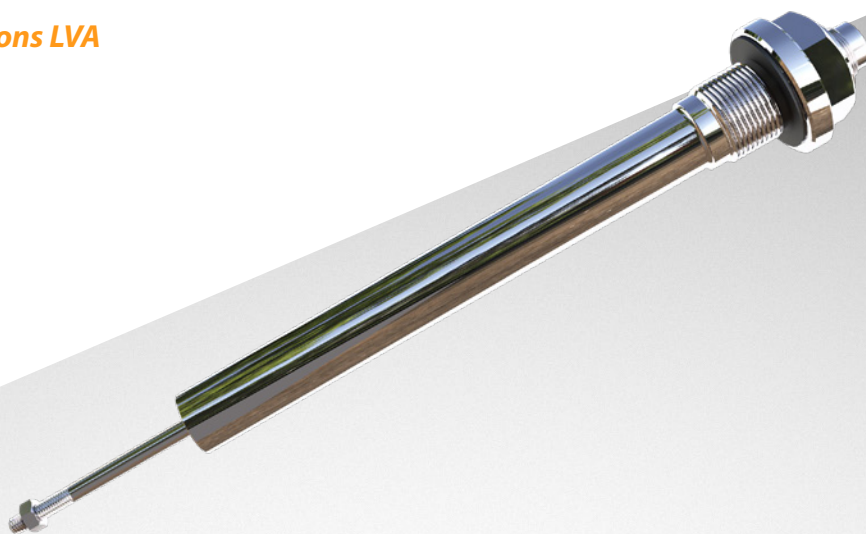


# INDUCTIVE SENSOR LVDT

Links to further documents for this series:

[Installation guide](#)

[Calibration Instructions LVA](#)



## LVPH SERIES

### Key-Features:

- LVDT for hydraulic applications
- Free moving rod with M5 thread
- Measurement ranges from 25 to 500 mm
- Linearity up to  $\leq 0.15\%$
- Output with external electronics: 0...10 V, 4...20 mA
- Operating temperature -20...+120 °C
- Operating pressure up to 350 bar
- Protection class IP67

### Content

|                                            |                   |
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| <a href="#">Technical Data .....</a>       | <a href="#">2</a> |
| <a href="#">Technical Drawing .....</a>    | <a href="#">3</a> |
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| <a href="#">Order Code.....</a>            | <a href="#">4</a> |

## TECHNICAL DATA SENSOR LVPH

|                         |                     |                                      |
|-------------------------|---------------------|--------------------------------------|
| Measurement range       | [mm]                | 25 / 50 / 100 / 150 / 200 / 500      |
| Linearity <sup>1)</sup> | [%]                 | ≤0.5 / optional: ≤0.25 or ≤0.15      |
| Output signal           | [mV]                | 1500 ±10 %                           |
| Excitation voltage      | [V <sub>RMS</sub> ] | 3                                    |
| Excitation frequency    | [kHz]               | 5                                    |
| Protection class        |                     | IP67                                 |
| Operating temperature   | [°C]                | -20...+120 <sup>2)</sup>             |
| Operating pressure max. | [bar]               | 350                                  |
| Pressure max.           | [bar]               | 450                                  |
| Vibration resistance    |                     | 20 g up to 2 kHz                     |
| Shock resistance        |                     | 100 g, 11 ms                         |
| Connection              |                     | connector output M16, axial, 5 poles |
| Housing                 |                     | stainless steel AISI 304             |

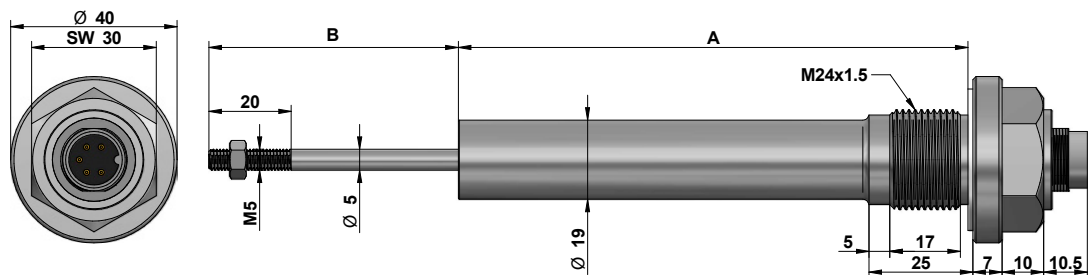
<sup>1)</sup> based on the measurement range

<sup>2)</sup> connector area -20...+100 °C

## TECHNICAL DATA ELECTRONICS LVA

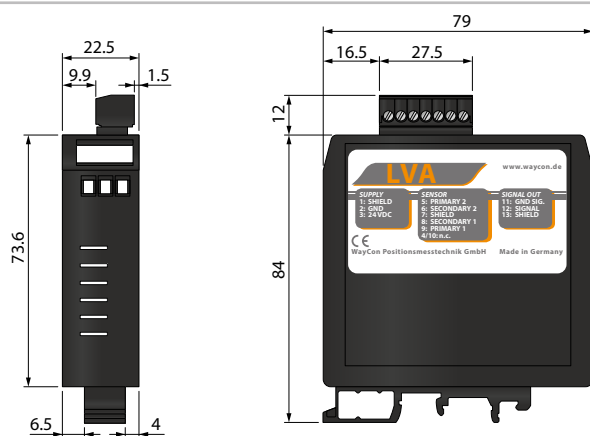
|                                     |                      |                                   |
|-------------------------------------|----------------------|-----------------------------------|
| Output                              |                      | 0...10 V / 4...20 mA              |
| Linearity                           | [% F.S.]             | < ±0.01                           |
| Noise                               | [mV <sub>RMS</sub> ] | <20                               |
| Supply                              | [VDC]                | 18...36                           |
| Current consumption (without load)  | [mA]                 | <50                               |
| Isolation voltage                   | [VDC]                | 500                               |
| Isolation resistance                |                      | 1 GΩ at 500 VDC                   |
| Cut-off frequency                   |                      | max. 10 % of excitation frequency |
| Sensor supply                       | [V <sub>RMS</sub> ]  | 3                                 |
| Carrier frequency                   | [kHz]                | 5                                 |
| Protection class                    |                      | IP40                              |
| Operating temperature               | [°C]                 | -25...+85                         |
| Storage temperature                 | [°C]                 | -25...+85                         |
| Temperature coefficient sensitivity | [% F.S./K]           | < ±0.04                           |
| Temperature coefficient zero point  | [% F.S./K]           | < ±0.015                          |
| Mounting                            |                      | DIN rail                          |
| Housing                             |                      | Polyamid PA6.6                    |

## TECHNICAL DRAWING SENSOR LVPH



| Measurement range         |   | 25    | 50  | 100 | 150 | 200 | 500 |
|---------------------------|---|-------|-----|-----|-----|-----|-----|
| Housing length            | A | 122.5 | 188 | 273 | 295 | 373 | 701 |
| Centre measuring position | B | 59    | 82  | 98  | 105 | 125 | 268 |
| Rod length                |   | 120   | 175 | 245 | 310 | 324 | 670 |

## TECHNICAL DRAWING ELECTRONICS LVA

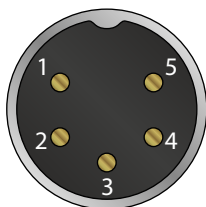


## ELECTRICAL CONNECTION

### Sensor LVPH

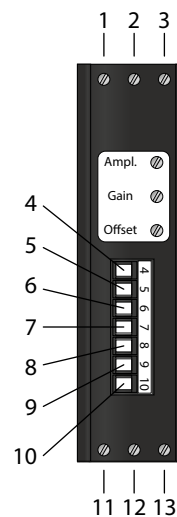
| Function    | Connector output | Connection cable K5P... |
|-------------|------------------|-------------------------|
| Primary 1   | Pin 1            | BN                      |
| n. c.       | Pin 2            | WH                      |
| Secondary 1 | Pin 3            | BU                      |
| Secondary 2 | Pin 4            | BK                      |
| Primary 2   | Pin 5            | GY                      |

Connector M16, male

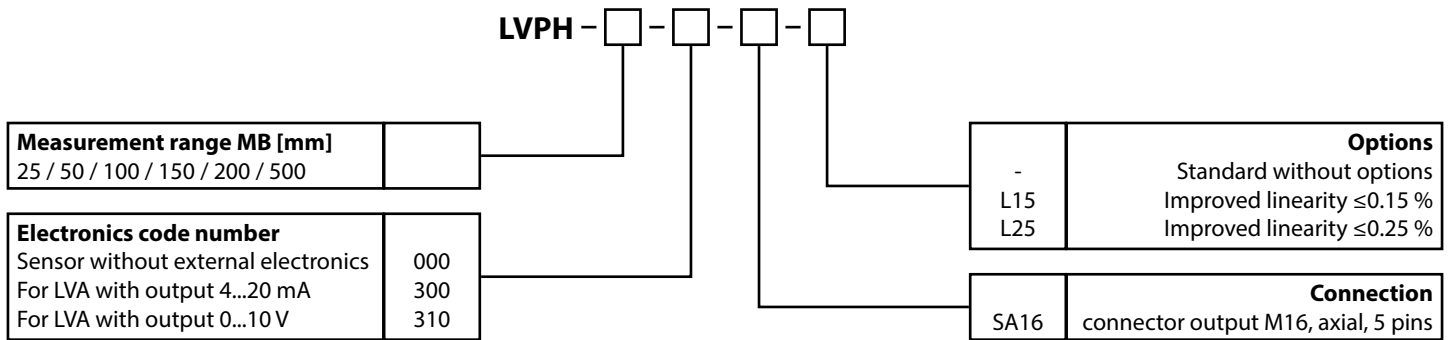


### DIN rail electronics LVA

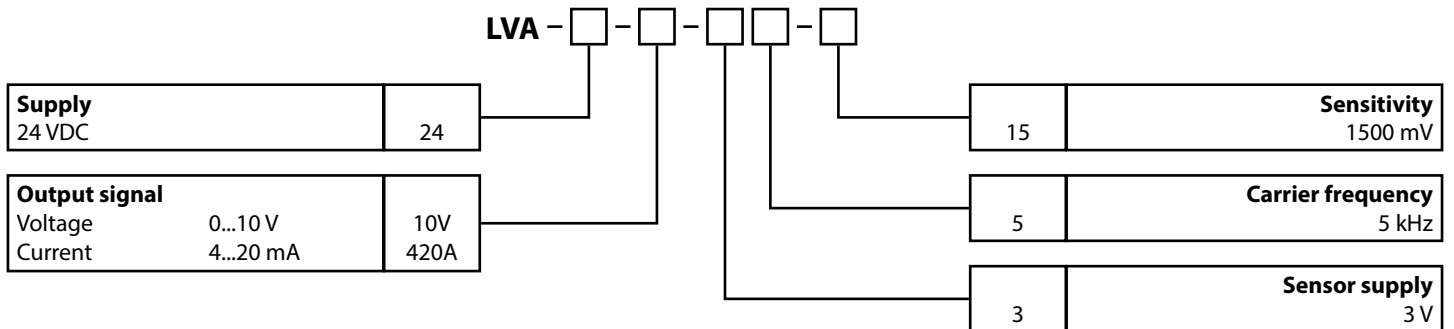
| Function              | Terminal |
|-----------------------|----------|
| Shield                | 1        |
| GND <sub>supply</sub> | 2        |
| +V                    | 3        |
| n. c.                 | 4        |
| Primary 2             | 5        |
| Secondary 2           | 6        |
| Shield                | 7        |
| Secondary 1           | 8        |
| Primary 1             | 9        |
| n. c.                 | 10       |
| GND <sub>signal</sub> | 11       |
| Signal                | 12       |
| Shield                | 13       |



## ORDER CODE SENSOR LVPH



## ORDER CODE ELECTRONICS LVA



## ACCESSORIES

| Mating connector M16 (female), 5 poles, for self assembly |                    |
|-----------------------------------------------------------|--------------------|
| D5-G-M16-F                                                | connector straight |
|                                                           |                    |
|                                                           |                    |

| Cable with mating connector M16 (female), shielded |                         |
|----------------------------------------------------|-------------------------|
| K5P2M-F-PUR-M16                                    | 2 m, connector straight |
|                                                    |                         |
|                                                    |                         |

Subject to change without prior notice.

**WayCon Positionsmesstechnik GmbH**  
Email: [info@waycon.de](mailto:info@waycon.de)  
Internet: [www.waycon.biz](http://www.waycon.biz)

**WayCon**  
Positionsmesstechnik

**Headquarters Munich**  
Mehlbeerenstr. 4  
82024 Taufkirchen  
Tel. +49 (0)89 67 97 13-0  
Fax +49 (0)89 67 97 13-250

**Office Cologne**  
Auf der Pehle 1  
50321 Brühl  
Tel. +49 (0)2232 56 79 44  
Fax +49 (0)2232 56 79 45