

GT-LVDT-100 Linear Position Transducer



Features and Advantages

- Low cost
- Long life operation
- Outstanding linearity (up to 0.075%)
- Very high resolution
- Resistance to shock and vibration
- IP65 waterproof

GT-LVDT-100 linear position transducer is a low cost, high performance transducer which is suitable for wide range industrial and structural monitoring application. The unit comes out with 100 mm measurement range or any other ranges by customer request. It has a compact dimension, robust construction, and IP65 waterproof protection that make it suitable to withstand any harsh condition in the installation sites. Both housing and core are made of corrosion resistant metals, while the housing can act as magnetic shield to prevent external noise caused by electric field. Besides, it is also designed to take a sudden shock loading or to do any measurement in high level vibration environment without any issues.

GT-LVDT-100 linear position transducer consists of a spring loaded shaft with central thread moving along the bearing sleeve. The shaft is linked together to a wiper, and when the shaft moves, it will cause the resistance value between the wiper and the two end connections to change accordingly. Consequently, this mechanism can give an electrical signal output that has a proportional relationship between the actual wiper position on the resistive track and its resistance value. Thus, it will provide a position or profile measurement.



Material Specifications

Housing	Anodized aluminum
Actuating shaft	Stainless steel with anti-rotation device
Fixing and mounting	Adjustable clamps
Gauging Head	Stainless steel
Bearings	Both end in DU sleeve
Resistance element	Conductive plastic
Wiper assembly	Precious metal multi-finger wiper, elastomer damped
Cable assembly	3 core, shielded cable

Technical Specifications

Defined electrical range	100 mm
Nominal resistance	$5 \pm 20\%$ kΩ
Linearity	0.075%
Repeatability	0.002 mm
Max. permissible input voltage	42 V
Effective temperature coefficient of the output to applied voltage ratio	5 ppm/$^{\circ}$C
Housing length	166 mm \pm 1 mm
Mechanical stroke	104 \pm 2 mm
Operating force (horizontal)	< 5 N
Max. operating frequency	10 Hz
Max. permitted torque	140 Ncm
Operating temperature	-30 to 100$^{\circ}$C
Vibration	Up to 2000 Hz with $a_{max} = 20g$
Shock	50g at 10 ms
Waterproof	IP65

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