

HIGH-ACCURACY DC LONG-STROKE DISPLACEMENT TRANSDUCERS

LD600 Series
 ± 15 to ± 300 mm
 ± 0.6 to ± 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

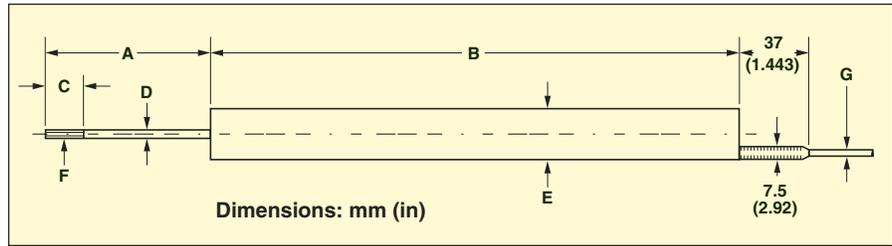
* Polarity is for inward displacement.





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.

omega.co.uk[®]

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

www.omega.co.uk



UNITED STATES

www.omega.com

1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca

Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de

Deckenfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk

Manchester, England
0800-488-488
+44-(0)161-777-6611

FRANCE

www.omega.fr

0800-466-342

BENELUX

www.omega.nl

0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters