



E SERIES

Economy Series AC LVDT

SPECIFICATIONS

- ◆ **Economical**
- ◆ **Stroke ranges from ± 0.1 to ± 2 inch**
- ◆ **AC operation, 50Hz to 10kHz**
- ◆ **Magnetically shielded case**
- ◆ **Available with imperial or metric core**

The **E Series** of LVDTs is highly economical, satisfying numerous applications in which LVDT performance and reliability are desired, but where budgets are limited. With a linearity of just $\pm 0.5\%$ of full range (E 2000, $\pm 1.0\%$), the E Series is suitable for most applications with moderate operating temperature environments. Housed in magnetic stainless steel for protection against electromagnetic and electrostatic interference, the E Series rugged construction is capable of resisting the shock and vibration of most industrial applications.

Like in most of our LVDTs, the E Series windings are vacuum impregnated with a specially formulated, high temperature, flexible resin, and the coil assembly is potted inside its housing with a two-component epoxy. This provides excellent protection against hostile environments such as high humidity, vibration and shock.

FEATURES

- ◆ Customary LVDT performance
- ◆ AISI 400 Series stainless steel case
- ◆ Imperial or metric core

APPLICATIONS

- ◆ General industrial
- ◆ Moderate operating temperature environments
- ◆ Cost sensitive applications

PERFORMANCE SPECIFICATIONS

| ELECTRICAL SPECIFICATIONS | | | | | | |
|---------------------------|-----------------------------------|--------------|--------------|--------------|-------------|-------------|
| Parameter | E 100 | E 200 | E 300 | E 500 | E 1000 | E 2000 |
| Stroke range | ±0.1 [±2.54] | ±0.2 [±5.08] | ±0.3 [±7.62] | ±0.5 [±12.7] | ±1 [±25.4] | ±2 [±50.8] |
| Sensitivity, V/V/inch | 2.40 | 1.57 | 1.20 | 0.68 | 0.76 | 0.46 |
| Sensitivity, mV/V/mm | 94.5 | 61.8 | 47.2 | 26.8 | 29.9 | 18.1 |
| Output at stroke ends (*) | 240mV/V | 314mV/V | 360mV/V | 340mV/V | 760mV/V | 920mV/V |
| Non-linearity (maximum) | ±0.5% of FR | ±0.5% of FR | ±0.5% of FR | ±0.5% of FR | ±0.5% of FR | ±1.0% of FR |
| Phase shift | -3° | -5° | -8.5° | +6° | +4° | 0° |
| Input impedance (PRI) | 660Ω | 970Ω | 960Ω | 408Ω | 525Ω | 585Ω |
| Output impedance (SEC) | 960Ω | 1010Ω | 1005Ω | 162Ω | 690Ω | 875Ω |
| Input voltage & frequency | 3 VRMS @ 50Hz to 10kHz, sine wave | | | | | |
| Test input frequency | 2.5kHz | | | | | |
| Null voltage (maximum) | 1% of FRO | | | | | |

| ENVIRONMENTAL SPECIFICATIONS & MATERIALS | |
|--|--|
| Operating temperature | -65°F to +200°F [-55°C to 95°C] |
| Shock survival | 500 g (11ms half-sine) |
| Vibration tolerance | 20 g up to 2kHz |
| Housing material | AISI 400 Series stainless steel |
| Electrical connection | Six lead-wires, 28 AWG, PTFE insulated, 1 foot [0.3m] long |
| IEC 60529 rating | IP61 |

Notes:

All values are nominal unless otherwise noted

Electrical specifications are for the test frequency indicated in the table

Dimensions are in inch [mm] unless otherwise noted

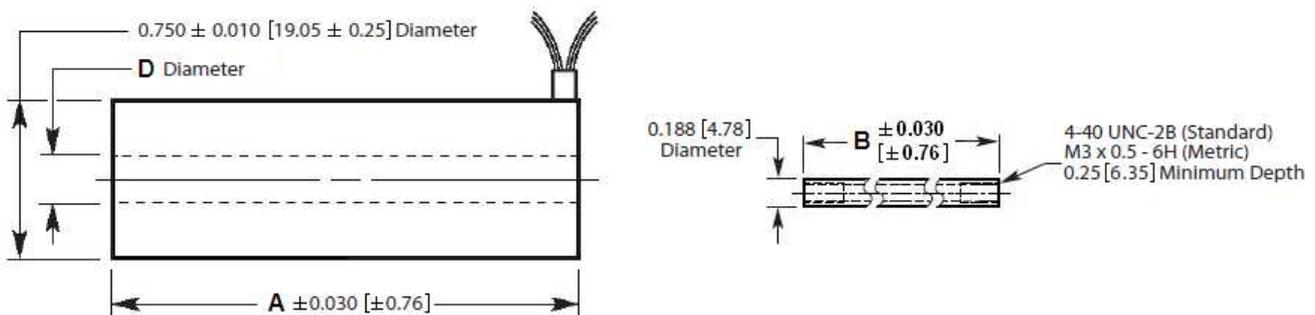
(*): Unit for output at stroke ends is millivolt per volt of excitation (input voltage)

FR: Full Range is the stroke range, end to end; FR=2xS for ±S stroke range

FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range

MECHANICAL SPECIFICATIONS

| Parameter | E 100 | E 200 | E 300 | E 500 | E 1000 | E 2000 |
|------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Body length "A" | 1.75 [44.5] | 2.25 [57.2] | 2.77 [70.4] | 4.56 [115.8] | 7.05 [179.1] | 10.57 [268.5] |
| Core length "B" | 1.25 [31.8] | 1.48 [37.6] | 1.62 [41.2] | 3.00 [76.2] | 3.80 [96.5] | 6.20 [157.5] |
| Bore diameter "D" | 0.236 [6.00] | 0.236 [6.00] | 0.236 [6.00] | 0.220 [5.59] | 0.220 [5.59] | 0.220 [5.59] |
| Body weight, oz [gram] | 1.09 [31] | 1.27 [36] | 1.59 [45] | 1.98 [56] | 2.43 [69] | 4.48 [127] |
| Core weight, oz [gram] | 0.12 [3.4] | 0.13 [3.8] | 0.17 [4.8] | 0.30 [8.4] | 0.39 [11] | 0.60 [17] |

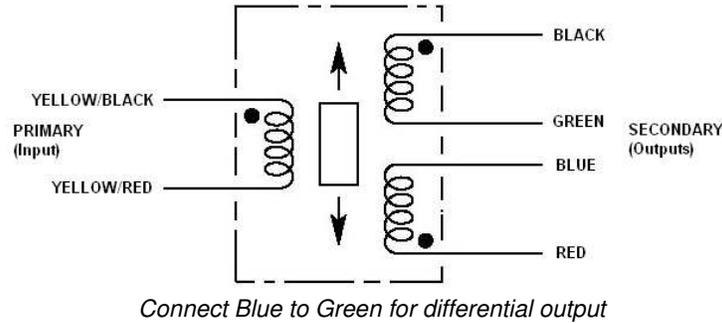


Dimensions are in inch [mm]

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WIRING INFORMATION



ORDERING INFORMATION

| Description | Model | Part Number |
|--|--------|--------------|
| ±0.1 inch LVDT | E 100 | 02560541-000 |
| ±0.2 inch LVDT | E 200 | 02560542-000 |
| ±0.3 inch LVDT | E 300 | 02560543-000 |
| ±0.5 inch LVDT | E 500 | 02560544-000 |
| ±1 inch LVDT | E 1000 | 02560545-000 |
| ±2 inch LVDT | E 2000 | 02560546-000 |
| Metric core option (M3x0.5-6H threads) | All | XXXXXXXX-006 |

| ACCESSORIES | |
|--|--------------|
| Core connecting rod, 6 inches long, 4-40 threads | 05282946-006 |
| Core connecting rod, 12 inches long, 4-40 threads | 05282946-012 |
| Core connecting rod, 24 inches long, 4-40 threads | 05282946-024 |
| Core connecting rod, 36 inches long, 4-40 threads | 05282946-036 |
| Core connecting rod, 6 inches long, M3x0.5 metric threads | 05282977-006 |
| Core connecting rod, 12 inches long, M3x0.5 metric threads | 05282977-012 |
| Mounting block | 04560950-000 |