

# FM-LVDT Series

## Linear Variable Differential Transformer

The Forbes Marshall LVDT series sensor is a highly reliable displacement transducer which measures relatively long displacements such as turbine valve position and casing expansion.

It produces an electrical voltage proportional to the displacement of the movable magnetic core. It is also used for any industrial displacement measurement application.

Our LVDTs are made from stainless steel and can be sealed to most IP levels, including IP65. The rugged construction and simple principle of operation, results in high reliability and accuracy.



### Features

Wide stroke range

Highly reliability, durability and accuracy

4-20 mA output is available

Integral cable and inbuilt signal conditioner

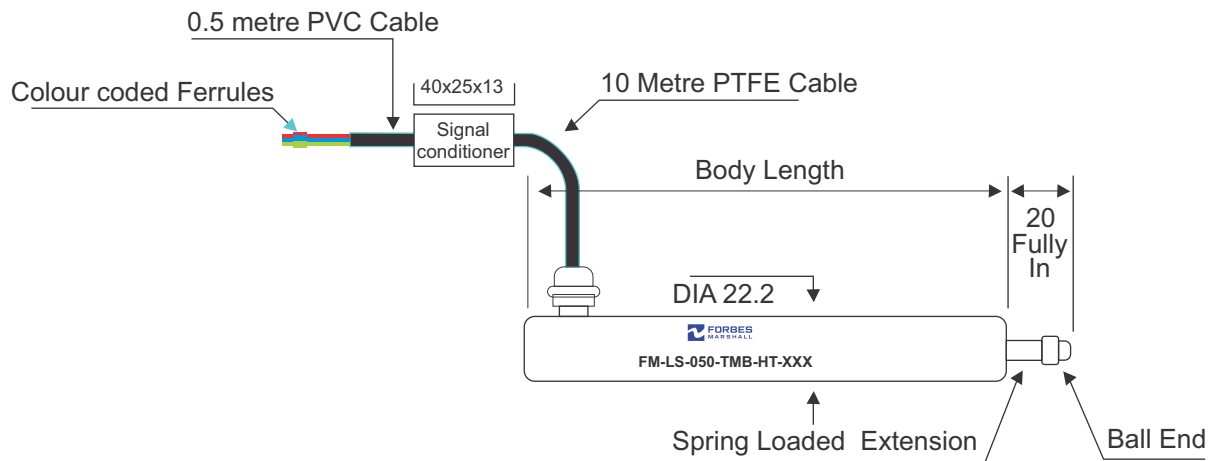
### Principle of Measurement

The LVDT (Linear Variable Differential Transformer) is a displacement detector which measures relatively long displacements.

When an iron core moves within the wound coils, the impedances between A and B, and B and C change. Since these impedance changes are proportional to the movement of the iron core, a voltage proportional to the movement of the iron core can be generated by obtaining the difference between  $V_{AB}$  and  $V_{BC}$ , when a constant voltage is applied between A and C.

Technical Specifications	
Item description	LVDT (Linear Variable Differential Transformer)
Model number	FM-LS-050-TMB-HT-XXX
Stroke	5,10,15,25,50,75,100,125,150 mm
Excitation voltage	5 V rms, 3KHz
Coil impedance	600 ±100 (3kHz)
Vibration resistance	20g up to 2kHz
Linearity	0.5 % Or better
Repeatability	Better than 0.1%
Frequency response	3dB @ 180Hz
Operating temperature range	-30°C to + 150°C
Shock resistance	1000g for 10 milliseconds
Insulation resistance	More than 10MΩ at 500VDC (between pins and case)
Dielectric strength	500V RMS for one minute (between pins and case)
Magnetic shielding	Internal magnetic shielding
Construction material	Stainless steel
Sealing	IP65
Output	3 or 4 wires signal conditioners
Cable type	PTFE

## Dimensions



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 Forbes Marshall Arca  
 Codel International  
 Forbes Solar  
 Forbes Vyncke  
 Forbes Marshall Steam Systems

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