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Ω OMEGA[®]

LP801/LP802 Series

LINEAR POTENTIOMETERS



INSTRUCTION
SHEET

M2034-0405

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Unpacking Instructions

Remove the Packing List and verify that you have received all equipment, including the following (quantities in parentheses):

LP800 Series Linear Potentiometer (1)
Operator's Manual (1)

If you have any questions about the shipment, please call the OMEGA Customer Service Department at 1-800-622-2378 or 203-359-1660. We can also be reached on the Internet at omega.com
e-mail: info@omega.com

When you receive the shipment, inspect the container and equipment for signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

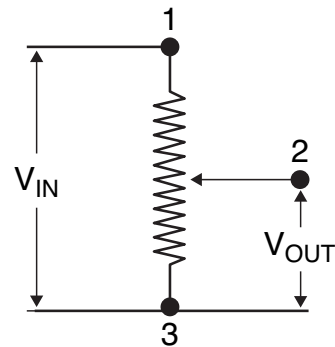
NOTE

The carrier will not honor any damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

General Description

The OMEGA[®] LP801/LP802 Series linear potentiometers can be used to measure linear position or displacement up to 48 inches in a wide variety of manufacturing and process equipment. These units feature front and rear bearings, anodized extruded aluminum housing, stainless steel shaft, and precious metal wipers and contacts for long trouble free life in harsh factory environments. Based on a conductive plastic film element, the LP801/LP802 Series provides high resolution, absolute position measurement without external signal conditioners.

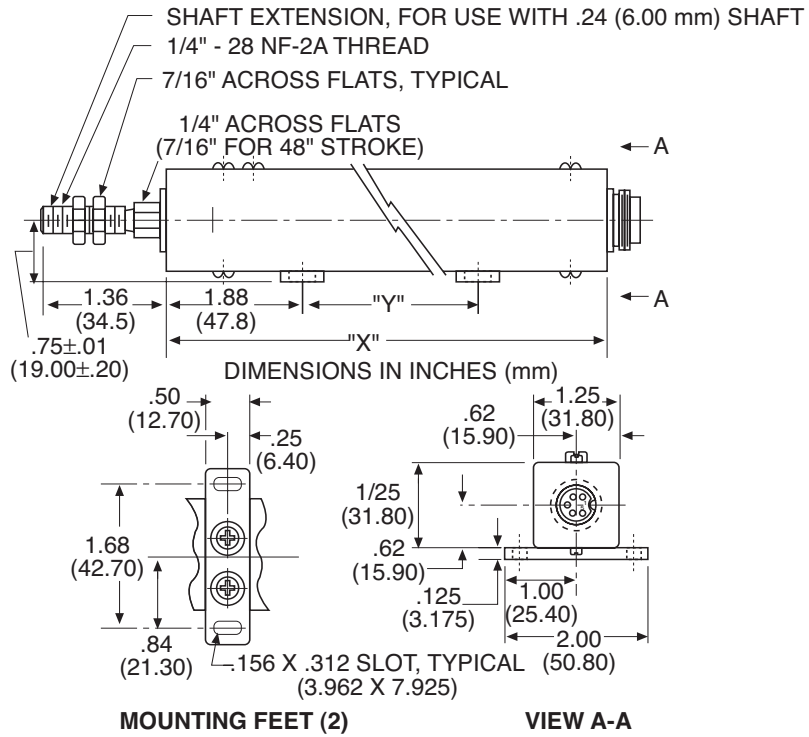
Wiring Diagram



Specifications

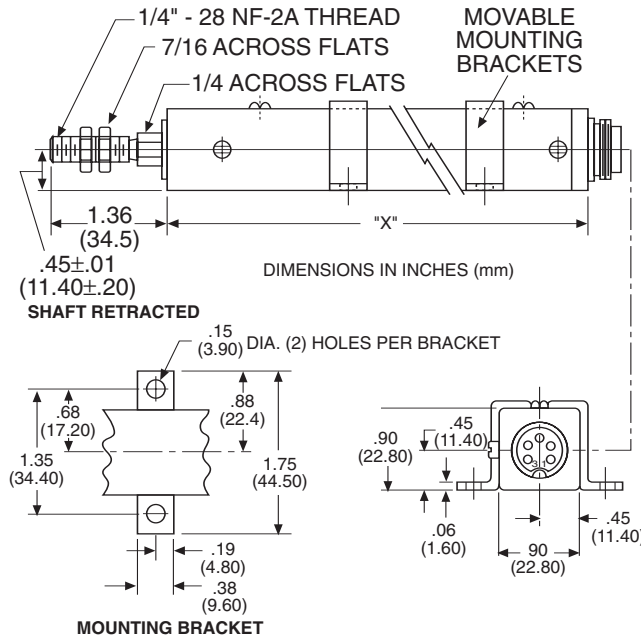
Total Resistance:	LP801: 5000 ohms $\pm 20\%$ LP802: See available models
Linearity:	$\pm 1\%$ FS
Hysteresis:	0.025 mm ($\pm 0.001''$)
Repeatability:	0.012 mm ($\pm 0.0005''$)
Incremental Sensitivity:	0.00005"
Power Rating:	0.75 watts/stroke inch
Temp. Range:	-85 to 221°F (-65 to 105°C)
Operating Force:	450 grams (1 lb.) maximum
Shaft:	6 mm (0.236") diameter with 114 - 28 threaded end adaptor
Life:	100 million operations up to 12" stroke - derated proportionally for longer units (standard rate of travel 2"/second for LP801, 10"/second for LP802)

LP801 Dimensions



MODEL NO.	EFFECTIVE TRAVEL		MECHANICAL TRAVEL		"X" DIMENSION (NOMINAL)		"Y" DIMENSION (NOMINAL)		COMPATIBLE METERS
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	
LP801-150	6.00	150.0	6.10	155.0	8.98	228	5.00	127	DP25-E, DP41-E
LP801-225	9.00	225	9.10	231.1	11.84	301	7.875	200	DP25-E, DP41-E
LP801-300	12.0	300	12.10	307.4	14.98	380	11	279	DP25-E, DP41-E
LP801-450	18	450	18.12	460.3	20.98	533	17	432	DP25-E, DP41-E
LP801-600	24	600	24.13	613.0	26.98	685	23	584	DP25-E, DP41-E
LP801-750	30	750	30.13	765.3	32.98	838	29	737	DP25-E, DP41-E
LP801-900	36	900	36.13	917.7	38.98	990	35	889	DP25-E, DP41-E
LP801-1200	48	1200	48.18	1223.8	51.00	1295	47	1194	DP25-E, DP41-E

LP802 Dimensions



MODEL NO.	EFFECTIVE TRAVEL		MECHANICAL TRAVEL		"X" DIMENSION (NOMINAL)		RESISTANCE (OHMS)	COMPATIBLE METERS
	IN.	MM	IN.	MM	IN.	MM		
LP802-25	1.00	25.00	1.20	30.50	4.05	103.0	1500 ±20%	DP25-E, DP41-E
LP802-50	2.00	50.00	2.20	55.90	5.05	128.0	3000 ±20%	DP25-E, DP41-E
LP802-75	3.00	75.00	3.15	80.00	5.95	151.0	4500 ±20%	DP25-E, DP41-E
LP802-100	4.00	100.0	4.15	105.4	6.95	176.0	6000 ±20%	DP25-E, DP41-E
LP802-150	6.00	150.0	6.15	156.2	8.95	227.0	9000 20%	DP25-E, DP41-E

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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. **WARNING:** These products are not designed for use in, and should not be used for, human applications.



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

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 in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

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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