E Series

Economical LVDT

The economical E series of LVDTs satisfies numerous applications where LVDT performance and reliability are desired, but where budgets are limited. Linearity is 0.5% of full-range for all units except long-stroke models. The E series is particularly suitable for moderate operating temperatures. Its rugged construction will resist the shocks and vibrations encountered in most industrial applications. The E series is housed in magnetic stainless steel for protection against electromagnetic and electrostatic interference.

Features

- Customary LVDT performance at minimal cost
- □ Magnetically shielded case
- Compatible with all Schaevitz[®] signal conditioners

Applications

□ Moderate operating temperatures

Options

□ Metric thread core



Specifications

| Input Voltage | 3 V rms (nominal) |
|------------------------------|--|
| Frequency Range | 50 Hz to 10 kHz |
| Operating Temperature | -65°F to 200°F |
| Range | (-55°C to 95°C) |
| Null Voltage | <1.0% full scale output |
| Shock Survival | 500 <i>g</i> for 11 msec |
| Vibration Tolerance | 20 <i>g</i> up to 2 kHz |
| Coil Form Material | High density, glass-filled polymer |
| Housing Material | AISI 400 series stainless steel |
| Lead Wires | 28 AWG, stranded copper, Teflon-insulated, 12 inches (300 mm) long (nominal) |

* Performance and electrical specifications for alternative frequencies will differ from the standard specifications listed below which are based on a 2.5 kHz excitation frequency. Consult factory for further information.

Performance and Electrical Specifications @ 2.5 kHz¹

| E Series Model | Nominal Linear Range | | Linearity | Sensitivity mV out/V in Per | | Impedance Ohms | | Phase Shift |
|-------------------|-------------------------|-------------|-----------------|--------------------------------|----|-------------------|------|----------------|
| Number | inches | mm | (±% full range) | 0.001 in | mm | Pri | Sec | Degrees |
| E 100 | ± 0.100 | ±2.54 | 0.5 | 2.4 | 96 | 660 | 960 | -3 |
| E 200 | ±0.200 | ±5.08 | 0.5 | 1.57 | 63 | 970 | 1010 | -5 |
| E 300 | ±0.300 | ±7.62 | 0.5 | 1.2 | 48 | 960 | 1005 | -8.5 |
| E 500 | ±0.500 | ± 12.70 | 0.5 | 0.68 | 29 | 408 | 162 | +6 |
| E 1000 | ± 1.00 | ±25.4 | 0.5 | 0.76 | 30 | 525 | 690 | +3.7 |
| E 2000 | ±2.00 | ±50.8 | 1.0 | 0.46 | 18 | 535 | 875 | 0 |

¹All calibration is performed at room ambient temperature.

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E Series LVDT Low-cost AC-Operated

How to Order

Specify the E Model followed by the desired option number(s) <u>added together</u>.

Ordering Example:

Model Number E 100-006 is an E Series LVDT with a ±0.10" range (E 100), and a Metric thread core (006).

| | PRI | SEC | | |
|-------------|---------|------------------|---------------------------|--|
| | | | - Red | |
| Yel/Black — | •ි | | - Blue | |
| Yel/Red — | 8 [| | - Green | |
| | | ¥ <u>8</u> | Black | |

Lead Side

Connect Green to Blue for differential output

| E Model | Options | |
|--------------------------|---------------|-----------------------------------|
| E 100 E 200 E 300 | Number 006 | Description Metric Thread Core |
| E 400 E 500 E 1000 | | |
| E 2000 | | |
| | | |
| | <u> </u> | |



Mechanical Specifications

| E Series | Weight | | | | Dimensions | | | | | |
|----------|----------|-----|------|------|------------|-------|------------|-------|----------|--|
| Model | lel Body | | Со | Core | | ody) | B (Core) | D (B | D (Bore) | |
| Number | OZ | gm | oz | gm | in | mm | in mm | in | mm | |
| E 100 | 1.09 | 31 | 0.12 | 3.4 | 1.75 | 44.5 | 1.25 31.8 | 0.236 | 6.00 | |
| E 200 | 1.27 | 36 | 0.13 | 3.8 | 2.25 | 57.2 | 1.48 37.6 | 0.236 | 6.00 | |
| E 300 | 1.59 | 45 | 0.15 | 4.3 | 2.77 | 70.4 | 1.63 41.4 | 0.236 | 6.00 | |
| E 500 | 1.98 | 56 | 0.30 | 8.4 | 4.56 | 115.8 | 3.00 76.2 | 0.210 | 5.33 | |
| E 1000 | 2.44 | 69 | 0.39 | 11 | 7.00 | 177.8 | 3.80 96.5 | 0.210 | 5.33 | |
| E 2000 | 4.49 | 127 | 0.60 | 17 | 10.50 | 266.7 | 6.20 157.5 | 0.210 | 5.33 | |

Wiring

