

## LVDT Deflection Sensors | 2601 Series

The 2601 series Linear Variable Differential Transformer (LVDT) displacement transducers are measuring devices that measure the displacement of the load frames of materials testing systems. They feature an LVDT as the active element, and are designed for use on both electromechanical and hydraulic Instron® testing systems.

### Features and Benefits

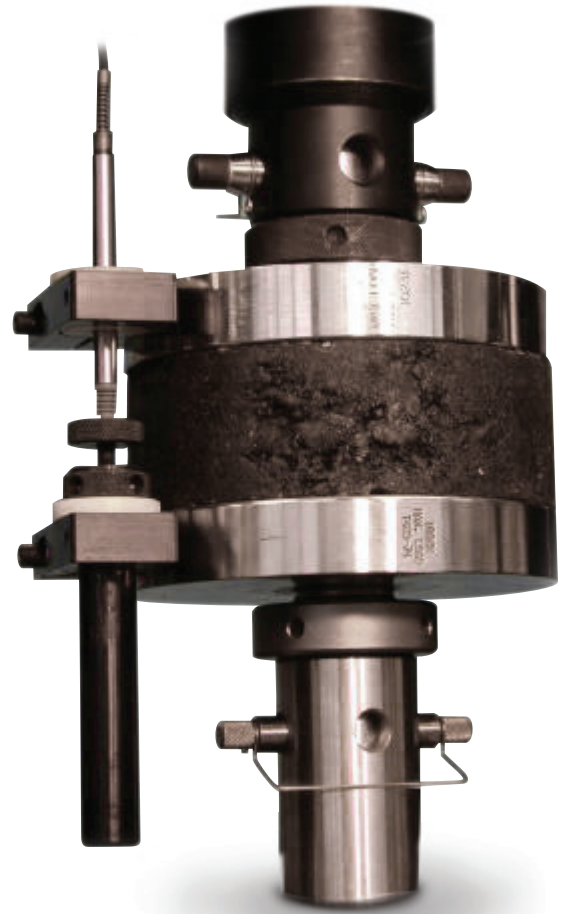
- Easy-to-use
- Wide variety of mounting configurations
- Variable stroke ranges
- Suitable for high and low temperature operation (see specification table)
- Self-identifying for ease-of-calibration

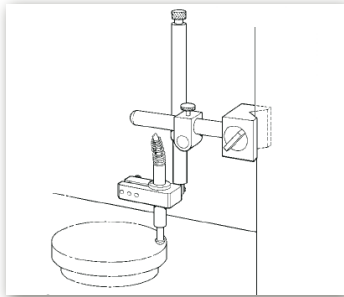
### Application Range

- Precision displacement measurements

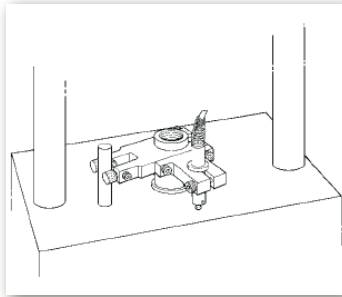
### Principle of Operation

There are ten models in the 2601 LVDT series, with stroke ranges from  $\pm 0.5$  mm (0.2 in) to  $\pm 100$  mm (4 in). The LVDTs allow accurate measurement of linear displacement and are spring loaded for contact with the reference surface. The LVDTs are AC excited, and, with an adapter, will interface with 3300, 4200, 4400, 4500, 5500, 5800, 8500 and 8800 series testing systems. The LVDTs are fully rationalized and have self contained calibration resistors, which allows auto-calibration on 3300, 4200, 4400, 4500, 5500, 5800, 8500 and 8800 series testing systems. All models may be mounted using one of a number of mounting configurations. The configuration chosen will depend on the type of specimen being tested, the model of Instron testing system, and the type of test being performed. Mounting configurations include an LVDT platen displacement indicator, a crosshead motion detector, a magnetic base LVDT holder, and an actuator motion detector.

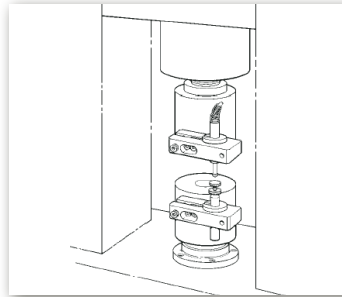




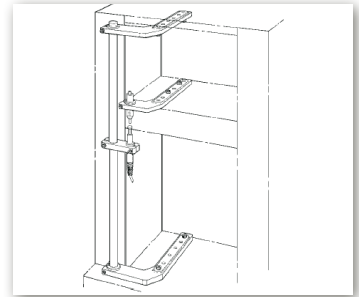
Model 2601 magnetic base  
LVDT holder



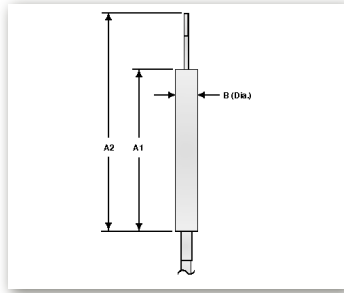
Model 2601 actuator motion device



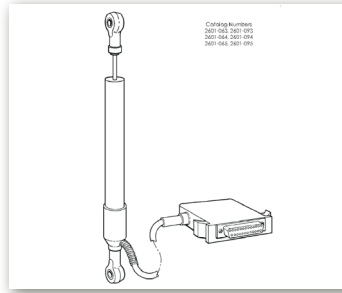
Model 2601 platen  
displacement indicator



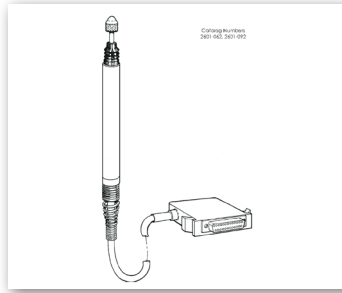
Model 2601 crosshead  
motion detector



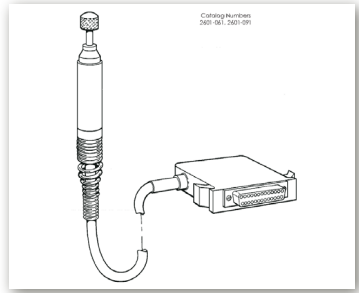
LVDT dimensions



Long-stroke LVDT's Cat # 2601-063,  
2601-064, 2603-065, 2601-093,  
2603-094, 2601-095



Medium-stroke (2.5 mm) LVDT  
Cat # 2601-062, 2601-092



Short-stroke (0.5 mm) LVDT  
Cat # 2601-061, 2601-091

## Specifications

Catalog Number		2601-061, 2601-091	2601-062, 2601-092	2601-063, 2601-093	2601-064, 2601-094	2601-065, 2601-095
Model Number	-	AGZ0.5	AG2.5	AGR15	AGR50	AGR100
Linear Stroke	mm	±0.5	±2.5	±15	±50	±100
	in	±0.02	±0.1	±0.6	±2	±4
Maximum Stroke	mm	±1.5	±6.0	±22	±62	±125
	in	±0.06	±0.24	±0.89	±2.4	±4.9
Spring Rate	g/mm	15	13	3.3	1.95	1.19
Force at Electrical Zero	g	40	90	110	150	120
Temperature Range	°C	-10 to +80	-10 to +80	-40 to +100	-40 to +100	-40 to +100
Temperature Coefficient Zero	% / °C	<0.01	<0.005	<0.005	<0.005	<0.005
Sensitivity	% / °C	<0.01	<0.005	<0.008	<0.008	<0.008
Non-linearity of Transducer	%	±0.25 (of full scale)	±0.25 (of full scale)	±0.3 (of full scale)	±0.3 (of full scale)	±0.3 (of full scale)

### System Accuracy

3300	-	±0.50	±0.50	±0.50	±0.50	±0.50
4200	-	±0.85	±0.85	±0.90	±0.90	±0.90
4500	-	±0.50	±0.50	±0.55	±0.55	±0.55
5500	-	±0.50	±0.50	±0.50	±0.50	±0.50
5800	-	±0.50	±0.50	±0.50	±0.50	±0.50
8500	-	±0.50	±0.50	±0.55	±0.55	±0.55
8800	-	±0.50	±0.50	±0.50	±0.50	±0.50

### Percentage of Full-Scale

Effective Length (A)1	mm	22.5	77	97	280	450
	in	0.875	3.003	3.78	10.92	17.55
Effective Length at Electrical 0 (A2)	mm	30.5	94	142	365	595
	in	1.187	3.673	5.54	14.24	23.21

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