HIGH-ACCURACY DC LONG-STROKE DISPLACEMENT TRANSDUCERS

LD600 Series

±15 to ±300 mm
±0.6 to ±12" Stroke

Starts at
$695

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

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

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

- **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**

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.

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.

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

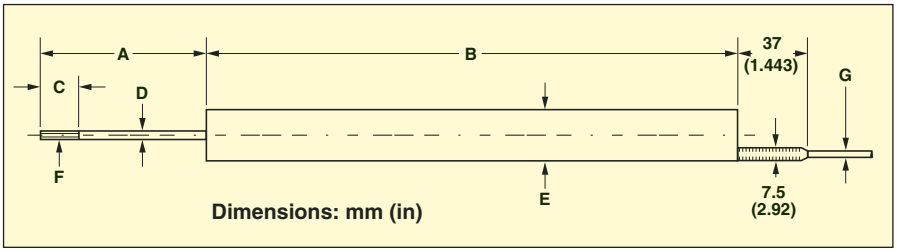
CONNECTIONS

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.



Dimensions: mm (in)

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

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.

ACCESSORY

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

MECHANICAL SPECIFICATIONS

	LINEAR STROKE	DIMENSIONS: mm (in) AT ELECTRICAL ZERO						
MODEL NO.	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 BODY	WEIGHT ARMATURE	SPRING RATE	FORCE* GRAMS	SENSITIVITY mV/Vmm	CURRENT @10 mV, mA	INPUT VOLTAGE RANGE
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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