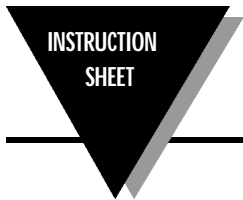




# LD701 SERIES

## Non-Contact Linear Displacement Sensors



INSTRUCTION SHEET

M3767/1201

### GENERAL DESCRIPTION

Non-contact linear sensors have an analog output that is proportional to the damping target. Their compact yet sturdy design makes them well suited for industrial, robotics and laboratory use.

These sensors utilize inductive technology, which means they are capable of sensing any metal target. The sensing distance, however, is influenced by the metal target. Ranges are calibrated using a standard square target. The target is mild steel (Fe 360), 1mm (0.04") thick. The side lengths are the larger of either the sensor's face diameter or three times the sensing distance.

Sensing distances are influenced by different metals other than mild steel. The Correction Factor chart, shows the reduction that occurs when brass or other target metals are used. For example, if the target were brass, the LD701-1/2 would sense 0.5 to 1.0mm (0.02 to 0.04 in).

The voltage output generated is directly linear to the distance being measured. The output can be read by panel meters, recorders, computer boards or dataloggers, all of which are available from OMEGA.

#### Sensing range with mild steel target: mm(in)

#### Wiring:

LD701-1/2	1-2 (0.04 - 0.08)	Brown + Excitation
LD701-2/5	2-5 (0.08 - 0.20)	Black + Output
LD701-5/10	5-10 (0.20 - 0.40)	Blue Common

### SPECIFICATIONS:

EXCITATION: 14-30 VDC @ 20mA  
 unregulated, reverse polarity and short circuit protected  
 Output: 1-9 Vdc  
 Output Load: 20 mA max  
 Repeatability: 0.01 mm (0.0004")  
 Compensated Temp.: 0 to 60C (32 to 140F)  
 Total thermal Effects: 1 um/C/mm  
 Housing: Nickel-plated brass  
 Electrical Conn: 1.8 m (6 ft), 3 -connector  
 22 AWG pigtail leads (20 AWG for 30mm)

Correction Factors	
Mild Steel	1
Stainless Steel	0.75
Brass	0.5
Aluminum	0.4
Copper	0.35



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**WARNING:** These products are not designed for use in, and should not be used for, patient-connected applications.



## WARRANTY/DISCLAIMER

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If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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