



Magnetic Cylinder Sensors
Analog positioning sensors

MPA-395THTP0



Model Name > [MPA-395THTP0](#)
Part No. > [1059458](#)



At a glance

- Measured lengths from 107 to 1007 mm in 36 mm steps
- Output signals 4 to 20 mA as well as 0 to 10 V in a single sensor
- Can be mounted on various cylinders thanks to its universal housing with adapters, e.g., cylinders with T-slot, round and tie rod cylinders
- Linearity of 0.5 mm at a sample rate of 1.15 ms
- Accuracy of 0.03 % as well as reproducibility of 0.06 %
- IP 67 enclosure rating
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

Your benefits

- High flexibility through measuring ranges from 107 to 1007 mm
- Increased machine performance thanks to the sensor's minimal blind zone
- Saves time due to configurable start and end points via intelligent Teach Pad
- A rugged aluminum housing, the capacitive Teach Pad and the anti-kink cable guarantees a long operational lifetime of the sensor and reduces maintenance costs
- Time savings through simple commissioning and diagnostics thanks to a 4-color LED display
- Analog power, voltage signal and IO-Link in a single sensor reduces the range of variants and thereby lowers warehousing costs
- IO-Link provides easy data access from the PLC
- Quick and easy configuration



Features

| | |
|------------------------------|--|
| Output function: | Analog |
| Electrical wiring: | DC 4-wire |
| Enclosure rating: | IP 65, IP 67 |
| Cylinder types with adapter: | Roundbody cylinder T-slot Tie rod cylinder |
| Teach-in: | 1 |
| Analog output (voltage): | 0 V ... 10 V |
| Analog output (current): | 4 mA ... 20 mA |
| Housing length: | 397 mm |
| Measuring range: | 395 mm ¹⁾ |
| IO-Link functions: | Standard functions |

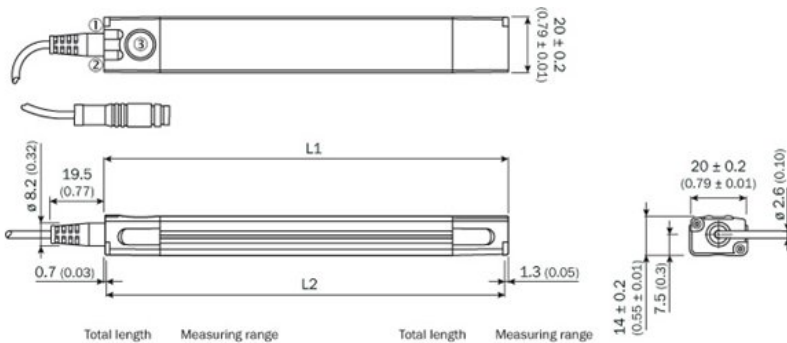
1) ± 1 mm

Mechanics/electronics

| | |
|-----------------------------------|--|
| Connection type: | Cable with connector M8, 4-pin, 300 mm ¹⁾ |
| Supply voltage: | 15 V DC ... 30 V DC |
| EMC: | According to EN 60947-5-7 ²⁾ |
| Cable material: | PUR |
| Conductor cross-section: | 0.14 mm ² |
| Reverse polarity protection: | ✓ |
| Short-circuit protection: | ✓ |
| Housing material: | Aluminium |
| Housing cap material: | PA, strengthened |
| Ambient operating temperature: | -20 °C ... 70 °C |
| Load resistance, max.: | 500 Ω ³⁾ |
| Min. load resistance: | 2 k Ω ⁴⁾ |
| Magnetic field sensitivity, min.: | 2 mT |
| Output indicator: | ✓ |
| Linearity typ.: | 0.5 mm |
| Protection class: | III |
| Resolution typ.: | 0.03 % FSR (max. ≥ 0.06 mm) ⁵⁾ |
| Repeat accuracy typ.: | 0.06 % FSR (≥ 0.1 mm) ⁶⁾ |
| Shock/vibration: | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm |
| IO-Link: | ✓ |
| Sampling rate: | 1 ms |

1) Do not bend below 0 °C ²⁾ The analog measured value can deviate under transient conditions ³⁾ Power output ⁴⁾ Voltage output ^{5) 6)} FSR: Full Scale Range; max. measuring range

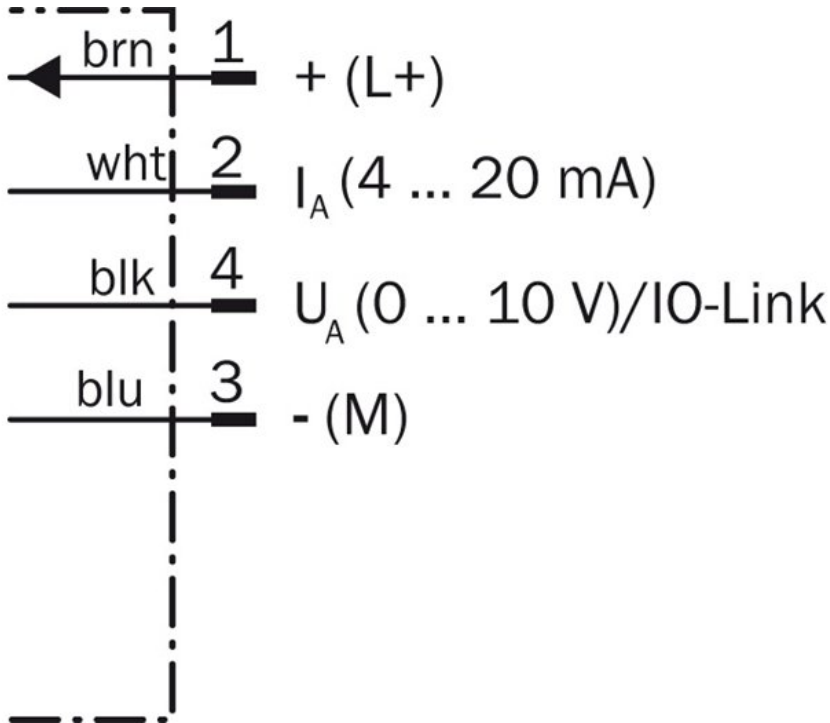
Dimensional drawing



- |1| Function signal indicator 1
- |2| Function signal indicator 2
- |3| Teach-Pad

| | Total length (L1) mm | Measuring range (L2) mm | | Total length (L1) mm | Measuring range (L2) mm |
|---------|----------------------|-------------------------|----------|----------------------|-------------------------|
| MPA-107 | 109 | 107 | MPA-575 | 577 | 575 |
| MPA-143 | 145 | 143 | MPA-611 | 613 | 611 |
| MPA-179 | 181 | 179 | MPA-647 | 649 | 647 |
| MPA-215 | 217 | 215 | MPA-683 | 685 | 683 |
| MPA-251 | 253 | 251 | MPA-719 | 721 | 719 |
| MPA-287 | 289 | 287 | MPA-755 | 757 | 755 |
| MPA-323 | 325 | 323 | MPA-791 | 793 | 791 |
| MPA-359 | 361 | 359 | MPA-827 | 829 | 827 |
| MPA-395 | 397 | 395 | MPA-863 | 865 | 863 |
| MPA-431 | 433 | 431 | MPA-899 | 901 | 899 |
| MPA-467 | 469 | 467 | MPA-935 | 937 | 935 |
| MPA-503 | 505 | 503 | MPA-971 | 973 | 971 |
| MPA-539 | 541 | 539 | MPA-1007 | 1,009 | 1,007 |

Connection diagram



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