



# More Precision

**induSENSOR** // Linear inductive displacement sensors





- *No wear and no maintenance*
- *Linearity 0.25% FSO*
- *Integrated microelectronics*
- *Short and compact design*
- *Rugged encapsulated sensor construction*
- *For use in difficult ambient conditions*
- *Lateral measurement possible*

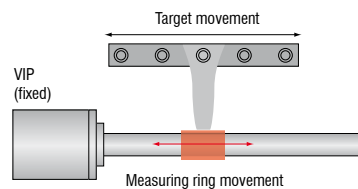
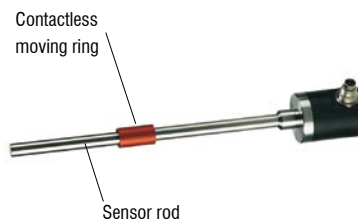
VIP sensors operate with a contactless moving ring. There is no mechanical contact between the measuring element (ring) and the sensor rod. The sensor therefore operates without any wear.

#### **Parallel mounting**

The optimum ratio of measurement range to installed length of the sensor reduces the installation space needed for the VIP series.

The parallel connection of the measurement object and measuring ring facilitates completely new construction and installation options. Whereas with conventional sensors with an axial measurement path, the length of the plunger must be added to the actual housing length, with the VIP series only the housing length has to be considered during the design.

With protection class IP67, the sensors can even be used in harsh industrial environments.



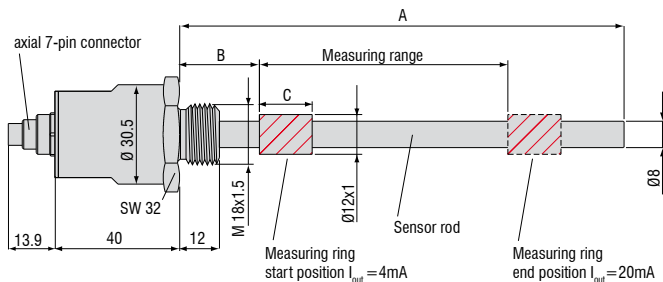
| Model                               | VIP-50                    | VIP-100   | VIP-150 |
|-------------------------------------|---------------------------|---|---------|
| Measuring range                     | 50mm                      | 100mm   | 150mm   |
| Linearity                           | standard $\leq 0.5\%$ FSO | 0.25mm  | 0.75mm  |
|                                     | option $\leq 0.25\%$ FSO  | 0.125mm   | -       |
| Resolution                          | $< 0.03\%$ FSO            | 0.015mm   | 0.045mm |
| Temperature range                   |                           | -40°C ... +85°C   |         |
| Temperature stability               | zero                      | $\pm 50\text{ppm} / ^\circ\text{C}$                               |         |
|                                     | sensitivity               | $\pm 150\text{ppm} / ^\circ\text{C}$                              |         |
| Frequency response (-3 dB)          |                           | 300Hz   |         |
| Output                              |                           | 4 - 20mA  |         |
| Output load                         |                           | 500Ω  |         |
| Power supply                        |                           | 18 - 30VDC  |         |
| Current consumption                 |                           | max. 40mA   |         |
| Protection class                    |                           | IP 67   |         |
| Electromagnetic compatibility (EMC) |                           | EN 61326-1:2006 (spurious emission)                               |         |
|                                     |                           | EN 61326-2-3:2006 (immunity to interference)                      |         |
| Shock <sup>1)</sup>                 |                           | 40g, 3000 shocks / axis   |         |
|                                     |                           | 100g radial, 300g axial   |         |
| Vibration                           |                           | 5Hz ... 44Hz $\pm 2.5\text{mm}$ ; 44Hz ... 500Hz $\pm 20\text{g}$ |         |

FSO= Full Scale Output

<sup>1)</sup> Half sinusoid 6ms

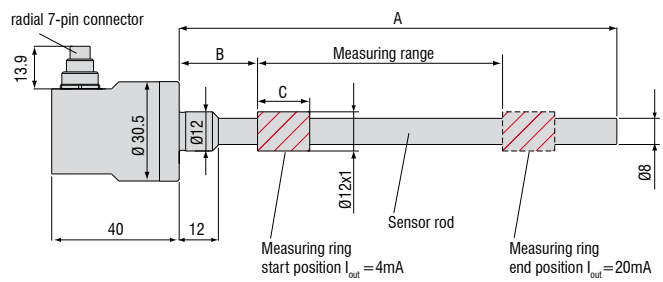
**VIP series housing version -GA- (option)**

Dimensions in mm, not to scale



**VIP series housing version -ZA-**

Dimensions in mm, not to scale



**Article**

|      |     |     |      |      |   |
|------|-----|-----|------|------|---|
| VIP- | 50- | ZA- | 2,5- | SR7- | I   |
|      |     |     |      |      | Electrical output   |
|      |     |     |      |      | SA7= connector, axial (housing version GA)<br>SR7= connector, radial (housing version ZA) |
|      |     |     |      |      | Linearity: 5 = 0.5% FSO<br>2.5 = 0.25% FSO  |
|      |     |     |      |      | ZA= housing, cylindrical (standard)<br>GA= housing, threaded (option)                     |
|      |     |     |      |      | Measuring range in mm   |

| Measuring range | A   | B  | C    |
|-----------------|-----|----|------|
| 50              | 105 | 24 | 11.5 |
| 100             | 175 | 27 | 22   |
| 150             | 242 | 30 | 33   |

**General accessories**

|         |        |   |
|---------|--------|---|
| 2960031 | MC25D  | digital micrometer calibration fixture  |
| 2420062 | PS2020 | power supply on DIN rail,<br>input 100 - 240VAC, output 24VDC / 2.5A  |
| 2984026 |        | certificate function and linearity inspection certificate incl.<br>protocol with listed measurement data of the linearity inspection<br>and documentation |



Linearity inspection certificate

**Accessories VIP and LVP series****Connection cable**

|         |           |  |
|---------|-----------|--|
| 0157043 | C703-5    | VIP/LVP/EDS 7-pin connection cable, 5m                                     |
| 2902084 | C703-5/U  | VIP/LVP/EDS 7-pin connection cable, 5m<br>for voltage output 1 - 5V        |
| 0157050 | C703/90-5 | VIP-/LVP-/EDS-7-pin connection cable, 5m<br>with 90° cable connector       |
| 2962001 | MBS 12/8  | mounting set for VIP series<br>with 3 mounting blocks and 2 adapting rings |
| 0487087 | MBS 12/8  | mounting block VIP/LVP series  |

**Plunger**

|         |         |         |
|---------|---------|---------|
| 0800114 | LVP-50  | plunger |
| 0800115 | LVP-100 | plunger |
| 0800116 | LVP-200 | plunger |

**Accessories LDR series****Connection cable**

|         |              |  |
|---------|--------------|--|
| 0157047 | C7210-5/3    | sensor cable, 5m, with cable connector     |
| 0157048 | C7210/90-5/3 | sensor cable, 5m, with 90° cable connector |

**Supply cable**

|         |           |                         |
|---------|-----------|-------------------------|
| 2901087 | PC710-6/4 | supply/output cable, 6m |
|---------|-----------|-------------------------|

**Plunger**

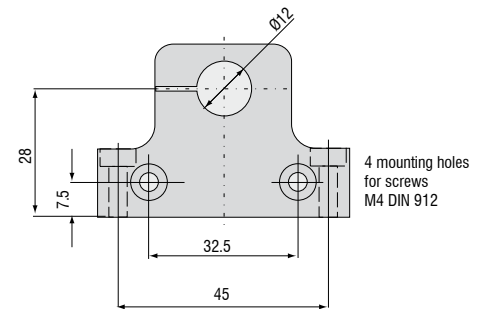
|         |        |         |
|---------|--------|---------|
| 0800136 | LDR-10 | plunger |
| 0800137 | LDR-25 | plunger |
| 0800138 | LDR-50 | plunger |

**Accessories EDS series****Service**

|         |  |   |
|---------|--|---|
| 2985001 |  | Function and linearity inspection for EDS series incl. pressure<br>inspection and documentation without recalibration |
|---------|--|---|

**Connection cable**

|         |           |  |
|---------|-----------|--|
| 0157043 | C703-5    | VIP/LVP/EDS 7-pin connection cable for S series, 5m                              |
| 2902084 | C703-5/U  | VIP/LVP/EDS 7-pin connection cable for S series, 5m<br>for voltage output 1 - 5V |
| 0157050 | C703/90-5 | VIP/LVP/EDS 7-pin connection cable for S series, 5m<br>with 90° cable connector  |
| 2901143 | C705-5    | VIP-/LVP-/EDS -pin connection cable for F series, 5m                             |
| 2901160 | C705-15   | VIP-/LVP-/EDS -pin connection cable for F series, 15m                            |

**Mounting block VIP and LVP series**

**AccessoriesLVDT series**

**Sensor cable**

|         |           |   |
|---------|-----------|---|
| 2902004 | C701-3    | sensor cable 3m, with connector and tin-plated free ends      |
| 2902013 | C701-6    | sensor cable, 6m, with connector and tin-plated free ends     |
| 2902009 | C701/90-3 | sensor cable, 3m, with 90° connector and tin-plated free ends |
| 2966002 | MSC710    | connector set for supply/output cable                         |
| 2981010 |           | connector mounting and calibration of MSC710                  |

**Connection cable**

|         |           |                          |
|---------|-----------|--------------------------|
| 2901087 | PC710-6/4 | supply/output cable, 6 m |
|---------|-----------|--------------------------|

**Plunger**

|         |         |         |
|---------|---------|---------|
| 0800001 | DTA-1D  | plunger |
| 0800002 | DTA-3D  | plunger |
| 0800003 | DTA-5D  | plunger |
| 0800004 | DTA-10D | plunger |
| 0800005 | DTA-15D | plunger |
| 0800006 | DTA-25D | plunger |

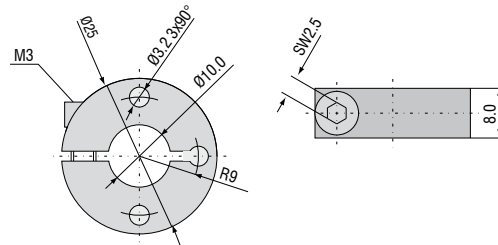
**Flange**

|            |         |  |
|------------|---------|--|
| 0483090.01 | DTA-F10 | mounting flange, slotted for DTA-1D, DTA-3D, DTA-5D, DTA-10D |
| 0483083.02 | DTA-F20 | mounting flange, slotted for DTA-15D, DTA-25D                |

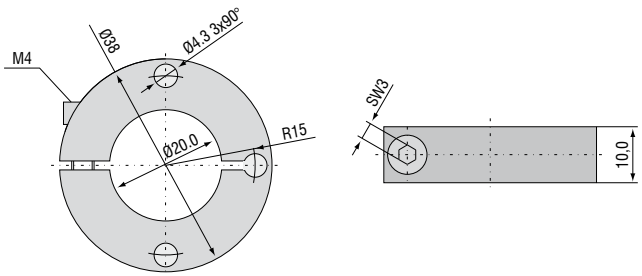
**Probe tips**

|         |                    |
|---------|--------------------|
| 0459002 | type 2             |
| 0459001 | type 2 hard metall |
| 0459003 | type 11            |
| 0459004 | type 13            |

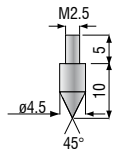
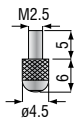
**Flange DTA-F10**



**Flange DTA-F20**



**Standard probe tip: type 2    Option: type 11    Option: type 13**



## High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fiber optic sensors and fiber optics



Color recognition sensors, LED analyzers and color online spectrometer



Measurement and inspection systems