MICRO-EPSILON

More Precision.

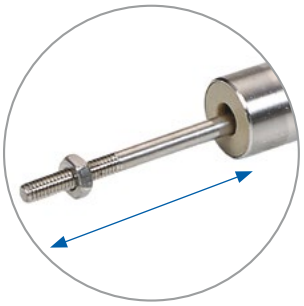
induSENSOR // Linear inductive displacement sensors

- Operating temperature up to 160 °C
- Compact design - short installation length
- High measurement signal quality
- IP67 Robust design IP67
- Sensor diameter of only ø8 mm

The specific sensor configuration of the LDR linear displacement sensors is characterized by its short, compact design and small diameter. Only three connections are required as interface to the sensor. Their compact design and the small sensor diameter allow the measuring systems to be installed in confined spaces.

Fields of application

Low-cost LDR sensors are also particularly suitable for large-scale installation under restricted spatial conditions and in industrial environments with a high measuring rate.



Freely moving plunger

Article designation

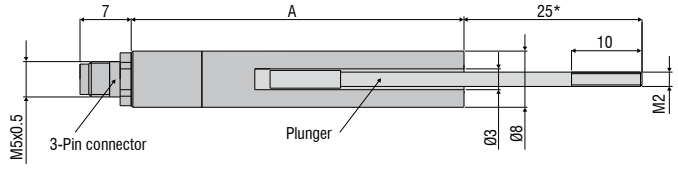
LDR-	10-	CA
		Axial connections CA integral cable (2 m) SA plug-in connection
	Measuring range in mm	
Principle: half-bridge sensor		

Model		LDR-10	LDR-25	LDR-50
Series		SA, CA	SA, CA	SA, CA
Measuring range		10 mm	25 mm	50 mm
Linearity	typ.	≤ ±30 µm	≤ ±88 µm	≤ ±250 µm
	max.	≤ ±50 µm	≤ ±125 µm	≤ ±375 µm
Temperature stability	Zero	≤ 30 ppm FSO/K		≤ 80 ppm FSO/K
	Max. temp. error	≤ 100 ppm FSO/K		≤ 150 ppm FSO/K
Sensitivity		51 mV / mm/V	21 mV / mm/V	5.5 mV / mm/V
Excitation frequency		21 kHz	13 kHz	9 kHz
Excitation voltage		550 mV		
Connection	CA	integrated cable (2 m) with open ends; axial cable outlet; cable diameter 1.8 mm; min. bending radius 10 mm (fixed installation)		
	SA	3-pin connector; axial output (see accessories for connection cable)		
Temperature range [1]	Storage	SA: -40 … +80 °C; CA: -40 … +160 °C		
	Operation	SA: -15 … +80 °C; CA: -40 … +160 °C		
Pressure resistance		atmospheric pressure		
Shock (DIN EN 60068-2-27)		40 g / 6 ms in 3 axes, 1000 shocks each 100 g / 6 ms in 3 axes, 3 shocks each		
Vibration (DIN EN 60068-2-6)		±1.5 mm / 10 … 58 Hz in 2 axes, 10 cycles each ±20 g / 58 … 500 Hz in 2 axes, 10 cycles each		
Protection class (DIN EN 60529)		IP67 (plugged)		
Material		Stainless steel (housing)		
Weight	Sensor	approx. 9 g (SA); approx. 24 g (CA)	approx. 14 g (SA); approx. 28 g (CA)	approx. 23 g (SA); approx. 37 g (CA)
	Plunger	approx. 1.5 g	approx. 2.2 g	approx. 3.5 g
Compatibility		MSC7401, MSC7802, MSC7602		

FSO = Full Scale Output

[1] Determined according to box method (-40 ... +80 °C)

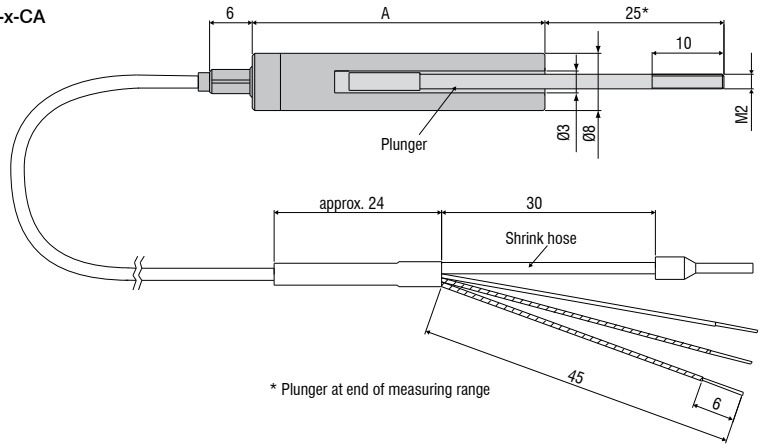
LDR-x-SA



* Plunger at end of measuring range

Model	A
LDR-10-SA	47 mm
LDR-25-SA	73 mm
LDR-50-SA	127 mm

LDR-x-CA



* Plunger at end of measuring range

Model	A
LDR-10-CA	41 mm
LDR-25-CA	67 mm
LDR-50-CA	121 mm

Dimensions in mm, not to scale

Accessories for DTA series

Sensor cables

C701-3	Sensor cable, 3 m, with cable connector and tin-plated free ends
C701-6	Sensor cable, 6 m, with cable connector and tin-plated free ends
C701/90-3	Sensor cable, 3 m, with 90° cable connector and tin-plated free ends

Service

Connector assembly M9 and cable reduction XXXX mm - DTA-x
Connector assembly M9 - DTA-x (see page 30/31)

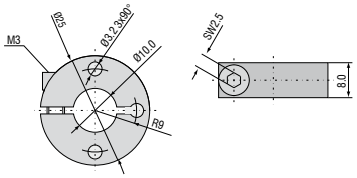
Spare plungers

Plunger for DTA-1D	Spare plunger
Plunger for DTA-3D	Spare plunger
Plunger for DTA-5D	Spare plunger
Plunger for DTA-10D	Spare plunger
Plunger for DTA-15D	Spare plunger
Plunger for DTA-25D	Spare plunger

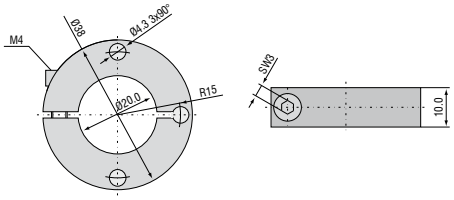
Sensor mounting

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

Flange DTA-F10



Flange DTA-F20



Accessories for LDR series

Connection cables

0157047	C7210-5/3	Sensor cable, 5 m, with cable connector
0157048	C7210/90-5/3	Sensor cable, 5 m, with 90° cable connector

Service

Connector assembly M9 and cable reduction XXXX mm - DTA-x
Connector assembly M9 - DTA-x (see page 30/31)

Supply cable

2901087	PC710-6/4	Supply/output cable, 6 m

Spare plungers

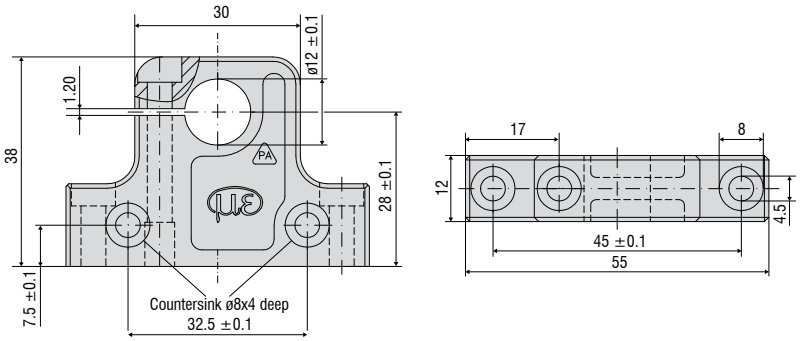
0800136	LDR-10	Spare plunger
0800137	LDR-25	Spare plunger
0800138	LDR-50	Spare plunger

Connector assembly

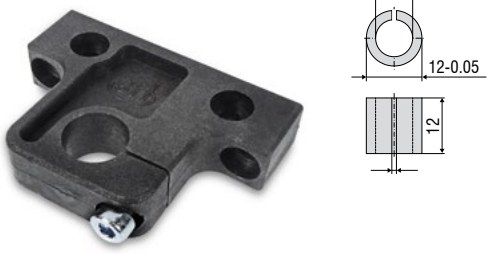
MBS12/8 Mounting block	Sensor installation for circumferential clamping

MBS12/8 Adapter ring for reduction to D8 (gauge / LDR)

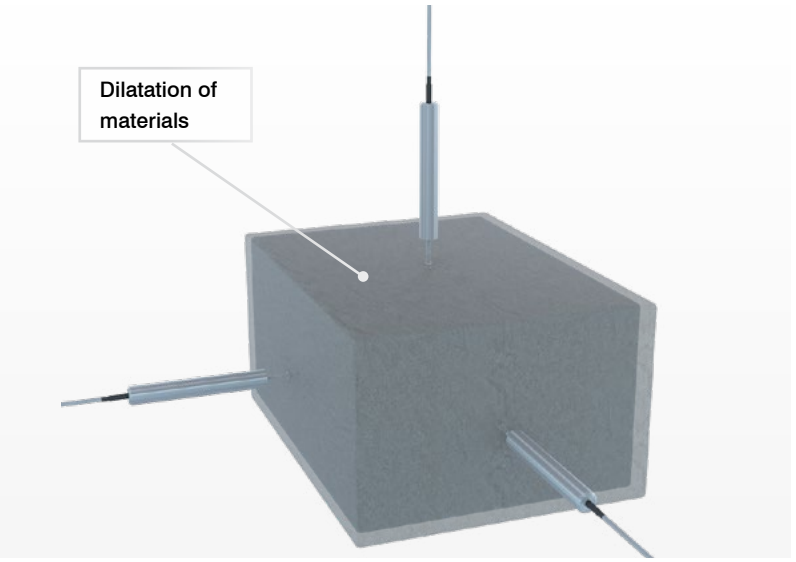
Mounting block MBS12/8

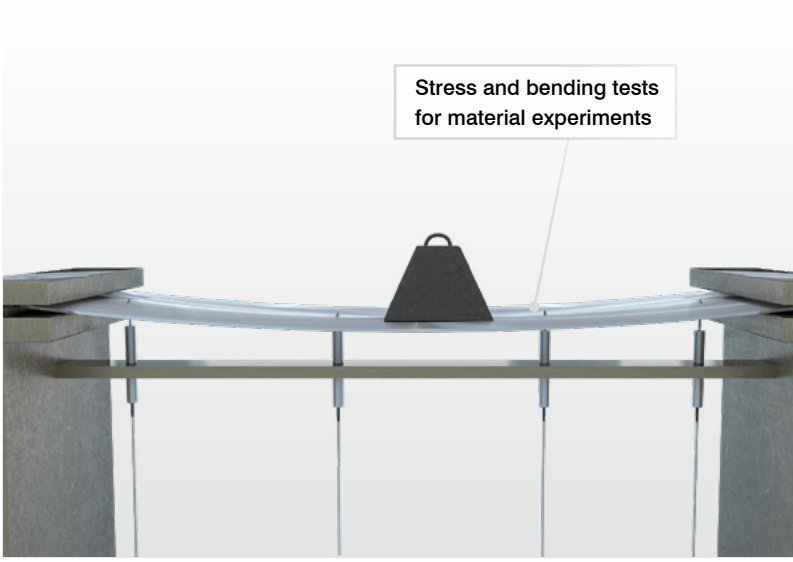


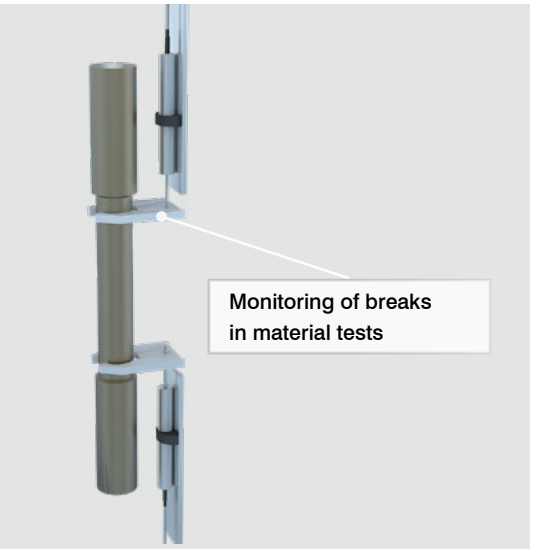
Adapter ring

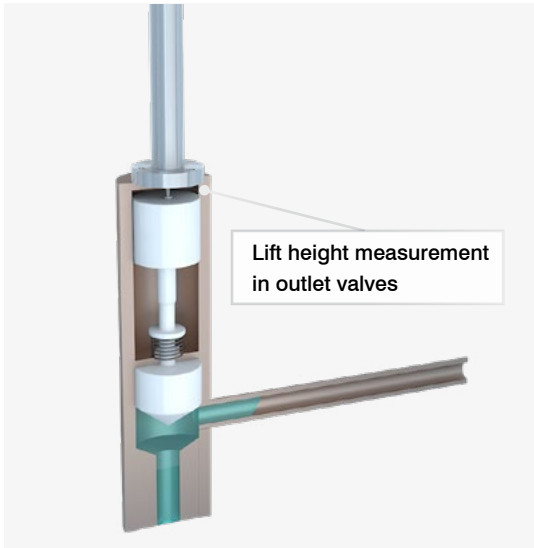


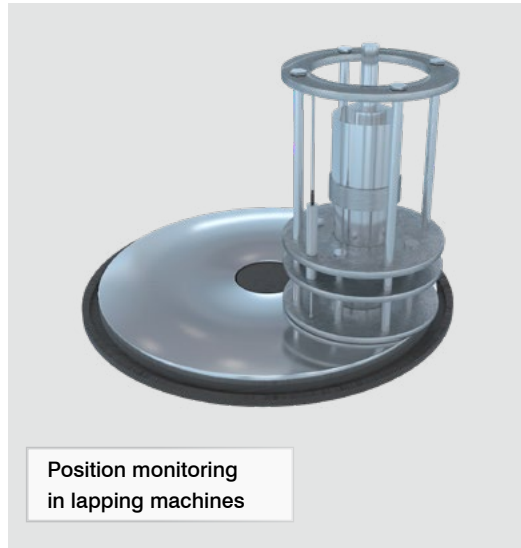
The DTA / LDR displacement sensors are suitable for numerous measurement tasks which require robust designs and high signal stability. Due to their wear-free design, the DTA / LDR sensors impress with longevity and long-term stability.

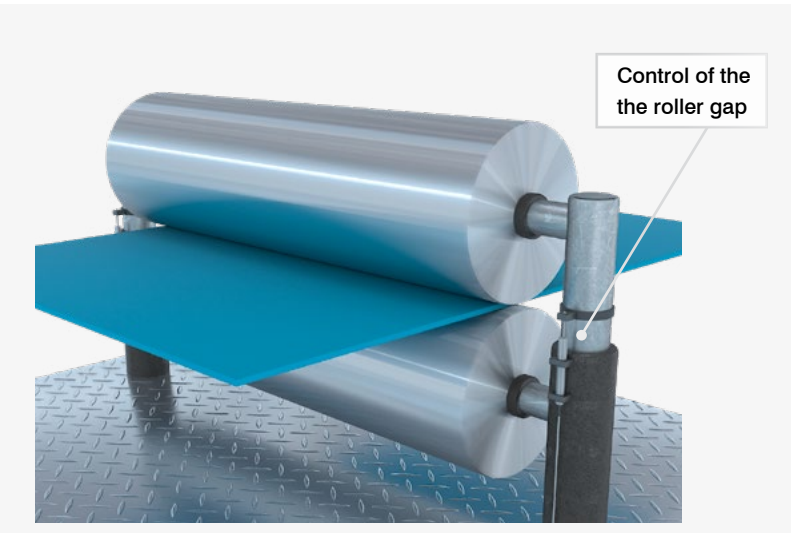


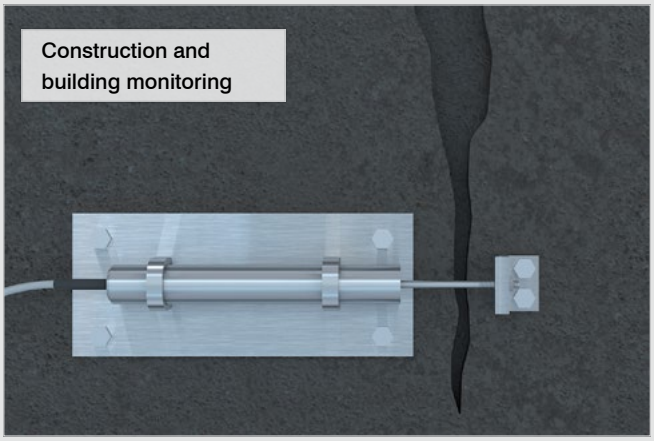












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MICRO-EPSILON

MICRO-EPSILON Headquarters
Koenigbacher Str. 15 · 94496 Ortenburg / Germany
Tel. +49 (0) 8542 / 168-0 · Fax +49 (0) 8542 / 168-90
info@micro-epsilon.com · **www.micro-epsilon.com**