



More Precision

indu**SENSOR** // Linear inductive displacement sensors





Operating temperature up to 160 °C



Compact design -
short installation length



High measurement signal quality



Robust design IP67

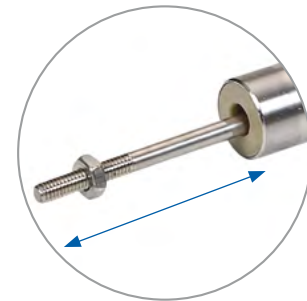


Sensor diameter of only $\varnothing 8$ mm

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

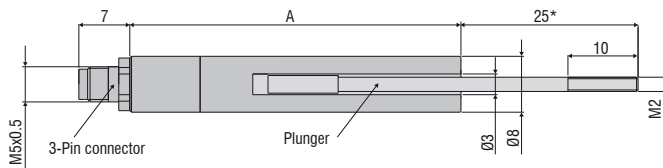


Model		LDR-10	LDR-25	LDR-50
Series		SA, CA	SA, CA	SA, CA
Measuring range		10 mm	25 mm	50 mm
Linearity	typ.	$\leq \pm 30 \mu\text{m}$	$\leq \pm 88 \mu\text{m}$	$\leq \pm 250 \mu\text{m}$
	max.	$\leq \pm 50 \mu\text{m}$	$\leq \pm 125 \mu\text{m}$	$\leq \pm 375 \mu\text{m}$
Temperature stability	Zero	$\leq 30 \text{ ppm FSO/K}$		$\leq 80 \text{ ppm FSO/K}$
	Max. temp. error	$\leq 100 \text{ ppm FSO/K}$		$\leq 150 \text{ ppm FSO/K}$
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)		$\pm 1.5 \text{ mm} / 10 \dots 58 \text{ Hz}$ in 2 axes, 10 cycles each $\pm 20 \text{ g} / 58 \dots 500 \text{ Hz}$ 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)

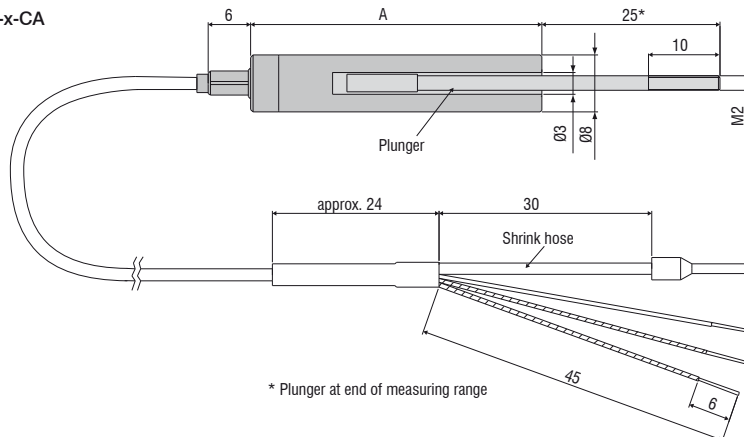
LDR-x-SA



* 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)

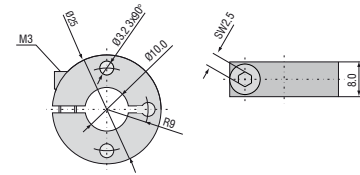
Spare plungers

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

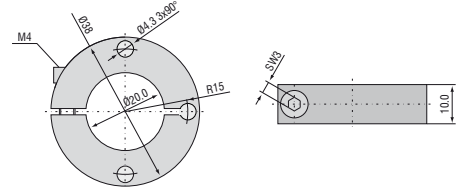
Sensor mounting

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
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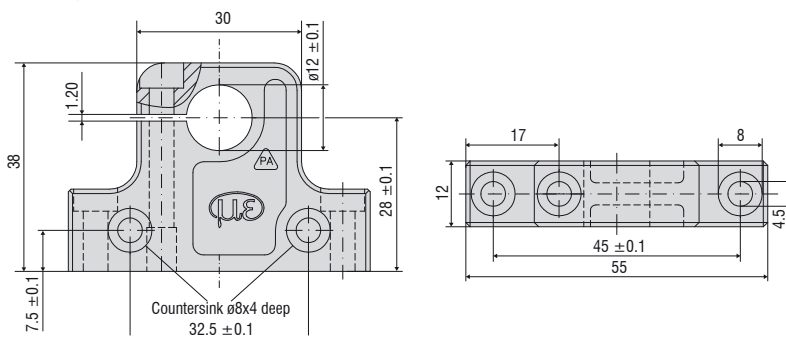
Spare plungers

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

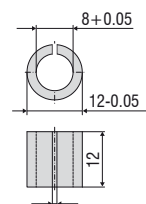
Connector assembly

MBS12/8 Mounting block Sensor installation for circumferential clamping
 MBS12/8 Adapter ring for reduction to D8 (gauge / LDR)

Mounting block MBS12/8

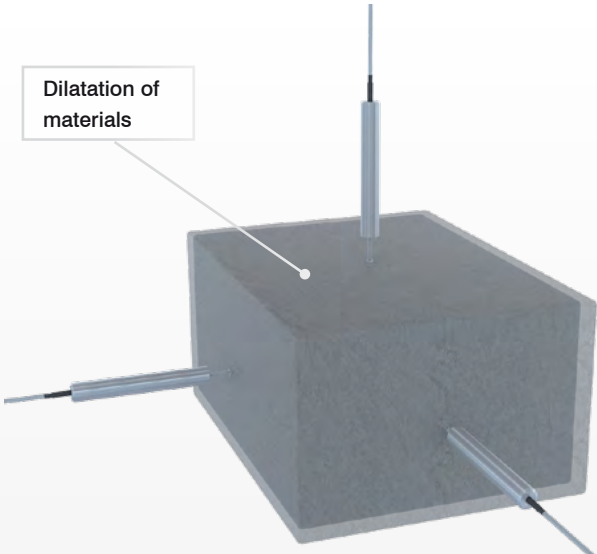


Adapter ring

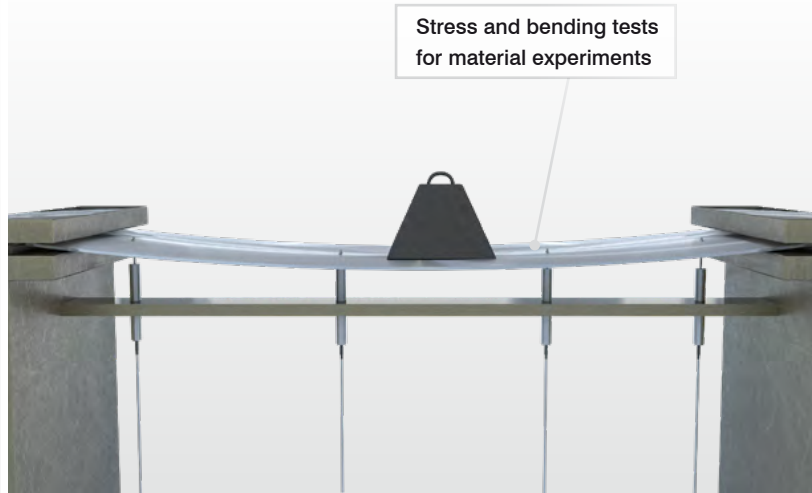


The DTA / LDR displacement sensors are suitable for numerous measurement tasks which require robust designs and high signal stability. Due to their wear-free design, the DTA / LDR sensors impress with longevity and long-term stability.

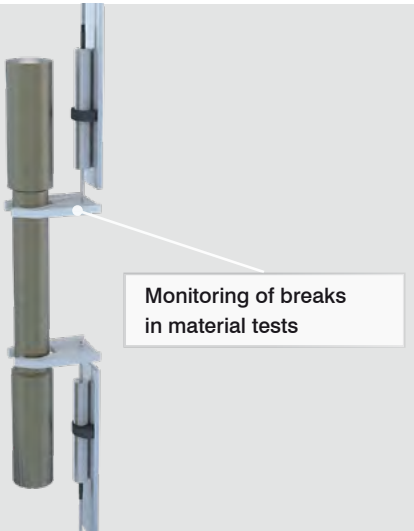
Dilatation of materials



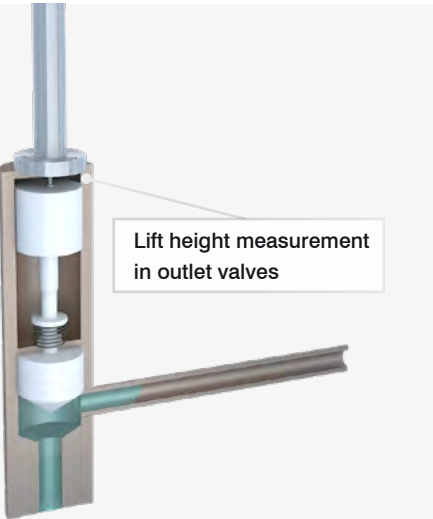
Stress and bending tests for material experiments



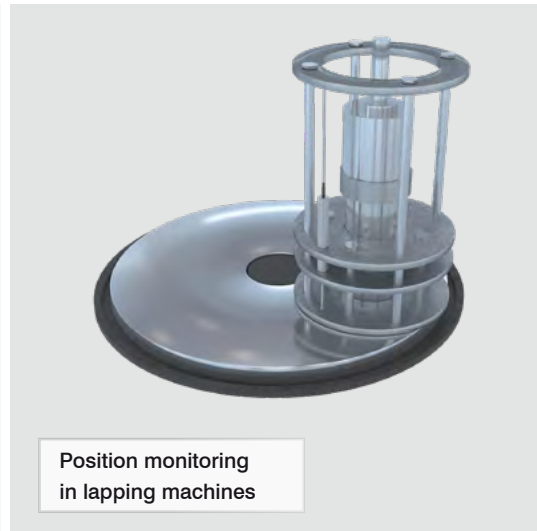
Monitoring of breaks in material tests



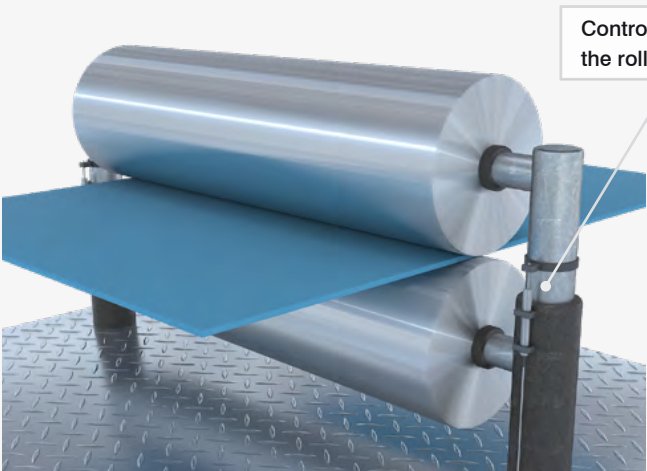
Lift height measurement in outlet valves



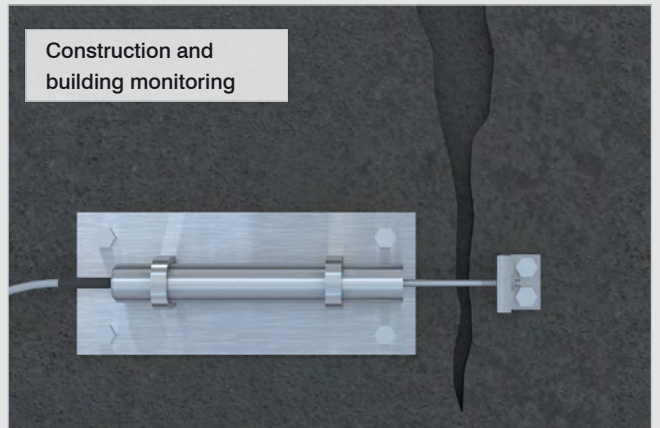
Position monitoring in lapping machines



Control of the roller gap



Construction and building monitoring



Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



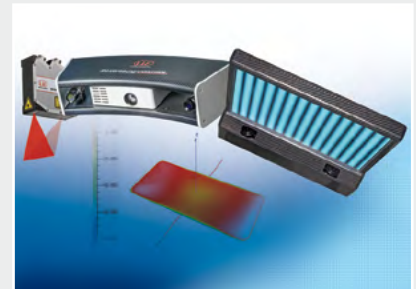
Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection