

THE LINEAR VARIABLE DIFFERENTIAL TRANSFORMER (LVDT) DISPLACEMENT TRANSDUCER ACCURATELY MEASURES THE MOVEMENT BETWEEN THE SPRING-LOADED SLIDING ARMATURE AND THE EXTERIOR BODY. THESE RUGGED AND SELF-CONTAINED UNITS ARE IDEAL FOR RECORDING DISPLACEMENTS ON STRUCTURAL MEMBERS DUE TO LIVE LOADS AND TEMPERATURE VARIATIONS. WITH YEARS OF EXPERIENCE USING THESE TRANSDUCERS ON BRIDGES, BUILDING AND HYDRAULIC STRUCTURES THEY ARE THE GOLD STANDARD WHEN IT COMES TO VERY ACCURATE POSITION MEASUREMENTS.

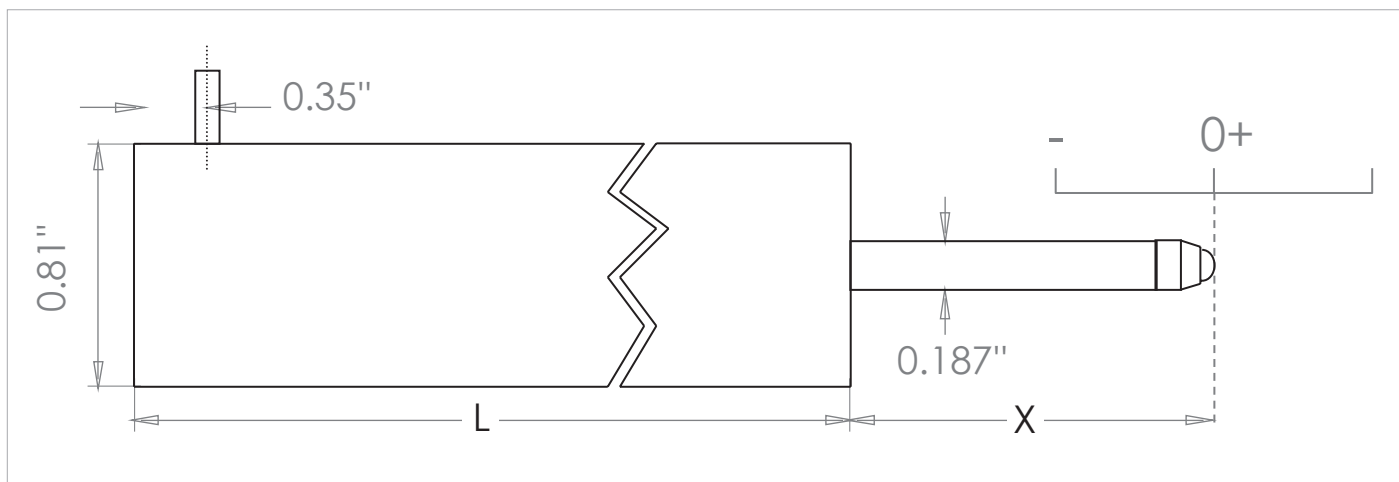
## FEATURES

- + Bridge deflection
- + Expansion joint movement
- + Concrete crack monitoring
- + Moveable structure testing
- + Tainter gate differential movement
- + Lift bridge movement
- + Laboratory testing

## APPLICATIONS

- + 6 to 18 Vdc input range
- + Stainless steel construction
- + Spring return armature
- + High cycle life
- + High accuracy
- + < 0.0001" resolution

## DIMENSIONS



## SPECIFICATIONS

MODEL	LVDT-01-005	LVDT-01-010	LVDT-01-020	LVDT-01-030
RANGE	±0.5 in ( ±12.5 mm)	±1.0 in ( ±25 mm)	±2.0 in ( ±50 mm)	±3.0 in ( ±75 mm)
LINEARITY ERROR (% F.S.) <sup>1</sup>	< ±0.5	< ±0.5	< ±0.5	< ±0.5
MAIN BODY DIMENSION	0.81 x 7.2 in (20.5 x 183 mm)	0.81 x 8.3 in (20.5 x 211 mm)	0.81 x 8.3 in (20.5 x 325 mm)	0.81 x 8.3 in (20.5 x 437 mm)
LENGTH (SHAFT CENTERED)	8.7 in (221 mm)	10.8 in (274 mm)	15.8 in (401 mm)	21.7 in (551 mm)
TOTAL WEIGHT	8 oz (226g)	10 oz (283g)	14 oz (397g)	17.6 oz (499g)
SPRING FORCE AT CENTER	0.29 lb (1.30 N)	0.45 lb (2.0 N)	0.375 lb (1.67 N)	1.0 lb (4.44 N)
SPRING RATE	2.0 oz/in (0.022 N/mm)	3.0 oz/in (0.033 N/mm)	1.8 oz/in (0.02 N/mm)	3.2 oz/in (0.035 N/mm)
INWARD OVER-TRAVEL	0.04 in (1.01 mm)	0.12 in (3.05 mm)	0.31 in (7.87 mm)	0.59 in (14.99 mm)
OUTWARD OVER-TRAVEL	0.51 in (12.95 mm)	0.39 in (9.91 mm)	0.55 in (13.97 mm)	0.59 in (14.99 mm)
SUPPLY VOLTAGE	+6.0 to +18 Vdc			
POWER RATING MAX TYPICAL INTELLIDUCER <sup>2</sup>	1080 mW @ 18 Vdc 900 mW @ 15 Vdc 35.5 mW @ +5.0 Vdc			
OUTPUT	±2.2 Vdc			
OUTPUT LOAD	2 kΩ (minimum)			
OUTPUT RIPPLE	30 mV (peak-to-peak)			
ELECTRICAL OUTPUT BANDWIDTH	200 Hz (flat)			
OUTPUT IMPEDANCE	2Ω			
TEMPERATURE COEFFICIENT (ZERO)	±0.006% F.S./°F ( ±0.0108% F.S./°C) (typical)			
TEMPERATURE COEFFICIENT (SPAN)	±0.017% F.S./°F ( ±0.0306% F.S./°C) (typical)			
OPERATING TEMPERATURE RANGE	-40° to +158°F (-40° to +80 °C)			
CABLE	Custom lead cable length made to order: IC-02-187 [22 AWG, 2 shielded pair, drain wire, red PVC jacket] IC-02-250 [22 AWG, 2 shielded pair, drain wire, blue PVC jacket]			

<sup>1</sup> Lower linearity error version available upon request.

<sup>2</sup> Intelliducer connector required with STS Intelliducer data acquisition nodes.

Available in:  **Schedule**  
Contract GS07F197CA

## OPTIONS & ACCESSORIES



**Intelliducer Connector:** Required for use with STS Intelliducer Nodes, cable is connected and potted for a weatherproof seal.



**Adjustable Mounting Bracket:** Two-part machined aluminum, angle adjustable mounting bracket. Works with the tripod (MNT-TP-01).



**Nylon Mount:** Glass-filled nylon mounting bracket. Minimum of two required per LVDT.



**Tripod:** Camera-style adjustable tripod.