



# 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.

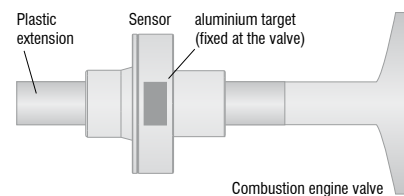
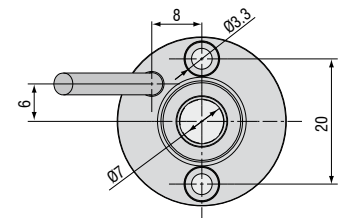
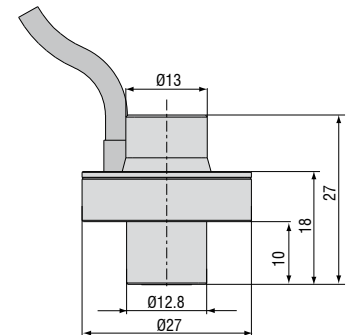
#### Valve stroke sensor in stainless steel housing

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

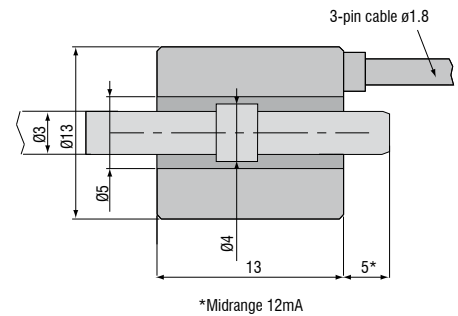


### Sensor for needle stroke movements

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



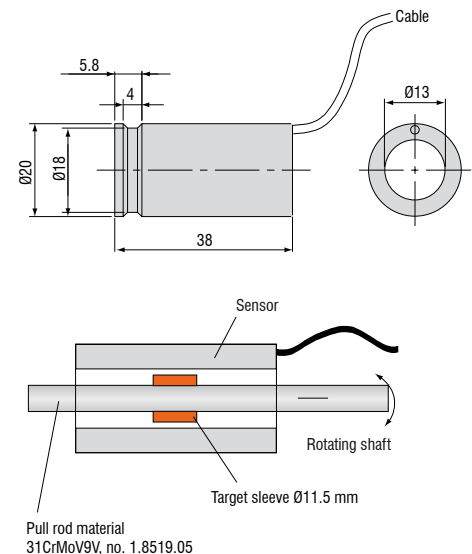
### Sensor for the acquisition of displacement on rotating shafts

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



**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
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**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
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**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