

E Series – Economy Series LVDT



- Economical
- Stroke ranges from ± 0.1 to ± 2.0 inch
- AC operation, 50Hz to 10kHz
- Magnetically shielded case
- Available with imperial or metric core

DESCRIPTION

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.

Measurement Specialties, Inc. (NASDAQ MEAS) offers many other types of sensors and signal conditioners. Data sheets can be downloaded from our web site at: <http://www.meas-spec.com/datasheets.aspx>

MEAS acquired Schaevitz Sensors and the **Schaevitz®** trademark in 2000.

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]	± 1.0 [± 25.4]	± 2.0 [± 50.8]
Sensitivity, mV/V/.001in	2.40	1.57	1.20	0.68	0.76	0.46
Sensitivity, mV/V/mm	95	62	47	27	30	18
Output at stroke ends (*)	240mV/V	314mV/V	360mV/V	340mV/V	760mV/V	920mV/V
Linearity (maximum band)	$\pm 0.5\%$ FS	$\pm 0.5\%$ FS	$\pm 0.5\%$ FS	$\pm 0.5\%$ FS	$\pm 0.5\%$ FS	$\pm 1.0\%$ FS
Phase shift	-3°	-5°	-8.5°	+6°	+4°	0°
Input impedance (PRI)	660 Ω	970 Ω	960 Ω	408 Ω	525 Ω	585 Ω
Output impedance (SEC)	960 Ω	1010 Ω	1005 Ω	162 Ω	690 Ω	875 Ω
Input voltage	3Vrms sine wave					
Input frequency range	50Hz to 10kHz					
Test input frequency	2.5KHz					
Null voltage (maximum)	1.0% of FSO					

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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
Lead wire type/length	Six lead-wires, 28 AWG, PTFE insulated, 1 foot [0.3m] long

Notes:

All values are nominal unless otherwise noted

Electrical specifications are for the test frequency indicated in the table

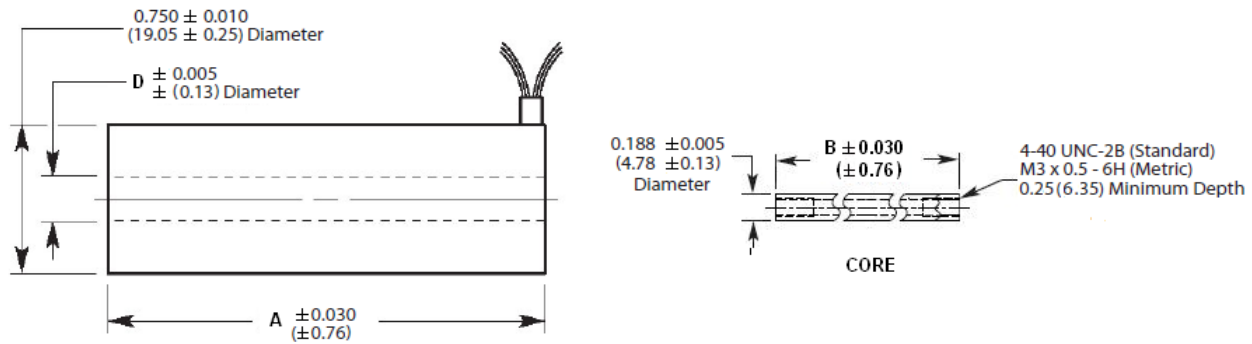
Dimensions are in inch [mm] unless otherwise noted

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

FS: Full Scale is 2X for ±X stroke; FSO: Full Scale Output is the output at X position for ±X stroke

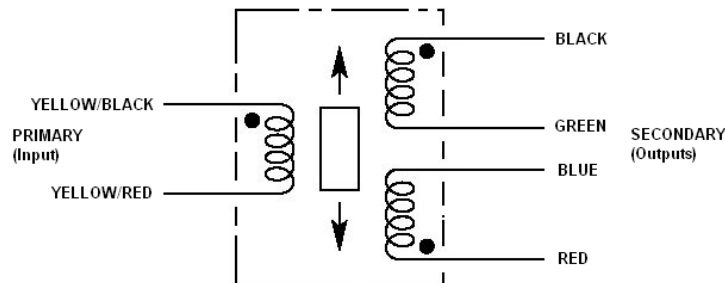
MECHANICAL SPECIFICATIONS

	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 inches [mm]

WIRING SCHEMATIC



Connect Blue to Green for differential output

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ORDERING INFORMATION

Description	Model	Part Number
±0.1 inch	E-100	02560541-000
±0.2 inch	E-200	02560542-000
±0.3 inch	E-300	02560543-000
±0.5 inch	E-500	02560544-000
±1.0 inch	E-1000	02560545-000
±2.0 inch	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

Note:

Refer to our "[Accessories for LVDT's](#)" brochure for our LVDT signal conditioning instrumentation and other accessories