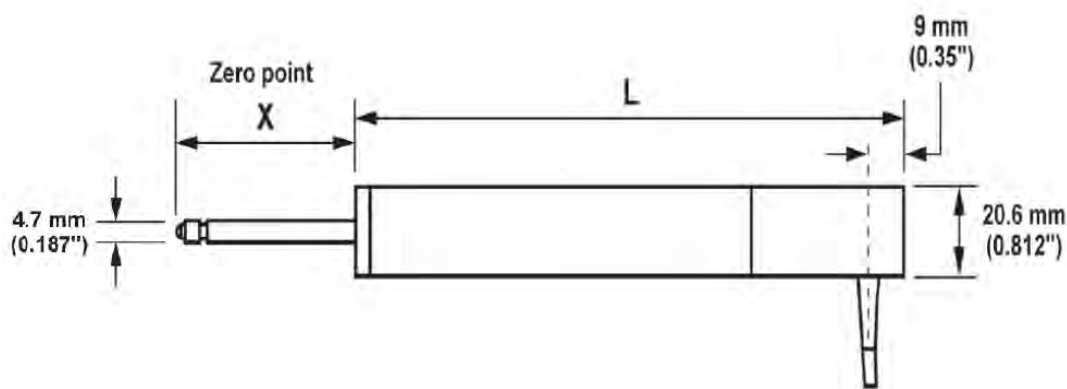




### “LE” LVDT SERIES

These high-performance transducers are the standard AC-EXCITED LONG-STROKE LVDT models with SPRING-EXTENDED ARMATURE. They are ideal for harsh applications under conditions of high ambient temperature and/or vibration. Each model requires separate signal conditioning, and will deliver its best performance when energized between 0.5 and 7 V-AC (RMS) at 5 kHz, using a high-quality carrier amplifier. Compact size allows use where physical space is limited. All models are fitted with 2 meters (6.6 ft.) of shielded cable.



Model	Range $\pm$	L	X (nom)	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel	Sensitivity (nom)
DS1000B	12.5mm (0.5")	5.25"	1.5"	6.5oz	5oz	2oz/inch	0.04"	0.51"	0.7V/V
DS2000B	25mm (1")	6.35"	2.5"	8.0oz	7oz	3oz/inch	0.1"	0.39"	0.9V/V
DS4000B	50mm (2")	10.85"	3.0"	14.0oz	6oz	2oz/inch	0.3"	0.55"	1.5V/V
DS6000B	75mm (3")	15.25"	4.5"	1.1lb	1lbs	3oz/inch	0.6"	0.59"	1.5V/V

# LVDT

AC, LONG-STROKE, SPRING-EXTENDED  
[LE SERIES]

## SPECIFICATIONS

**Excitation:** 0.5 to 7 V-AC (RMS), regulated (3)

**Armature:** Spring-extended

**Linearity:**  $\pm 0.5\%$  of full scale (4)

**Output (full-scale RMS):** See table, above

**Residual Null Output:** 0.1% of full-scale output (quadrature and harmonic)

**Phase Shift:** Typically  $10^\circ$  (depends on frequency)

**Output Load (optimum):** 100k  $\Omega$

**Temperature Coefficient (Zero and Span):** 0.01% of full scale/ $^\circ\text{C}$  (0.005% of full scale/ $^\circ\text{F}$ )

**Operating Temperature Range:**  $-50^\circ\text{C}$  to  $+125^\circ\text{C}$  ( $-58^\circ\text{F}$  to  $+257^\circ\text{F}$ ) 5

1. Note the AC "LE" Series LVDT's have a revised version to "B" which indicate the 14 pin amphenol connectors are not supplied
2. Other spring rates can be accommodated.
3. Factory calibration is at 5 V-AC (RMS) at 5 kHz (50 mA maximum), with output load of 100k  $\Omega$
4.  $\pm 0.25\%$  and  $\pm 0.1\%$  linearity are available as options on some ranges (contact the factory for details).
5.  $-50^\circ\text{C}$  to  $+200^\circ\text{C}$  ( $-58^\circ\text{F}$  to  $+392^\circ\text{F}$ ) optional.

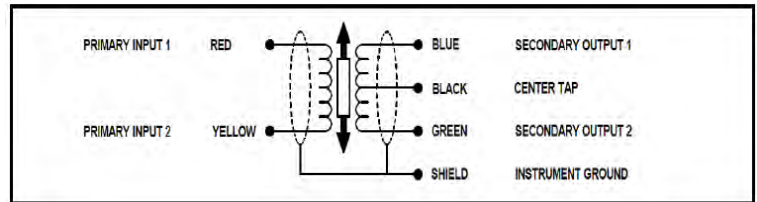
### Wiring Details

#### Wire Color

RED  
YELLOW  
Shield  
BLUE  
GREEN  
RED  
YELLOW  
BLACK

#### Transducer Connection

Primary Input 1 (+ Excitation)  
Primary Input 2 (- Excitation)  
Shield  
Secondary Output 1 (+ Signal)  
Secondary Output 2 (- Signal)  
+ Excitation Sense  
- Excitation Sense  
Center Tap



**Note as of June 2018:** Version has been updated to "B" to denote the transducer is supplied without the 14 pin Amphenol connector pair. For recommended in-line connector pair - use Daytronic part number 64090.00. Technical document 92377.00.