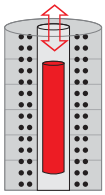
MICRO-EPSILON

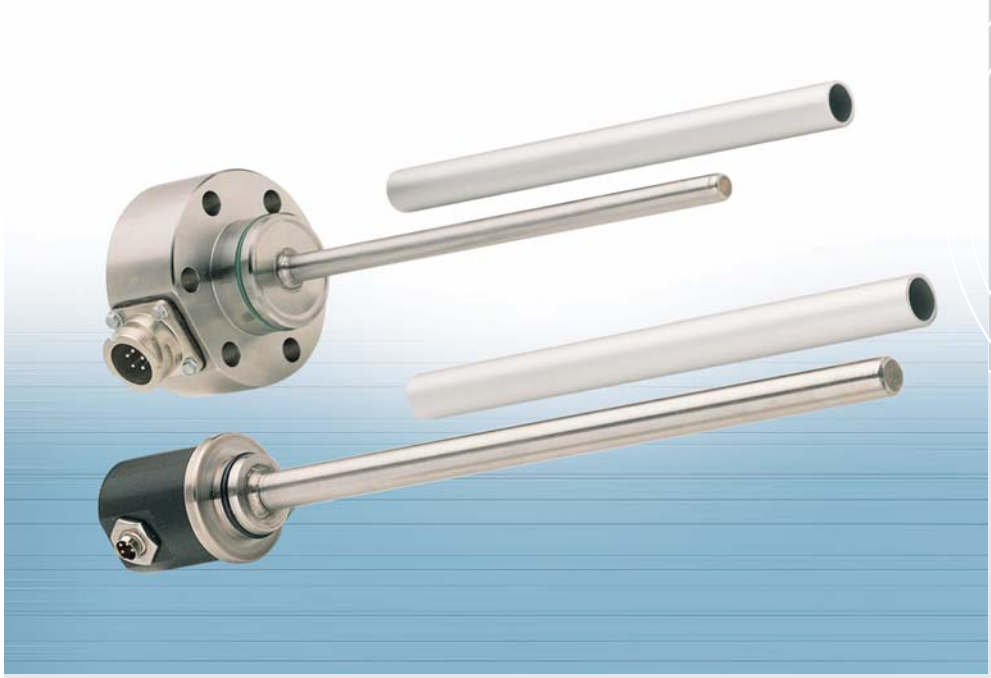
More Precision.

induSENSOR

Linear inductive displacement sensors



EDS series: long-stroke sensors for hydraulics & pneumatics



Measurement ranges 100 ... 630 mm
Output signal 4 ... 20 mA
Integrated microelectronics
High pressure resistance
Oil resistant and maintenance-free
Short offset ranges

The sensor elements of the EDS series are protected by a pressure resistant stainless steel housing. The sensor electronics and signal conditioning are completely integrated in a sensor flange.

As a target an aluminum sleeve is used which is integrated into the piston rod and is passed without making contact and wear-free over the sensor rod.

Due to the use of the eddy current principle, no permanent magnets need to be mounted inside the cylinder.

Due to the rugged design of the long-stroke sensors of the EDS series, these sensor systems have proven themselves, not only through the integration in hydraulic and pneumatic cylinders, but also especially under harsh industrial conditions.

Typical applications

Long-stroke sensors in the EDS series are designed for industrial use in hydraulic and pneumatic cylinders for the displacement and position measurement of pistons or valves, e.g. for the measurement of

- displacement, distance, position, gap
- deflection
- movement, stroke
- filling level, immersion depth, spring travel

Artikelbezeichnung

EDS - **300** - ***S*** - ***SR7*** - I

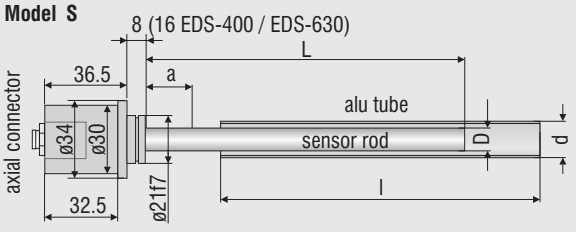
- electrical output
  - SRB = connector, radial Bajonet (model F)
  - SA7 = connector, axial (model S)
  - SR7 = connector, radial (model S)
- Models: S = compact design with alu cap
  F = flange housing with mounting holes
- measuring range in mm

Integration in a hydraulic cylinder

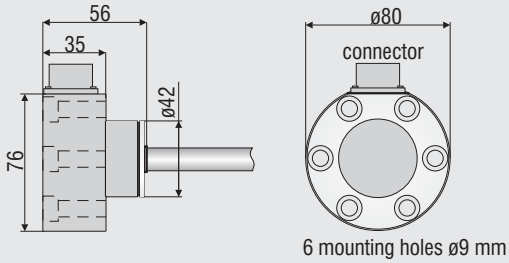
Model			EDS-100	EDS-160	EDS-200	EDS-250	EDS-300	EDS-400	EDS-630
Connection			**S, F**	**S, F**	**S**	**S, F**	**S, F**	**S, F**	**S, F**
Measuring range		mm	100	160	200	250	300	400	630
Linearity	±0.3 % FSO	mm	0.3	0.48	0.6	0.75	0.9	1.2	1.89
Resolution	0.05 % FSO	mm	0.05	0.08	0.1	0.125	0.15	0.2	0.315
Temperature range			-40 °C ... +85 °C						
Temperature stability			±200 ppm / °C						
Frequency response (-3 dB)			150 Hz						
Output			4 - 20 mA						
Output load			500 Ohm						
Power supply			18 - 30 VDC						
Current consumption			max. 40 mA						
Connector	model S		7-pin connector (sensor cable as an option) options radial or axial output						
	model F		5-pin radial bayonet-connector with mating plug						
Pressure resistance			450 bar (sensor rod, flange)						
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 IEC 68-2-27		40 g, 3000 shocks / axis 100 g radial, 300 g axial						
Vibration	IEC 68-2-6		5 Hz ... 44 Hz ±2.5 mm 44 Hz ... 500 Hz ±23 g						
Material			V4A-Steel 1.4571						

FSO = Full Scale Output 1) Half sinusoid 6 ms

Model S



Model F

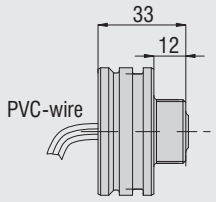


6 mounting holes ø9 mm
on pitch circle ø63 mm

OEM sensors

Modified OEM sensors with e.g. different measuring ranges, sensor rods and tubes are available on request.
Example: Model Z with axial PVC wire

Model Z



meas. range	sensor rod		alu tube				offset
	L	D	l		d		a
100	140	10	140		16		20
160	200	10	200		16		20
200	240	10	240		16		20
250	290	10	290		16		20
300	340	10	340		16		20
400	450	12	450 (S)	460 (F)	18 (S)	26 (F)	25
630	680	12	680 (S)	690 (F)	18 (S)	26 (F)	25

More Precision.

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Sensors and systems
for displacement, position and dimension

Sensors and measurement devices
for non-contact temperature measurement

Measurement systems
for online/offline quality control

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