

# IMPRESS

SENSORS & SYSTEMS

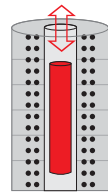
Unit 6B, Mercury House, Calleva Park  
Aldermaston, Berkshire, RG7 8PN  
Tel: +44 (0)118 981 7980  
Fax: +44 (0)118 981 7990  
e-mail: [info@impress-sensors.co.uk](mailto:info@impress-sensors.co.uk)  
Website: [www.impress-sensors.co.uk](http://www.impress-sensors.co.uk)

Pressure - Temperature - Level - Flow - Analytical - Control - Indication - Data logging

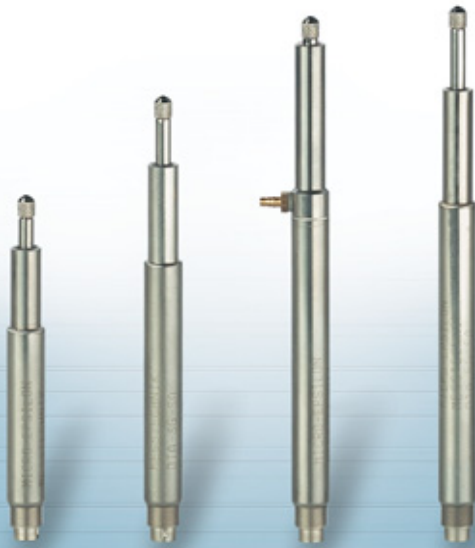
# More Precision.

**indu**SENSOR

Linear inductive displacement sensors



## LVDT series: Gauging sensor with external electronics



Measurement ranges  $\pm 1 \dots \pm 10 \text{ mm}$

Extremely accurate even under difficult ambient conditions

Long-term stability, because wear-free

Easy fitting/operation

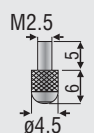
Gauging sensor with plunger guided in plain bearings and fitted with return spring. The measuring probe is mounted via a standard M2.5 thread and can be interchanged with commercially available measurement probes. Measurement probes are primarily used for the measurement and inspection of work-piece geometry (length, width, diameter, thickness, depth, height, etc.).

### Article

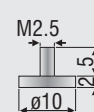
	<b>DTA - 5 G - 3 - CA - V</b>
principle: differential-transformator (LVDT)	DTA - 5
excitation AC	G - 3
measuring range $\pm \text{mm}$	CA
function: gauging sensor	V
Linearity 3 ( $\pm 0.3 \%$ ) 1.5 ( $\pm 0.15 \%$ )	
Connection (axial): CA integral cable (3 m) SA plug connection	
gauging sensor option: V pneumatic push	

### Probe tips

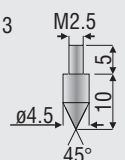
standard



option: type 11



option: type 13



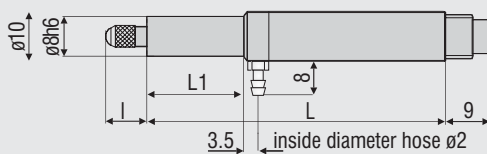
Model	DTA-1G-		DTA-3G-		DTA-5G-		DTA-10G-	
	CA	SA	CA	SA	CA	SA	CA	SA
Measuring range	± 1 mm		± 3 mm		± 5 mm		± 10 mm	
Linearity	standard ± 0.3 % FSO		6 μm		18 μm		30 μm	
	optional ± 0.15 % FSO		3 μm		9 μm		15 μm	
Repeatability	< 0.0075 %		< 0.15 μm		< 0.45 μm		< 0.75 μm	
Excitation frequency	5 kHz						2 kHz	
Excitation amplitude	5 V <sub>eff</sub>							
Sensitivity	133 mV/V/mm		85 mV/V/mm		53 mV/V/mm		44 mV/V/mm	
Force in midrange (typical)	0.95 N		1.00 N		1.18 N		1.23 N	
Spring force	0.22 N/mm		0.14 N/mm		0.12 N/mm		0.08 N/mm	
Temperature range	-20 °C ... 80 °C							
Options	option V with pneumatic push							
Operating temperature	-20 °C ... +80 °C							
Storage temperature	-40 °C ... +80 °C							
Temperature stability	zero		± 50 ppm / °C					
	sensitivity		± 100 ppm / °C					
Housing	stainless steel incl. magnetic shielding							
Protection class	SA: IP 40 / IP54 * CA: IP 54							
Minimum cable bending radius	20 mm							
Outer diameter cable	~4,6 mm							
Shock	IEC 68-2-29		40 g, 1000 shocks / axis					
	IEC 68-2-27		100 g, 3 shocks / axis					
Vibration	IEC 68-2-6		10 Hz ... 58 Hz ± 1.5 mm / 58 Hz ... 500 Hz ± 20 g					

FSO = Full Scale Output \*) depends from connector

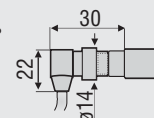
Basic model		DTA-1G-			DTA-3G-			DTA-5G-			DTA-10G-		
		CA	SA	Opt. V	CA	SA	Opt. V	CA	SA	Opt. V	CA	SA	Opt. V
Length of housing L	mm	67	67	69	89	89	92,1	108	108	120	135	135	145
Length of clamping cylinder L <sub>1</sub>	mm	21	21	19	26	26	25,1	30	30	38	42	42	46
Length of plunger l *	mm	9.5	9.5	10	12.5	12.5	12.7	14	14	17.5	20	20	22.2

\* Plunger in zero position (± 10 % FSO ± 1 mm)

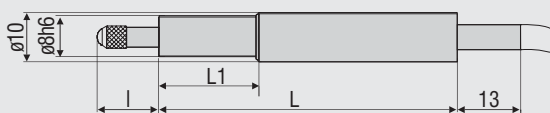
gauging sensor type - SA-V with pneumatic push



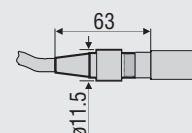
female connector 90° dimensions apply for all models



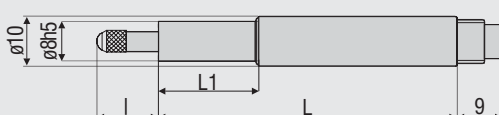
gauging sensor type - CA with integral cable



female connector dimensions apply for all models



gauging sensor type - SA with axial connection



# More Precision.

## Sensors and systems

for displacement, position and dimension

## Sensors and measurement devices

for non-contact temperature measurement

## Measurement systems

for online/offline quality control