



# More Precision

**induSENSOR** // Linear inductive displacement sensors





- Measurement ranges 75 ... 630mm
- Linearity  $\pm 0.3\%$  FSO
- 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 aluminium sleeve is used which is integrated into the piston rod and is passed without making contact and wearfree over the sensor rod. Integration in a hydraulic cylinder 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 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

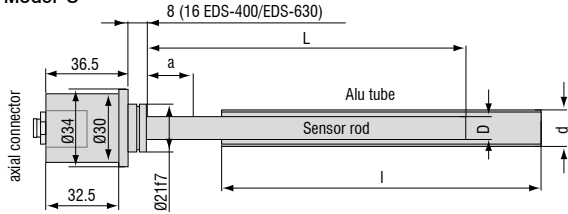


EDS series: integration in a hydraulic cylinder

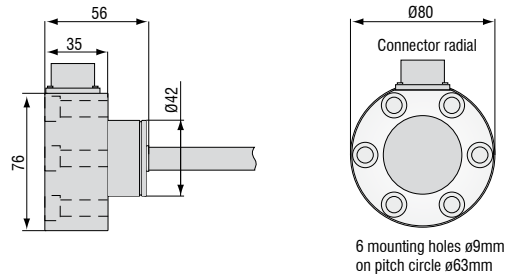
Model	EDS-75	EDS-100	EDS-160	EDS-200	EDS-250	EDS-300	EDS-400	EDS-500	EDS-630
Connection	S	S, F	S, F	S	S, F	S, F	S, F	S	S, F
Measuring range	75mm	100mm	160mm	200mm	250mm	300mm	400mm	500mm	630mm
Linearity	±0.3% FSO	0.23mm	0.3mm	0.48mm	0.6mm	0.75mm	0.9mm	1.2mm	1.89mm
Resolution	0.05% FSO	0.038mm	0.05mm	0.08mm	0.1mm	0.125mm	0.15mm	0.2mm	0.315mm
Temperature range	-40°C ... +85°C								
Temperature stability	±200ppm / °C								
Frequency response (-3 dB)	150Hz								
Output	4 - 20mA								
Output load	500Ω								
Power supply	18 - 30VDC								
Current consumption	max. 40mA								
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	450bar (sensor rod, flange)								
Protection class	IP 67								
Electromagnetic compatibility (EMC)	EN 61326-1:2006 (spurious emission) EN 61326-2-3:2006 (immunity to interference)								
Shock <sup>1)</sup>	40g, 3000 shocks / axis 100g radial, 300g axial								
Vibration	5Hz ... 44Hz ±2.5mm 44Hz ... 500Hz ±23g								
Material	V4A-Steel 1.4571								

FSO = Full Scale Output <sup>1)</sup> Half sinusoid 6 ms

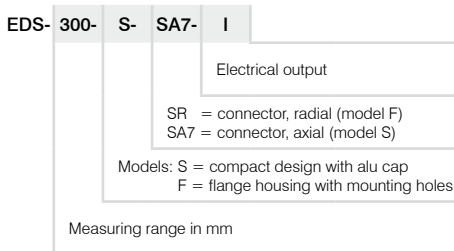
**Model S**



**Model F**



**Article**



Meas. range	Sensor rod		Alu tube		Offset
	L	D	l	d	
75	110	10	110	16	15
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
500	550	12	550	18	25
630	680	12	680 (S) 690 (F)	18 (S) 26 (F)	25

**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

**Accessories VIP and LVP series****Connection cable**

0157043	C703-5	VIP/LVP/EDS 7-pin connection cable, 5m
2902084	C703-5/U	VIP/LVP/EDS 7-pin connection cable, 5m for voltage output 1 - 5V
0157050	C703/90-5	VIP-/LVP-/EDS-7-pin connection cable, 5m with 90° cable connector
2962001	MBS 12/8	mounting set for VIP series with 3 mounting blocks and 2 adapting rings
0487087	MBS 12/8	mounting block VIP/LVP series

**Plunger**

0800114	LVP-50	plunger
0800115	LVP-100	plunger
0800116	LVP-200	plunger

**Accessories LDR 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

**Accessories EDS series****Service**

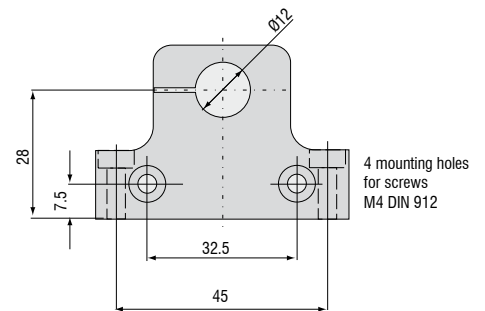
2985001		Function and linearity inspection for EDS series incl. pressure inspection and documentation without recalibration
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**Connection cable**

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

**Mounting block VIP and LVP series**

**Accessories LVDT series**

**Sensor cable**

2902004	C701-3	sensor cable 3m, with connector and tin-plated free ends
2902013	C701-6	sensor cable, 6m, with connector and tin-plated free ends
2902009	C701/90-3	sensor cable, 3m, with 90° connector and tin-plated free ends
2966002	MSC710	connector set for supply/output cable
2981010		connector mounting and calibration of MSC710

**Connection cable**

2901087	PC710-6/4	supply/output cable, 6 m
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**Plunger**

0800001	DTA-1D	plunger
0800002	DTA-3D	plunger
0800003	DTA-5D	plunger
0800004	DTA-10D	plunger
0800005	DTA-15D	plunger
0800006	DTA-25D	plunger

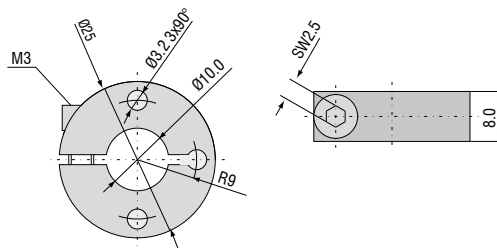
**Flange**

0483090.01	DTA-F10	mounting flange, slotted for DTA-1D, DTA-3D, DTA-5D, DTA-10D
0483083.02	DTA-F20	mounting flange, slotted for DTA-15D, DTA-25D

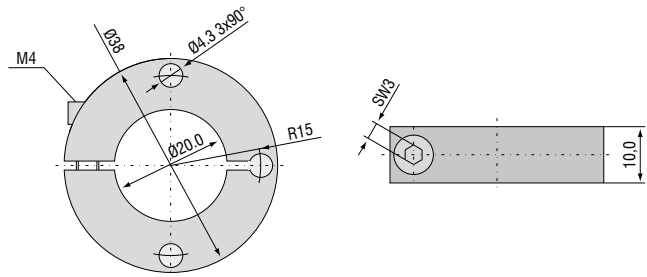
**Probe tips**

0459002	type 2
0459001	type 2 hard metall
0459003	type 11
0459004	type 13

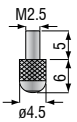
**Flange DTA-F10**



**Flange DTA-F20**



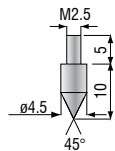
**Standard probe tip: type 2**



**Option: type 11**



**Option: type 13**



## High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



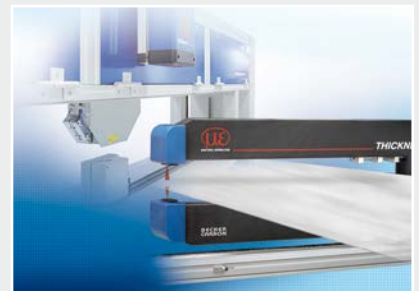
2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analyzers and colour online spectrometer



Measurement and inspection systems

