

Series 350

General Purpose DC Gaging LVDTs

The Series 350 DC Gaging Transducers are an integrated package consisting of a spring loaded spindle, precision linear variable differential transformer, a solid state oscillator, and a phase-sensitive demodulator. The transducer is designed for excellent linearity, infinite resolution, and high sensitivity. Input and output circuits are electrically isolated from each other and from the coil assembly housing, making them usable directly in floating or ground return systems. DC indicators, recorders, and control systems can usually be driven directly by the large DC output. The spindle, when displaced axially within the coil assembly, produces a voltage change in the output directly proportional to the displacement.



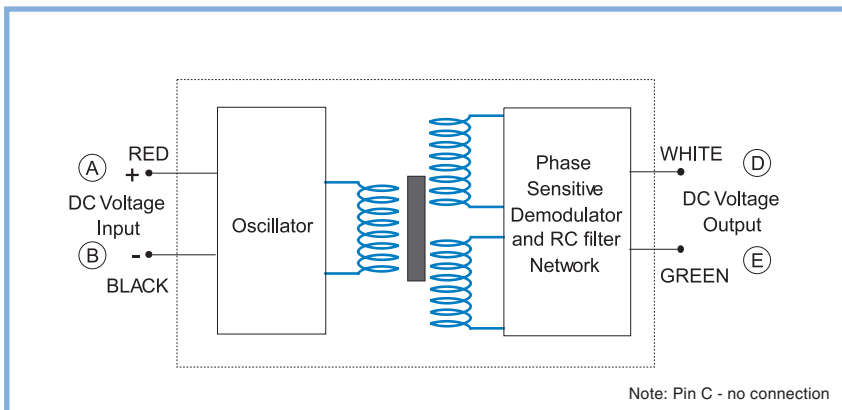
KEY FEATURES

- Ranges from $\pm 0.05''$ to $\pm 3.0''$
- High Sensitivity
- Non-linearity < 0.5%
- 6 to 28 VDC Excitation

SPECIFICATIONS - ELECTRICAL

MODEL NUMBER	0350-0000	0350-0010	0351-0000	0351-0006	0352-0000	0353-0000	0354-0000	0355-0000	0356-0000
WORKING RANGE, \pm Inches (mm)	0.050 (1.27)	0.050 (1.27)	0.10 (2.54)	0.10 (2.54)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.00 (50.8)	3.00 (76.2)
MECH. TRAVEL, Inches (mm)	0.16 (4.06)	0.14 (3.56)	0.31 (7.87)	0.31 (7.87)	0.75 (19.1)	1.25 (31.8)	2.25 (57.2)	4.25 (108)	6.25 (159)
INPUT, VDC	6.0 Min. to 28 Max.								
NOMINAL F.S. OUTPUT \pm VDC (tested with load impedance simulating open circuit)									
@ 6 VOLT INPUT	1.2	1.2	2.1	2.0	1.6	3.0	4.3	4.0	3.1
@ 15 VOLT INPUT	3.0	3.0	5.4	5.8	4.2	7.5	10.8	10.0	7.8
@ 24 VOLT INPUT	5.0	5.0	9.0	9.4	7.0	12.5	18.0	16.0	13.0
@ 28 VOLT INPUT	5.6	5.8	10.1	10.4	7.9	14.0	20.3	18.7	14.6
INPUT CURRENT	6.3 mA @ 6 Volt input to 48 mA @ 28 Volt input								
LINEARITY % FULL SCALE OVER TOTAL WORKING RANGE	± 0.50								
INTERNAL CARRIER FREQ., Hz NOM. GREATER THAN:	13000	13000	12000	14000	3600	3400	3200	1500	1400
% RIPPLE (RMS) NOM.	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.0	1.0
OUTPUT IMPEDANCE, Ohms	2500	2500	3500	3500	5200	5500	5600	5500	5600
TEMPERATURE RANGE	-65°F to +200°F (-54°C to +93°C)								
RESOLUTION	Infinite								

BLOCK DIAGRAM



Notes:

1. Polarity of excitation must be observed for proper function. Reversal will not damage the unit.
2. Load Impedance of 50 KOhms minimum required for proper operation.
3. Output polarity will be positive on one side of null, negative on the other side of null. Transducers are calibrated at 24 VDC.
4. White lead is more positive with respect to the Green lead when the core is moved toward the lead end.

SPECIFICATIONS - MECHANICAL

MODEL	UNITS	0350-0000	0350-0010	0351-0000	0351-0006	0352-0000	0353-0000	0354-0000	0355-0000	0356-0000
FIGURE #		1	3	1	3	2	2	2	2	2
TOTAL LENGTH A	Inches (mm)	3.01 (76.5)	2.63 (66.8)	3.52 (89.4)	3.74 (95.0)	9.89 (251)	10.89 (277)	15.31 (389)	25.43 (646)	35.02 (890)
SHAFT EXTENSION B	Inches (mm)	0.41 (10.4)	0.39 (9.91)	0.56 (14.2)	0.56 (14.2)	1.42 (36.1)	1.42 (36.1)	2.42 (61.5)	4.75 (121)	6.75 (172)
TIP FORCE MAX	Grams	57	57	170	85	312	425	482	1,276	1,361
WEIGHT	Grams	200	104	207	125	239	275	372	625	845

