

- Very high accuracy
- High cycle life
- Stainless steel
- Infinite resolution
- Precision linear bearings
- Miniature



These transducers are for displacement / position measurement. They make an accurate position measurement of the movement of the armature (the sliding part) relative to the body of the displacement transducer.

This transducer uses the Linear Variable Differential Transformer (LVDT) principle which means that it is probably the most robust and reliable position sensor type available. The strength of the LVDT sensor's principle is that there is no electrical contact across the transducer position sensing element which for the user of the sensor means clean data, infinite resolution and a very long life.

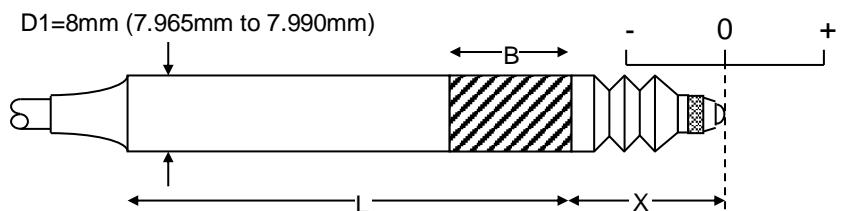
The GT series gauging transducer employs precision linear bearings to optimise the LVDTs measurement precision and repeatability.

### Spring return version.

Our GT spring displacement transducer has bearings to guide the armature inside the measurement sensor and a spring which pushes the armature to the fully out position. Our GT spring return LVDTs are appropriate where it is not possible to connect the transducer armature to the moving component being measured.

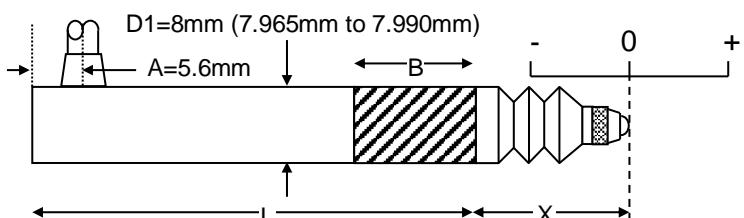
### End (axial) exit cable.

Type	L	X (nom)	B- (No clamp zone)	Total weight
GT0500Z	26mm	7.3mm	5.5mm	7g
GT1000	53mm	14.2mm	14mm	11g
GT2500	58mm	20.3mm	18mm	13g
GT5000	87mm	22.0mm	30mm	16g



### Side (radial) exit cable.

Type	L	X (nom)	B- (No clamp zone)	Total weight
GT0500XRA	33mm	7.3mm	5.5mm	7g
GT1000RA	57mm	14.2mm	14mm	12g
GT2500RA	61mm	20.3mm	18mm	16g
GT5000RA	91mm	22.0mm	30mm	21g



Type	Range	Linearity error (% F.S.)	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel	Sensitivity (nom)
GT0500Z/GT0500XRA	$\pm 0.5\text{mm}$	$\pm 0.25$	7g	1.0N	1.7N/cm	0.3mm	0.3mm	110mV/V
GT1000/GT1000RA	$\pm 1\text{mm}$	$\pm 0.25/\pm 0.1$	11g	0.8N	2.6N/cm	1.4mm	0.3mm	150mV/V
GT2500/GT2500RA	$\pm 2.5\text{mm}$	$\pm 0.25/\pm 0.1$	13g	1.1N	2.6N/cm	0.8mm	0.3mm	375mV/V
GT5000/GT5000RA	$\pm 5\text{mm}$	$\pm 0.25/\pm 0.1$	16g	1.5N	1.5N/cm	1.3mm	0.3mm	700mV/V

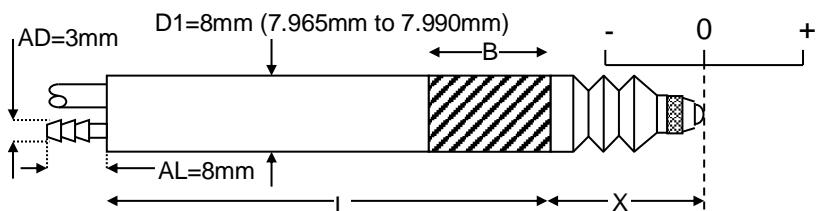
# Air push version.

The air-push version of the GT displacement transducer is extended by the application of air to the displacement transducer and is retracted by an internal spring. This is useful where the LVDTs position measurement tip must be retracted to allow components to move on a conveyor for example.

Type	L	X (nom)	B- (No clamp zone)
GT1000P	72mm	26.0mm	14mm
GT2500P	77mm	20.0mm	18mm
GT5000P	112mm	22.0mm	30mm

Air filter = 0.0005mm

Relative humidity = 60% (maximum)



Type	Range	Linearity error (% F.S.)	Total weight	Air pressure		Inward over-travel	Outward over-travel	Sensitivity (nom)
				Minimum	Maximum			
GT1000P	±1mm	±0.25/±0.1	11g	40kPa	65kPa	1.4mm	0.3mm	150mV/V
GT2500P	±2.5mm	±0.25/±0.1	13g	45kPa	65kPa	0.8mm	0.3mm	375mV/V
GT5000P	±5mm	±0.25/±0.1	16g	45kPa	55kPa	1.3mm	0.3mm	700mV/V

## Specification

Excitation/supply (acceptable) 0.5V to 7V rms, 2kHz to 10kHz (sinusoidal)

Excitation/supply (calibrated) 5V rms, 5kHz (sinusoidal)

Linearity error (Standard) ±0.25% F.S.

Linearity error (Optional on some models) ±0.1% F.S.

Repeatability 0.00015mm

Temperature coefficient (span) ±0.01% F.S. /°C (typical)

Operating temperature range -40°C to 100°C

Electrical termination 2m (integral cable) Longer available to order.



Due to our policy of on-going development, GT specifications may change without notice. Any modification to our GT may affect some or all of the specifications for our equipment. All GT dimensions and specifications are nominal.

## GT - WARNING - PERSONAL INJURY

Do not use our GT as safety, emergency stop or feedback devices in any application where the failure of this product could result in damage to equipment, personal injury or death.

USA & Canada  
RDP Electrosense  
2216 Pottstown Pike  
Pottstown, PA 19465  
USA  
Tel: 610-469-0850  
Tel: 800-334-5838  
Fax: 610-469-0852  
Email: info@rdpe.com

Global Head Office  
RDP Electronics Ltd  
Grove Street, Heath Town  
Wolverhampton, West Midlands, WV10 0PY  
United Kingdom  
Tel: +44 1902 457512  
Email: sales@rdpe.com  
URL: www.rdpeltd.com

Torque  
Position  
Pressure  
Load Cells  
Displacement  
Instrumentation