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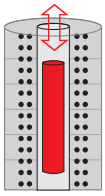
More Precision.

induSENSOR

Linear inductive displacement sensors



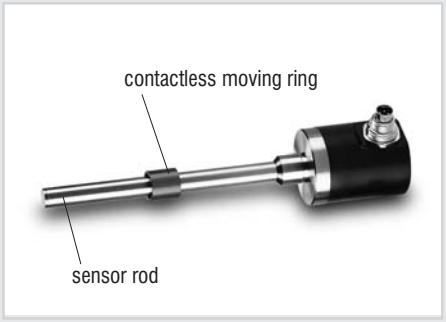
VIP series: sensors with measuring ring and integral electronics

No wear and no maintenance

Integrated microelectronics

Short and compact design

Rugged encapsulated sensor construction

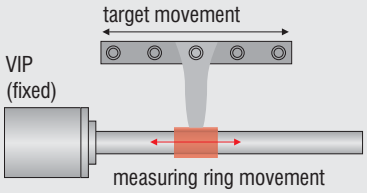


Patented measurement principle

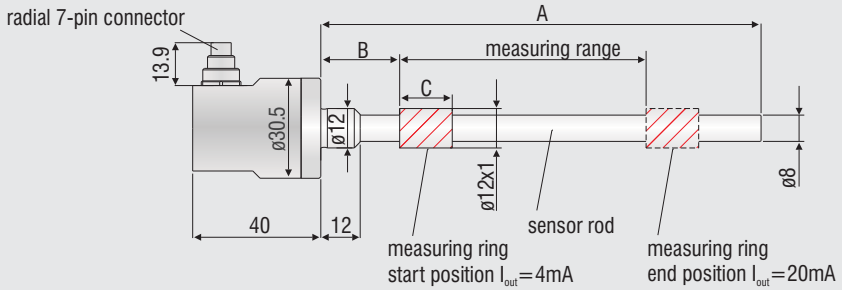
There is no mechanical contact between the measuring element (ring) and the sensor rod. The sensor therefore operates without any wear.

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.



VIP series **housing version -ZA-**
Dimensions in mm, not to scale



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

All data in mm.

Model		VIP-50	VIP-100	VIP-150
Measuring range		50 mm	100 mm	150 mm
Linearity	standard ±0.5 % FSO	0.25 mm	0.5 mm	0.75 mm
	option ±0.25 % FSO	0.125 mm	0.25 mm	-
Resolution	<0.03 % FSO	0.015 mm	0.03 mm	0.045 mm
Temperature range		-40 °C ... +85 °C		
Temperature stability	zero	± 50 ppm / °C		
	sensitivity	±150 ppm / °C		
Frequency response (-3 dB)		300 Hz		
Output		4 - 20 mA		
Output load		500 Ohm		
Power supply		18 - 30 VDC		
Current consumption		max. 40 mA		
Protection class		IP 67		
Electromagnetic compatibility (EMC)		EN 50 081-2 spurious emission EN 50 082-2 interference immunity		
Shock[1]	IEC 68-2-29	40 g, 3000 shocks / axis		
	IEC 68-2-27	100 g radial, 300 g axial		
Vibration	IEC 68-2-6	5 Hz ... 44 Hz ± 2.5 mm; 44 Hz ... 500 Hz ±20 g		

FSO = Full Scale Output

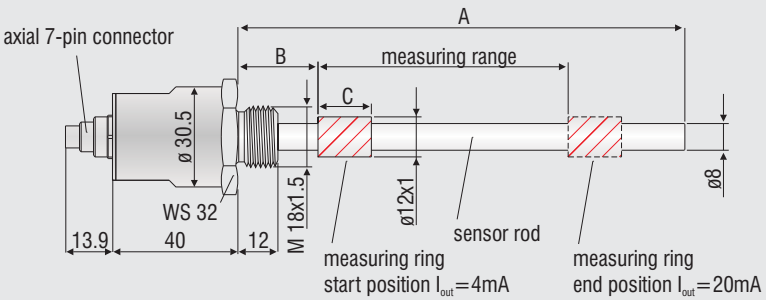
1) Half sinusoid 6 ms

Article

VIP- ***50*** - ***ZA*** - ***2.5*** - ***SR7*** - I

- electrical output
- SA7= connector, axial (housing version GA)
  SR7= connector, radial (housing version ZA)
- linearity 5 = 0.5 % FSO
  2.5 = 0.25 % FSO
- ZA= cylindrical housing (standard)
  GA= threaded housing (option)
- measuring range in mm

VIP series **housing version -GA- (option)**
Dimensions in mm, not to scale



Sensor in plastic housing with integrated ASIC electronics VIP-30-ISC-HRW1

Excellent ratio of installed length to measurement range

Rugged and wear-free

High dynamic response

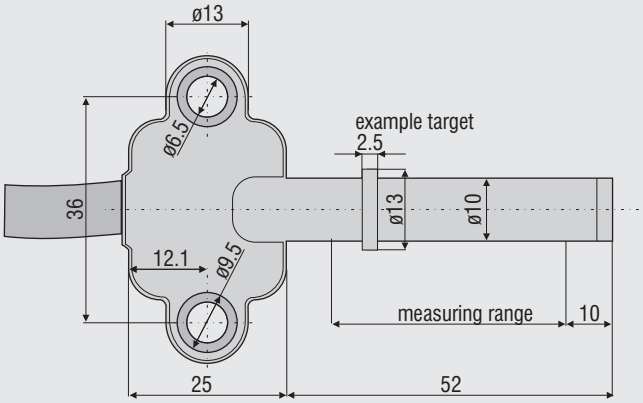
No magnet

Large-scale production system for industrial applications

With the increasing deployment of electronic equipment in vehicles, inductive sensors are finding numerous fields of application. Ruggedness, compact design and favorable prices are regarded as basic requirements for applications in the automotive sector. It was against this backdrop that this innovative displacement sensor was developed, which is employed non-contacting and wear-free for applications particularly in the engine and gearbox, but which can also be used for industrial applications. The sensor is characterized particularly by its excellent ratio of installed length to measurement range. Further plus points are the integrated electronics, the high dynamic response and the measurement principle which does not need a magnet. These advantages take effect particularly with displacement and position measurements on the transmission, such as for example with the measurement of the clutch disengagement, shift rail or selector lever position.

Model	**VIP-30-ISC-HRW1**
Article	2617015
Measuring principle	VIP (page 10-11)
Measuring range	30 mm
Target (included)	aluminium ring ø13 x 1 mm, 2.5 mm long
Linearity	± 0.5% FSO (0.15 mm)
Resolution	10 Bit
Frequency response	1000 Hz (-3 dB)
Housing	thermosetting plastic
Temperature stability	200 ppm / °C
Output	UART (TTL-level RxD/TxD) option 0.5...4.5 VDC
Power supply	+ 5 VDC (4.9 ... 5.1 VDC) stabilized
Temperature range sensor	-40 °C ... +100 °C / temporary up to 125 °C
Protection class	IP 67, without connector

FSO = Full Scale Output



Integrable load and unbalance sensor ILU-50-0-10-SR

Sensor integrated into damper

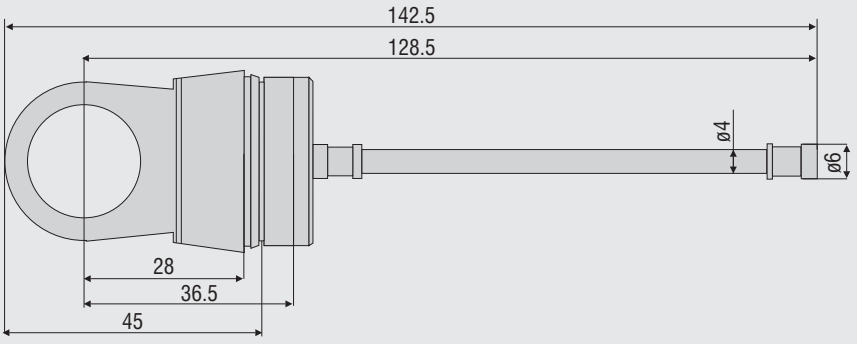
Integrated Rast 2.5 standard plug

Integral damper flange

The displacement sensor ILU-50-O-10-SR (Integrated Load and Unbalance sensor) measures the depression of the suds container when the washing machine is loaded and its deviation during the spinning stage. Due to the inductive measurement principle, the sensor provides an absolute position acquisition for static and dynamic processes. The short installed length of the patented VIP principle enables the sensor to be integrated into a compact friction damper. The displacement sensor supplies an output signal proportional to the weight of washing. Apart from the present version, the geometry of the flange can be customized for large-scale applications.

Model	**ILU-50**
Article	2611051
Measuring principle	VIP (page 10-11)
Measuring range	50 mm
Target (included)	aluminium ring
Linearity	3 % FSO
Temperature range sensor	+5 °C ... +80 °C
Electronics	MSC ILU50 (article 2208111)

FSO = Full Scale Output



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Sensors and systems
for displacement, position and dimension

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