



## Magnetic Cylinder Sensors Analog positioning sensors

MPA-935THTP0



**Model Name** > [MPA-935THTP0](#)  
**Part No.** > [1059477](#)



#### 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<br>T-slot<br>Tie rod cylinder |
| Teach-in:                    | 1                                                |
| Analog output (voltage):     | 0 V ... 10 V                                     |
| Analog output (current):     | 4 mA ... 20 mA                                   |
| Housing length:              | 937 mm                                           |
| Measuring range:             | 935 mm <sup>1)</sup>                             |
| IO-Link functions:           | Standard functions                               |

1)  
± 1 mm

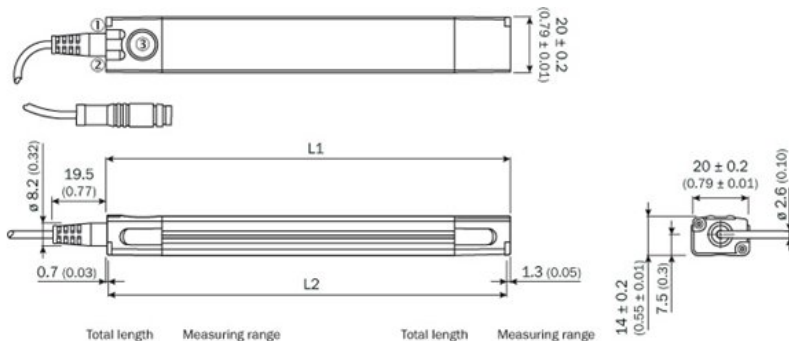
## Mechanics/electronics

---

|                                   |                                                      |
|-----------------------------------|------------------------------------------------------|
| Connection type:                  | Cable with connector M8, 4-pin, 300 mm <sup>1)</sup> |
| Supply voltage:                   | 15 V DC ... 30 V DC                                  |
| EMC:                              | According to EN 60947-5-7 <sup>2)</sup>              |
| Cable material:                   | PUR                                                  |
| Conductor cross-section:          | 0.14 mm <sup>2</sup>                                 |
| 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 <sup>3)</sup>                                  |
| Min. load resistance:             | 2 kΩ <sup>4)</sup>                                   |
| 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) <sup>5)</sup>            |
| Repeat accuracy typ.:             | 0.06 % FSR (≥ 0.1 mm) <sup>6)</sup>                  |
| Shock/vibration:                  | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm                    |
| IO-Link:                          | ✓                                                    |
| Sampling rate:                    | 1 ms                                                 |

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

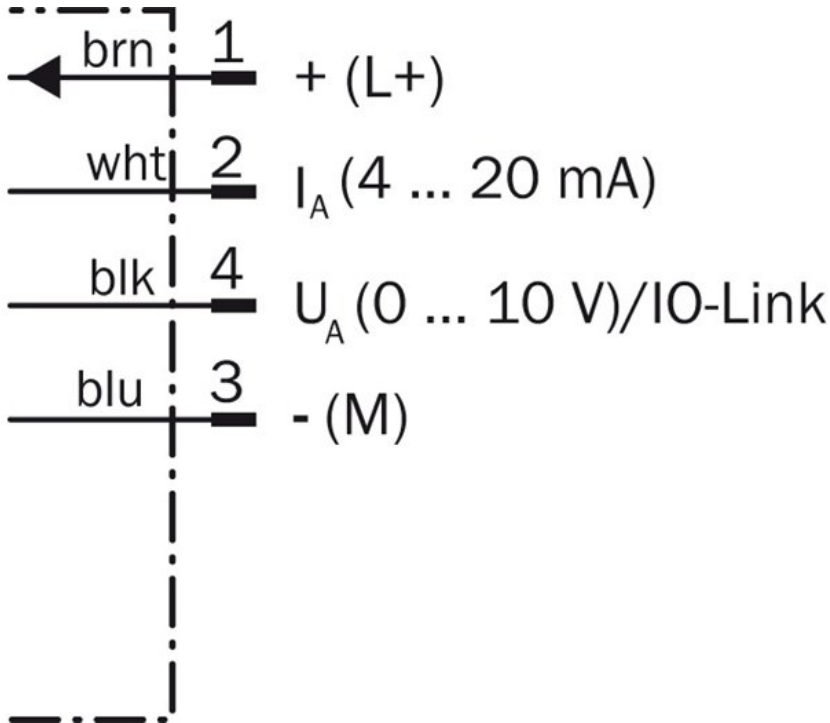
## Dimensional drawing



- [1] Function signal indicator 1
- [2] Function signal indicator 2
- [3] Teach-Pad

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

## Connection diagram



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)