

# PRECISION DC GAGING TRANSDUCERS FOR QUALITY CONTROL OR AUTOMATION TOOLING

$\pm 1$  to  $\pm 5$  mm  
( $\pm 0.04$  to  $\pm 0.20$ " )

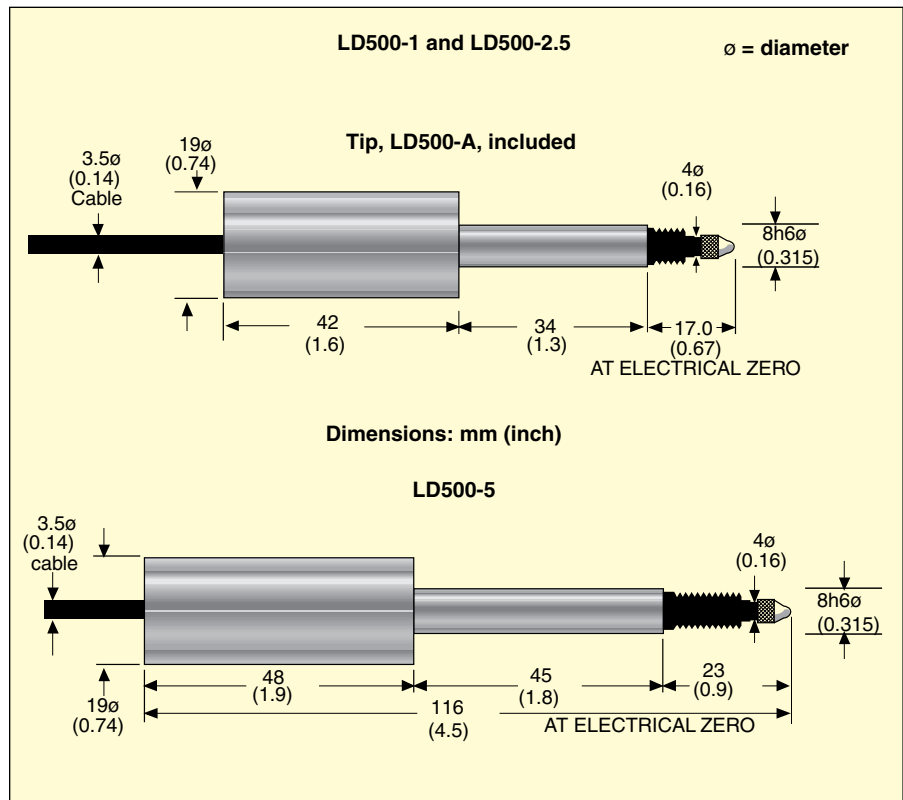


## LD500 Series



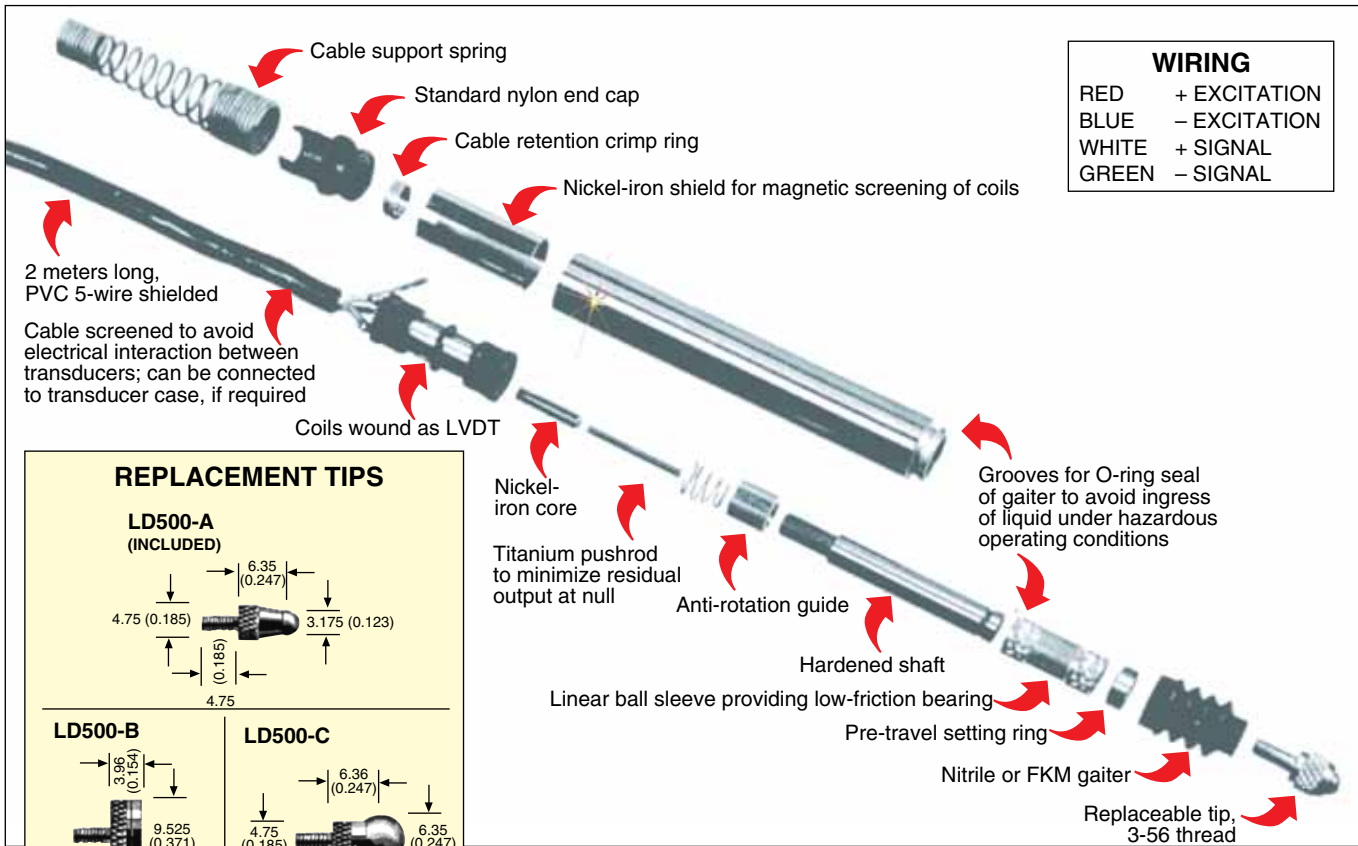
- ✓ High Accuracy and Repeatability
- ✓ Rugged Industrial Construction
- ✓ Replaceable Tips
- ✓ Repeatability Better Than 0.15  $\mu\text{m}$
- ✓ Linear Ball-Bearing Actuator

These precision-manufactured displacement transducers can be mounted to most production lines to perform automatic gaging for quality, sorting, or go/no-go applications. The hardened steel shaft, O-ring seals, and titanium pushrod can withstand most industrial conditions. The hybrid IC module produces a linear mV/V/mm (or inch) output that will interface with most standard DC input meters, recorders, data interfaces, and industrial controllers.



# DC GAGING TRANSDUCERS

DISPLACEMENT



**REPLACEMENT TIPS**

**LD500-A (INCLUDED)**

**LD500-B**

**LD500-C**

**LD500-D**

**Dimensions: mm (inch)**

**To Order Visit [omega.com/ld500](http://omega.com/ld500) for Pricing and Details**

MODEL NO.	STROKE, ±mm (inch)	COMPATIBLE METERS
LD500-1	±1.0 (0.04)	DP41-S, DP25B-S
LD500-2.5	±2.5 (0.10)	DP41-S, DP25B-S
LD500-5	±5.0 (0.20)	DP41-S, DP25B-S

**Ordering Example:** LD500-2.5, DC gaging probe with a range of ±2.5 mm (0.10") and LD500-A tip included.

## SPECIFICATIONS: MECHANICAL

MODEL NO.	LINEAR STROKE mm (inch)**	SPRING RATE	REPEATABILITY	TEMPERATURE RANGE	TEMP COEFFICIENTS		LINEARITY
					ZERO	SENSITIVITY	
LD500-1	±1.0 (0.04)	13 g/mm	<0.15 μm (6 μin)	-20 to 80°C	<0.01%/°C	<0.01%/°C	0.25%
LD500-2.5	±2.5 (0.10)	13 g/mm	<0.15 μm (6 μin)	-20 to 80°C	<0.005%/°C	<0.01%/°C	0.25%
LD500-5	±5.0 (0.20)	10 g/mm	<0.10 μm (4 μin)	-20 to 80°C	<0.005%/°C	<0.01%/°C	0.25%

\*\* Output nulls in mechanical middle.

## SPECIFICATIONS: ELECTRICAL

MODEL NO.	CURRENT	INPUT VOLTAGE	OUTPUT RIPPLE (TYPICAL)	TIME	FREQUENCY RESPONSE	SENSITIVITY†	CABLE
LD500-1	10 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for -3 dB	78 mV/V/mm (1.98 mV/V/0.001 inch)	2 m (6') long, PVC 5-wire shielded
LD500-2.5	10 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for -3 dB	78 mV/V/mm (1.98 mV/V/0.001 inch)	2 m (6') long, PVC 5-wire shielded
LD500-5	13 mA	10 to 24 Vdc	<1% FS	1.5 ms	100 Hz for -3 dB	56 mV/V/mm (1.98 mV/V/0.001 inch)	2 m (6') long, PVC 5-wire shielded

† Actual output supplied with each unit.