



IT Linear Displacement Sensor

Features:

- Full-scale ranges from 2mm to 100mm
- Accuracy, Rugged, low profile design
- Compact, lightweight, and easy to install
- Low measuring force
- Stainless housing is used
- Standard cable or optional connections.
- Easy to install and use.
- Infinite resolution
- Excellent stability and temperature compensation



Applications:

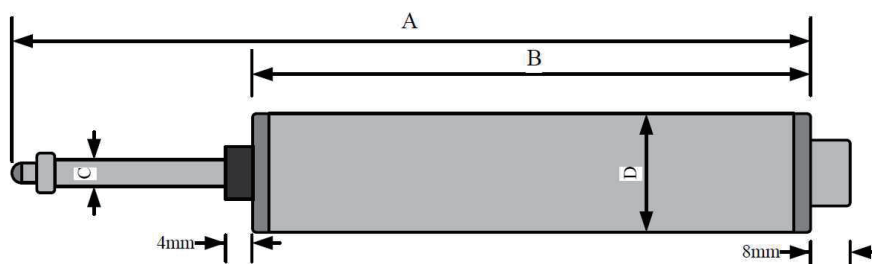
- Automotive
- Strain/Stress Analysis
- Material Elasticity Measuring
- Material Test
- Actuator Stroke Measuring
- Automation

Description:

TTI Linear Displacement Sensors use a fully active 350-ohm strain-gage bridge to sense spindle displacement, giving infinite resolution and excellent linearity. They are compatible with all standard strain-gage instrumentation with bridge excitation from 2 to 10 volts. With a selection of models having full-scale ranges from 2 mm to 100 mm, Linear Displacement Sensors feature a unique design that produces maximum operating forces of less than 4 N. Available with specially designed mounting fixtures, these versatile sensors are ideally suited for use in research, manufacturing and process control applications.

IT Linear Displacement Sensors produce an output voltage proportional to a captive, guided spindle displacement by means of a 350-ohm strain gage bridge with four active arms. This arrangement provides excellent temperature compensation and linearity.

IT Linear Displacement Sensors exhibit the same inherent advantages for linearity, versatility and precision as many other strain-gage-based sensors. As such, they are systems-compatible with a wide range of commonly used sensors for pressure, load, acceleration, vibration, etc. and normally utilize the same instrumentation.





IT Linear Displacement Sensor

Specification:

MODEL		IT002	IT005	IT010	IT025	IT050	IT100
Measurement Range	mm	2 mm	5 mm	10 mm	25 mm	50 mm	100 mm
Nonlinearity(Best-Fit Method)*	% FS	0.25	0.15	0.10	0.10	0.10	0.10
Rated (F.S.) Output*	mV/V	3.0	4.5	5.3	7.0	3.6	5.2
Excitation	V	2 to 10 V, ac or dc					
Zero Output	%	2% of F.S., Optional : 0.1% of F.S. (option code ZO)					
Zero drift of long time	%/year	0.1% of F.S.					
Bridge Resistance (Nominal)	ohms	350 ohms Bridge, 100k ohms Zero Balance					
Resolution		Analog, infinite, limited only by instrumentation)					
Spring Force*	N	2.0	2.0	2.5	2.5	3.0	3.5
Frequency Response*	Hz	2-mm displacement: 200 Hz; 100-mm displacement: 10 Hz					
Fatigue Lift (25%,50%,100%)	K Cycles	5000,500,50	5000,500,50	5000,500,50	5000,500,50	5000,5000,500	5000,500,50
Cable		4-Conductor (0.08mm2) shield cable, 4 mm diameter by 3m long					
Electrical Connector		Standard (Pigtail Termination) : Input: Red+ Black– ; Output: Green+ White– Optional : Highly reliable TAJIMI circular socket accept independent bridge inputs (PRC03-23A10-7F Bulkhead Mount Receptacle 7pin). Mating Plug is include (PRC03-32A10-7F5 Jack 7pin).					
Dimension A	mm	105	105	110	140	215	380
Dimension B	mm	90	90	90	105	155	266
Dimension C	mm	5	5	5	5	5	5
Dimension D	mm	18	18	18	18	18	18
Weight	g	135	140	140	150	200	500
Operating Temperature	° C	+15 to +140° F [–10 to +60° C]			102x102x178		
Temperature Coefficient (%FS)*	ppm/° C	Zero < 60/° F [<100/° C] , Span < 60/° F [< 100/° C]					
Humidity	% RH	95 at 32 ° C					

▪ Typical figures: Actual values subject to calibration.

IT Linear Displacement Sensor

• Model and optional :

ITxxx
Model ITxxx
Model ITxxx-Cyyy
Model ITxxx-ZD
Model ITxxx-Cyyy-PT1

Model ITxxx-ST1
Model ITxxx-ST1-PT
Model ITxxx-Sx-Px

Measurement Range xxx mm
Standard: Cable Length, 3 meter long, pigtail termination
Optional: Customer Cable yyy meter long
Optional: 0.1% Zero Output
Optional: Cable Length, yyy meter long with TAJIMI circular Mating Plug
Optional: TAJIMI circular socket
Optional: TAJIMI circular socket with Mating Plug
Optional: Customer socket with Customer Mating Plug, Please description.