

HIGH-ACCURACY AC LONG-STROKE DISPLACEMENT TRANSDUCERS

LD300 Series

±15 to ±300 mm
(±0.6 to ±12")



LD300-100, shown smaller than actual size.

DISPLACEMENT

- ✓ Rugged Stainless Steel Case
- ✓ LVDT—Infinite Resolution
- ✓ 0.25% Linearity
- ✓ Spring-Loaded Armature
- ✓ Works with Standard AC LVDT Signal Conditioning Modules

The LD300 Series provides our longest stroke length—up to ±300 mm (12")—in accordance with the linear variable differential transformer principle. These AC AVDTs are highly accurate.

Special winding techniques ensure excellent linearity. The components are then packaged in a rugged housing and the transformer core is fitted with an extension rod and

very-low-friction nylon bearings that act as guides. The transducer features a spring-return armature.

With their long life, infinite resolution, versatility, and excellent repeatability, these units are suitable for many demanding industrial applications.

SPECIFICATIONS

Linearity: 0.25% full scale

Sensitivity: (mV/V/mm) see chart on next page (actual output supplied with each unit)

Excitation: 1 to 10 Vrms

Excitation Frequency: 1 to 10 kHz

Ennergizing Current:

See chart on next page

Frequency Response: 2 ms

Zero Offset: 0.5% full scale

Thermal Effect:

Zero Sensitivity: 0.008%/°C,
0.005%/°C

Compensated Temperature Range:
-40 to 100°C (-40 to 212°F)

Operating Temperature Range:
-40 to 100°C (-40 to 212°F)

Electrical Connection: 2.7 m (9')
shielded cable

Calibration: Calibrated at 5 V, 5 kHz
with 100K load at 20°C (68°F)

Mechanical

Threaded Core: LD300-15 (M3);
LD300-25, -50 (M4); LD300-100,
-150, -250, -300 (M5)

Core Material: Ni/Fe—Radio Metal 50

Case Material: 400 Series SS

Weight: See chart on next page

Electrical Connections:

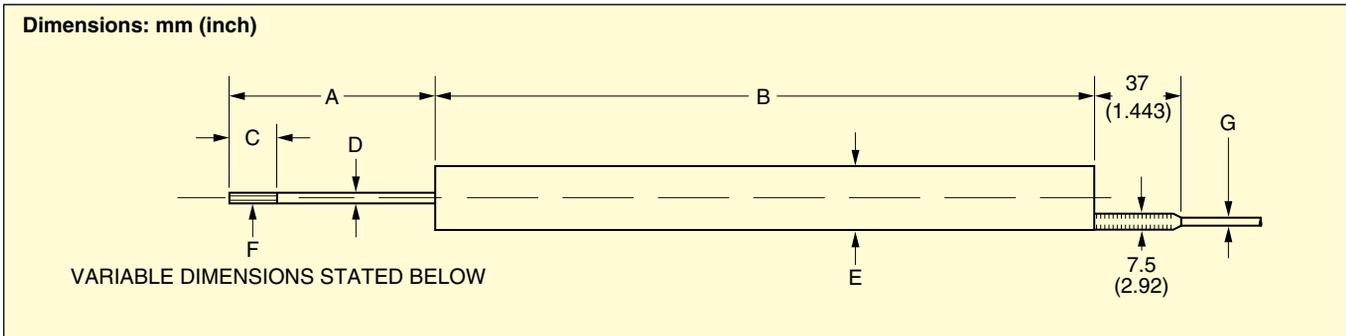
Red and Blue: Excitation (AC)

White: Signal

Green: Signal ground

Red and White: In phase for
inward displacement

AC-POWERED LVDT TRANSDUCERS



| MODEL NO. | LINEAR STROKE mm (inch) | DIMENSIONS: mm (inch) AT ELECTRICAL ZERO | | | | | | |
|-----------|----------------------------|------------------------------------------|-------------|-------------|-------------|-----------|----|------------|
| | | A | B | C | D | E | F | G |
| LD300-15 | ±15 (0.6) | 45 (1.76) | 97 (3.78) | 20.6 (0.78) | 3.17 (0.12) | 19 (0.74) | M3 | 3.5 (0.14) |
| LD300-25 | ±25 (1.0) | 60 (2.34) | 156 (6.08) | 20.6 (0.78) | 4.0 (0.16) | 19 (0.74) | M4 | 3.5 (0.14) |
| LD300-50 | ±50 (2.0) | 85 (3.32) | 280 (10.92) | 20.6 (0.78) | 4.0 (0.16) | 19 (0.74) | M4 | 3.5 (0.14) |
| LD300-100 | ±100 (4.0) | 145 (5.66) | 450 (17.55) | 20.6 (0.78) | 4.75 (0.19) | 25 (0.98) | M5 | 4.5 (0.18) |
| LD300-150 | ±150 (6.0) | 197 (7.68) | 552 (21.53) | 19 (0.74) | 4.75 (0.19) | 25 (0.98) | M5 | 4.5 (0.18) |
| LD300-250 | ±250 (10.0) | 298 (11.62) | 755 (29.45) | 19 (0.74) | 4.75 (0.19) | 25 (0.98) | M5 | 4.5 (0.18) |
| LD300-300 | ±300 (12.0) | 349 (13.61) | 857 (33.42) | 19 (0.74) | 4.75 (0.19) | 25 (0.98) | M5 | 4.5 (0.18) |

| To Order | | |
|-----------|----------------------------|-------------------------------|
| MODEL NO. | LINEAR STROKE mm (inch) | COMPATIBLE INSTRUMENTS |
| LD300-15 | ±15 (0.6) | DP-LVDT, LDX-2, LDX-3A, LDX-4 |
| LD300-25 | ±25 (1.0) | DP-LVDT, LDX-2, LDX-3A, LDX-4 |
| LD300-50 | ±50 (2.0) | DP-LVDT, LDX-2, LDX-3A, LDX-4 |
| LD300-100 | ±100 (4.0) | DP-LVDT, LDX-2, LDX-3A, LDX-4 |
| LD300-150 | ±150 (6.0) | DP-LVDT, LDX-3A, LDX-4 |
| LD300-250 | ±250 (10.0) | DP-LVDT, LDX-2, LDX-3A, LDX-4 |
| LD300-300 | ±300 (12.0) | DP-LVDT, LDX-3A, LDX-4 |

Comes with complete operator's manual.

Ordering Example: LD300-100, 100 mm (4.0") stroke LVDT with spring-loaded core.

SPECIFICATIONS

| MODEL NO. | MAXIMUM STROKE mm (inch) | WEIGHT | | SPRING RATE | FORCE* | SENSITIVITY mV/V/mm | ENERGIZING CURRENT | OUTPUT IMPED. | I/O PHASE |
|------------|-----------------------------|------------|---------------|-------------------------|--------|------------------------|--------------------|---------------|-----------|
| | | BODY/LEADS | CORE ASSEMBLY | | | | | | |
| LD300-15 | ±22 (.886) | 60 g | 10 g | 3.30 g/mm | 110 | 34.0 | 6 mA | 220 Ω | 7° |
| LD300-25 | ±35 (1.378) | 96 g | 18 g | 2.34 g/mm | 150 | 20.0 | 4 mA | 210 Ω | 9° |
| LD300-50 | ±62 (2.441) | 170 g | 25 g | 1.95 g/mm | 185 | 9.3 | 4 mA | 160 Ω | 10° |
| LD300-100 | ±125 (4.921) | 600 g | 54 g | 1.19 g/mm | 120 | 5.0 | 6 mA | 160 Ω | 7° |
| LD300-150 | ±178 (7.007) | 900 g | 78 g | 1.00 g/mm | 120 | 3.5 | 5 mA | 150 Ω | 7° |
| LD300-250 | ±279 (10.884) | 1300 g | 106 g | CANNOT BE SPRING LOADED | | 2.1 | 6 mA | 110 Ω | 5° |
| LD-300-300 | ±330 (12.992) | 1600 g | 122 g | | | 1.7 | 9 mA | 90 Ω | 2° |

* At electrical zero, in grams.