



More Precision

induSENSOR // Linear inductive displacement sensors





The LVP-3, LVP-14 and LVP-25 sensors are modified versions of the standard LVP sensors.

They are designed for specific application areas, and operated with external electronics in contrast to the standard LVP series.

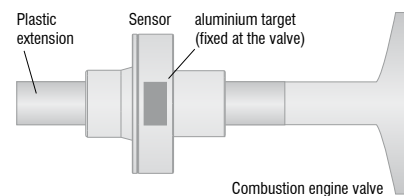
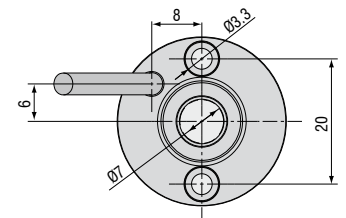
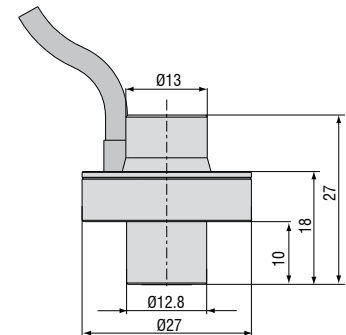
Valve stroke sensor in stainless steel housing

Future generations of engines will be able to dispense with mechanical camshafts. The displacement of the electromechanically or electrohydraulically driven inlet and outlet valves of internal combustion engines is acquired by the displacement sensor of the product line LVP-14-F-5-CR and fed into the control circuit. In this way a variable inlet and outlet control of the valves can be realised. Ultimately, the fuel consumption is reduced, emission values are improved and the engine power characteristic is matched to the individual driving situation.

| Model | LVP-14-F-5-CR |
|------------------------------|-------------------|
| Article | 2616078 |
| Measuring range | 14mm |
| Target (optional) | article 0482273 |
| Linearity | 0.5% FSO (0.07mm) |
| Housing | stainless steel |
| Temperature stability sensor | ±100ppm / °C |
| Temperature range sensor | -30°C ... +150°C |
| Protection class sensor | IP 67 |

| Controller | MSC739VS-U |
|--------------------|-----------------|
| Article | 4111009 |
| Power supply | +10...16VDC |
| Output | 1...9VDC |
| Resolution | 0,02% FSO |
| Frequency response | 20kHz (-3dB) |
| Dimensions | 150 x 64 x 54mm |

FSO = Full Scale Output

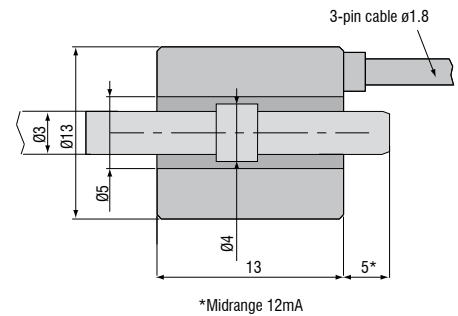


Sensor for needle stroke movements

The compact displacement sensor LVP-3- Z13-5-CA is suitable for acquiring small measurement ranges with high accuracy. The large free hole for the passage of the core also facilitates large excessive strokes. The measurement object, realised as a simple aluminium ring, is mounted on the rod, plunger, pin, needle or other similar part to be measured. In a typical application the displacement sensor LVP-3-Z13-5-CA is used in automatic glue application guns. The continuously measuring sensor monitors the switching point, also for wear of the needle seating. Additionally, the continuous measurement offers the option of checking the needle for the correct stroke position. The small, compact sensor is easy to integrate even in tight installation spaces.

| Model | LVP-3-Z13-CA |
|------------------------------|---|
| Article | 2617014 |
| Measuring range | 3mm |
| Target (included) | ø3 x 30 long with thread M3 and alu sleeve ø4 x 3.3 |
| Linearity | typ. 0.3% FSO (9µm) |
| Housing | stainless steel |
| Temperature stability sensor | ±100ppm / °C |
| Temperature range sensor | -40°C ... +150°C |
| Protection class sensor | IP 67 |
| Electronics | series MSC7210 (page 12 - 13) |

FSO = Full Scale Output



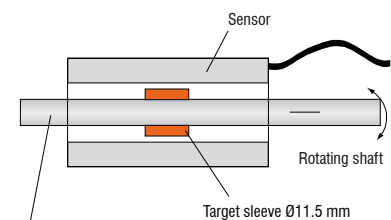
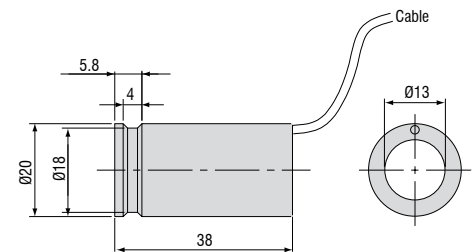
Sensor for the acquisition of displacement on rotating shafts

Analog sensors from the series LVP offer a significant improvement to monitor the clamping position of tools. The sensor is integrated into the chuck and directly measures the clamping stroke of the drawbar. It can be universally used with the most varied types of tool due to an extremely compact design. The sensor supplies an analog signal according to the stroke motion of the drawbar when clamping the tool. Consequently, continuous monitoring is possible without the switching point having to be laboriously set mechanically. The miniaturised sensor electronic unit is supplied with 24 VDC and can either be accommodated at the point of measurement or in the control cabinet.



| Model | LVP-25-Z20-5-CA-AC |
|------------------------------|---|
| Article | 2617008 |
| Measuring range | 25mm |
| Target (included) | article 0482218 for shaft diameter 8mm article 0482219 for shaft diameter 10mm |
| Resolution | 0.01mm |
| Linearity | typical ≤1% FSO (0.25mm) |
| Dynamics | 150Hz (-3dB) |
| Housing | stainless steel |
| Temperature stability sensor | < ±0.01% FSO / °C |
| Temperature range | -40° C ... +150° C |
| Protection class sensor | IP 67 |
| Medium | air, oil |
| Electronics | series MSC7210 (page 12 - 13) |

FSO = Full Scale Output



Pull rod material
31CrMoV9V, no. 1.8519.05

General accessories

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

AccessoriesLDR 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 |

AccessoriesEDS series**Service**

| | | |
|---------|--|---|
| 2985001 | | Function and linearity inspection for EDS series incl. pressure 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 for voltage output 1 - 5V |
| 0157050 | C703/90-5 | VIP/LVP/EDS 7-pin connection cable for S series, 5m 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 |



Linearity inspection certificate

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