

# HIGH-ACCURACY DC LONG-STROKE DISPLACEMENT TRANSDUCERS

**LD600 Series**  
 $\pm 15$  to  $\pm 300$  mm  
 $\pm 0.6$  to  $\pm 12$ " Stroke

Starts at  
**\$695**



- ✓ Rugged Stainless Steel Case
- ✓ Custom Built-In Hybrid IC Gives Linear DC Output
- ✓ 0.25% Linearity
- ✓ Spring-Loaded Armature
- ✓ Compatible with Standard DC Signal Conditioning Modules



DP41-S meter,  
 \$545, see section D.

LD600-50, \$810,  
 shown smaller  
 than actual size.

LD600-250, \$1400,  
 shown smaller  
 than actual size.

The transducers feature spring-return armature, which simplifies installation.

The long life, infinite resolution, and excellent repeatability of LD600 Series transducers make them suitable for many demanding applications.

The LD600 Series provides our longest stroke length (for DC-powered transducers): up to 300 mm (12"). Our custom hybrid IC, composed of an oscillator/demodulator and filter, requires DC excitation and produces a linear mV signal proportional to displacement. The built-in electronics facilitate setup. The mV/V output is compatible with DC metering, recording, and data interface devices.

Long-stroke transducers require special manufacturing methods to ensure linearity, including special coil-winding techniques. The windings are packaged in a rugged housing, and the transformer core is fitted with an extension rod and low-friction nylon bearings to guide it.

## SPECIFICATIONS

- ELECTRICAL**
- Linearity:** 0.25% FS sensitivity: (mV/V/mm) see chart on next page (actual output supplied with each unit)
  - Excitation:** Vdc regulated (see ranges in chart on next page)
  - Energizing Current:** See chart on next page
  - Response Time:** 100 Hz @ 3 dB
  - Output Ripple:** <1% FS
  - Thermal Effect:**
    - Zero:** 0.003%/°F (0.005%/°C)
    - Sensitivity:** 0.009%/°F (0.015%/°C)
  - Compensated Temperature Range:** -20 to 80°C (-4 to 175°F)
  - Operating Temperature Range:** -20 to 80°C (-4 to 175°F)

**Electrical Connection:** 2.9 m (9') shielded, color-coded cable

**Calibration:** Provided with a transducer output impedance of 2.0 kΩ into a calibration load of 20 kΩ at 20°C (68°F); variations in these parameters will change performance

**Output Impedance:** 2 kΩ

**Min Load:** 20 kΩ

## MECHANICAL

**Threaded Core:** See chart on next page

**Core Material:** Ni/Fe—Radio Metal 50

**Case Material:** 400 Series SS

**Weight:** See chart on next page

## CONNECTIONS

**Electrical Connections:**

- Red:** + Excitation
- Blue:** - Excitation
- White:** + Signal\*
- Green:** - Signal

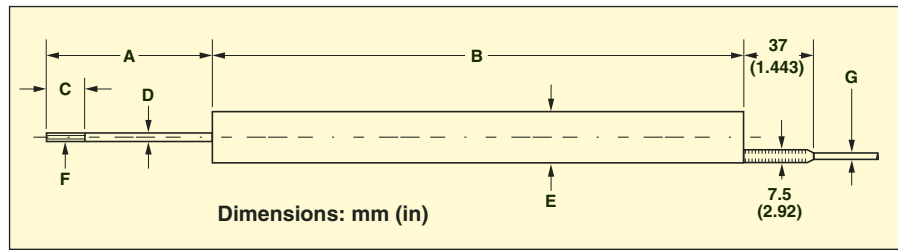
\* Polarity is for inward displacement.





DP41-S meter, \$545, see section D.

LD600-25, \$710,  
shown smaller  
than actual size.



**MOST POPULAR MODELS HIGHLIGHTED!**

**To Order (Specify Model Number)**

MODEL NO.	LINEAR STROKE, mm (in)	PRICE	COMPATIBLE METER*
LD600-15	±15 (0.6)	\$695	DP41-S
LD600-25	±25 (1.0)	710	DP41-S
LD600-50	±50 (2.0)	810	DP41-S
LD600-100	±100 (4.0)	945	DP41-S
LD600-150	±150 (6.0)	1125	DP41-S
LD600-250	±250 (10.0)	1400	DP41-S
LD600-300	±300 (12.0)	1600	DP41-S

**ACCESSORY**

MODEL NO.	PRICE	DESCRIPTION
EE-2530	\$220	Reference Book: Handbook of Systems Engineering

Comes with complete operator's manual.

\* See section D for compatible meter.

Ordering Example: LD600-150, displacement transducer with a range of ±150 mm (±6"), \$1125.

**MECHANICAL SPECIFICATIONS**

MODEL NO.	LINEAR STROKE	DIMENSIONS: mm (in) AT ELECTRICAL ZERO						
	mm (in)*	A	B	C	D	E	F	G
LD600-15	±15 (0.6)	45 (1.76)	97 (3.78)	20 (0.78)	3.17 (0.12)	19 (0.74)	M3	3.5 (0.14)
LD600-25	±25 (1.0)	60 (2.34)	156 (6.08)	20 (0.78)	4.0 (0.16)	19 (0.74)	M4	3.5 (0.14)
LD600-50	±50 (2.0)	85 (3.32)	280 (10.92)	20 (0.78)	4.0 (0.16)	19 (0.74)	M4	3.5 (0.14)
LD600-100	±100 (4.0)	145 (5.66)	450 (17.55)	20 (0.78)	4.75 (0.19)	25 (0.98)	M5	4.5 (0.18)
LD600-150	±150 (6.0)	197 (7.68)	552 (21.53)	19 (0.74)	4.75 (0.19)	25 (0.98)	M5	4.5 (0.18)
LD600-250	±250 (10.0)	298 (11.62)	755 (29.45)	19 (0.74)	4.75 (0.19)	25 (0.98)	M5	4.5 (0.18)
LD600-300	±300 (12.0)	349 (13.61)	857 (33.42)	19 (0.74)	4.75 (0.19)	25 (0.98)	M5	4.5 (0.18)

MODEL NO.	MAX STROKE ±mm (in)*	WEIGHT		SPRING RATE	FORCE* GRAMS	SENSITIVITY mV/V/mm	CURRENT @10 mV, mA	INPUT VOLTAGE RANGE
		BODY	ARMATURE					
LD600-15	22 (0.89)	60 g	10 g	3.30 g/mm	110	28.00	10	9 to 24 Vdc
LD600-25	35 (1.38)	96 g	18 g	2.34 g/mm	150	16.50	18	9 to 24 Vdc
LD600-50	62 (2.44)	170 g	25 g	1.95 g/mm	185	6.00	40	9 to 24 Vdc
LD600-100	125 (4.92)	600 g	54 g	10.19 g/mm	120	2.00	40	9 to 15 Vdc
LD600-150	178 (7.01)	900 g	78 g	1.00 g/mm	120	1.33	40	9 to 15 Vdc
LD600-250	279 (10.88)	1300 g	106 g	Cannot Be Spring Loaded		0.80	40	9 to 15 Vdc
LD600-300	330 (12.99)	1600 g	122 g			0.66	40	9 to 15 Vdc

\* At electrical zero, in grams.



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