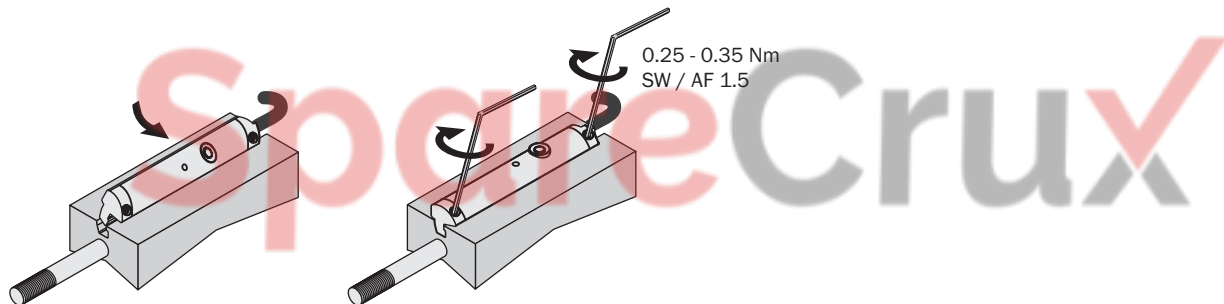
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |

Classifications

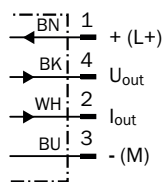
| | |
|---------------------|----------|
| ECLASS 5.0 | 27270104 |
| ECLASS 5.1.4 | 27270104 |

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

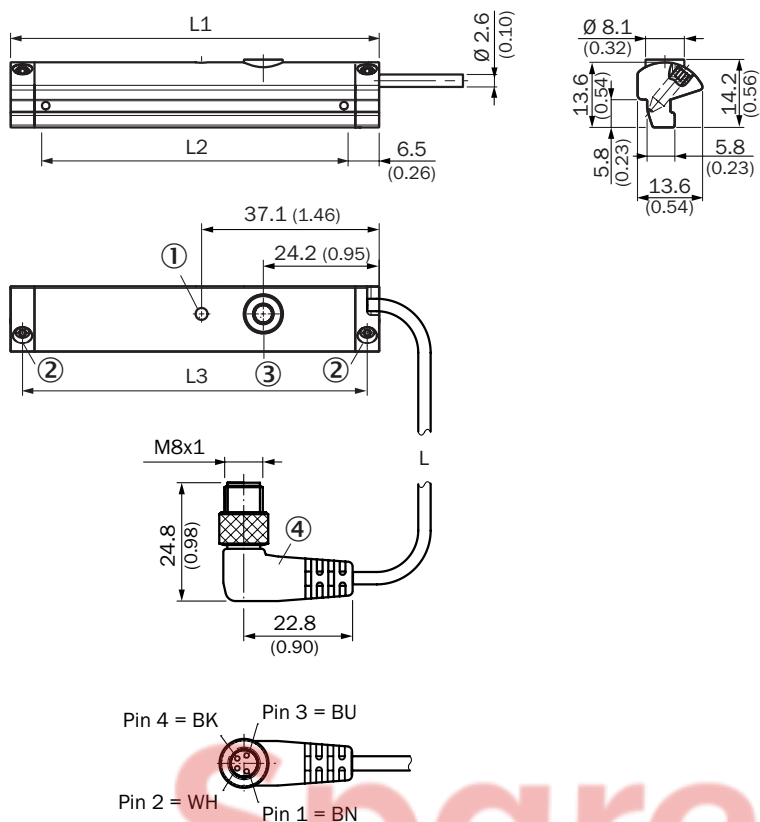
Installation note



Connection diagram Cd-034



Dimensional drawing Cable with male connector, M8, 4-pin, angled, with knurled screws, Teach-in



| | Total length (L1) mm | Measuring range (L2) mm | Distance mounting screws (L3) mm |
|----------------|----------------------|-------------------------|----------------------------------|
| MPS-32 | 45 | 32 | 40 |
| MPS-64 | 77 | 64 | 72 |
| MPS-96 | 109 | 96 | 104 |
| MPS-128 | 141 | 128 | 136 |
| MPS-160 | 173 | 160 | 168 |
| MPS-192 | 205 | 192 | 200 |
| MPS-224 | 237 | 224 | 232 |
| MPS-256 | 269 | 256 | 264 |

Dimensions in mm (inch)

- ① function indicator
- ② Fixing screw SW 1.5
- ③ Teach-in button
- ④ Connection






| Part no. | Type | L | Number of cores |
|----------|-----------------|-------|-----------------|
| 1097992 | MPS-096TSTRDS04 | 140mm | 4 |
| 1099501 | MPS-128TSTRDS04 | 150mm | 4 |

Recommended accessories

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

| | Brief description | Type | part no. |
|---|--|-----------------|----------|
| Mounting systems | | | |
|  | <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 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 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 ... 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 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 Suitable for: T-slot | BEF-KHZ-RT-20 | 2077679 |
|  | <ul style="list-style-type: none"> 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 | BEF-KHZ-RT-25 | 2077678 |

| | 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 32 mm, ambient temperature min 0 °C max 50 °C • Dimensions (W x H x L): 42.9 mm • 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 mm • 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 mm • 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 mm • Material: Plastic, Aluminum • Details: Plastic, Aluminum • Packing unit: 1 piece • Suitable for: T-slot | BEF-KHZ-RT-63 | 2077674 |
|  | <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: Label Holder, 2.5 mm to 3.5 mm, 10 pcs. • Material: Plastic • Details: TPU • Packing unit: 10 pieces | LABEL HOLDER | 2086019 |
|  | <ul style="list-style-type: none"> • Description: Cable clips T-slot, 10 pcs./bag | CABLE CLIPS | 2059322 |

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm² | DOS-0804-G | 6009974 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0804-G | 6037323 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 4-pin, angled, A-coded • Description: Unshielded • Connection systems: Solder connection • Permitted cross-section: ≤ 0.25 mm² | DOS-0804-W | 6009975 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 0.6 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF8U14-C60UA3XLEAX | 2145825 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 1 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF8U14-010UA3XLEAX | 2145826 |



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