

LX-EP SERIES

TWO CHANNEL DIGITAL OUTPUT



The **UniMeasure LX-EP Series** linear position transducer with digital output is a low cost, compact device for use in light to moderate duty applications in dry environments. The plastic bodied device is ideal for high volume OEM situations where cost is a major consideration and in applications where small size or low weight are of paramount importance.

The sensing element in the LX-EP is an optical incremental encoder with electrical outputs consisting of two square wave, TTL level output channels in quadrature. Each output channel is open collector, current sinking with an internal 5.4KΩ pullup resistor.

The electrical connection to the LX-EP is a common configuration with five pins of .025" (.64 mm) square shape on .100" (2.54 mm) centers. An accessory electrical cable in various lengths is available.

SPECIFICATIONS

General

Measurement Ranges See Table 2
 Sensing Device Incremental Optical Encoder
 Resolution See Table 2
 Linearity ±0.10% of Full Scale
 Repeatability ±0.015% of Full Scale
 Construction Thermoplastic Body
 Wire Rope Ø.018 (0.46 mm) Jacketed Stainless Steel
 Wire Rope Tension See Table 2
 Weight 3 oz. (85 gm)
 Connector025" (.64 mm) square pins on .10" (2.54 mm) centers
 Dimensional Information See Supplemental Data¹

Life

Ranges 10" to 25" 2,000,000 full stroke cycles
 Ranges 30" to 50" 1,000,000 full stroke cycles

FOOTNOTES TO SPECIFICATIONS

1. Supplemental Data section located at end of LX Series pages.

Electrical

Excitation Voltage 5.00 ± 0.25 VDC
 Excitation Current 30 mA max.
 Output Two channel square wave in quadrature, TTL level current sinking with 5.4KΩ pullups

Environmental

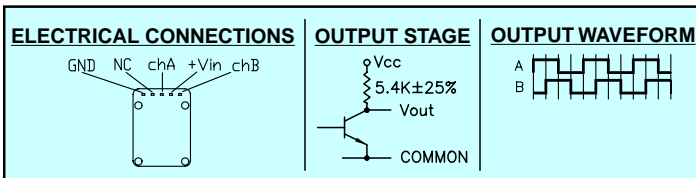
Operating Temperature -40°C to 75°C
 Storage Temperature -40°C to 85°C
 Operating Humidity 95% R.H. max. non-condensing
 Vibration 5G
 Shock 50G
 Ingress Protection NEMA 1 (IP-40)

TABLE 2

MODEL NO.	RANGE		RESOLUTION		TOLERANCE ON RESOLUTION (See Note 2)	NOMINAL CABLE TENSION	
	(inch)	(mm)	counts/inch	counts/mm (See Note 1)		(oz)	(N)
LX-EP-10	10	250	113.5	4.46	±.50%	16	4.4
LX-EP-15	15	380	82.5	3.25	±.35%	14	3.9
LX-EP-20	20	500	62.3	2.45	±.35%	11	3.1
LX-EP-25	25	625	50.4	1.98	±.35%	8	2.2
LX-EP-30	30	750	82.5	3.25	±.35%	14	3.9
LX-EP-40	40	1000	62.3	2.45	±.35%	11	3.1
LX-EP-50	50	1250	50.4	1.98	±.35%	8	2.2

NOTES

- Resolution shown is for times one counting mode. Resolution may be increased by a factor of four with interface electronics capable of quadrature times 4 counting mode.
- Resolution shown is a calculation based upon the capstan diameter, wire rope diameter and line count of the encoding device. Tolerance on resolution accounts for resolution differences from unit to unit due to manufacturing tolerances on the capstan and wire rope. In practice, the output count in a given unit of travel is an integer.



Model Number Configuration

LX-EP-

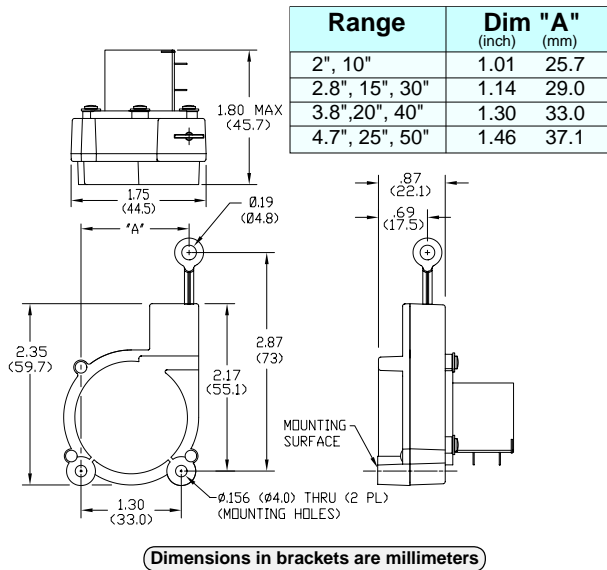
Range	
10	10" (250 mm)
15	15" (390 mm)
20	20" (500 mm)
25	25" (640 mm)
30	30" (750 mm)
40	40" (1000 mm)
50	50" (1250 mm)

Note: For mating connector with electrical cable see 10172 accessory in LX Series Supplemental Data .

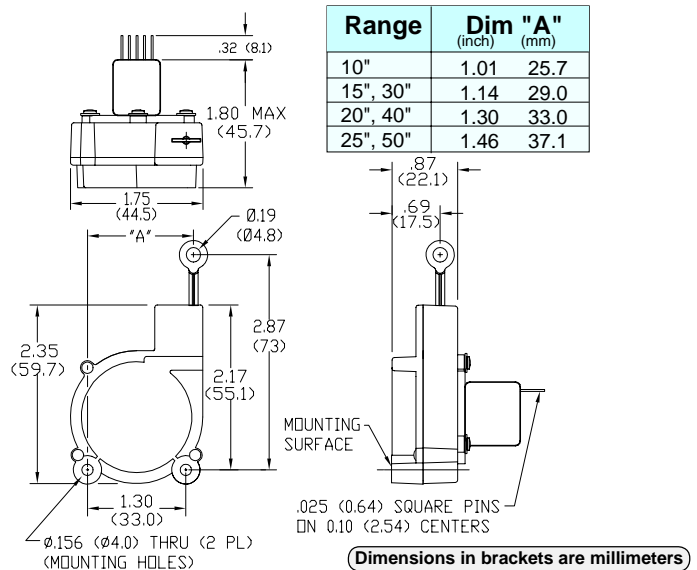
Example
LX-EP-40

DIMENSIONAL INFORMATION

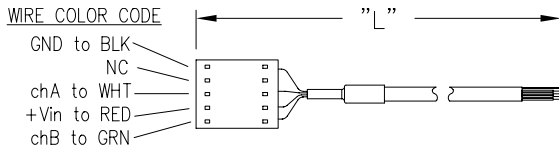
LX-PA



LX-EP



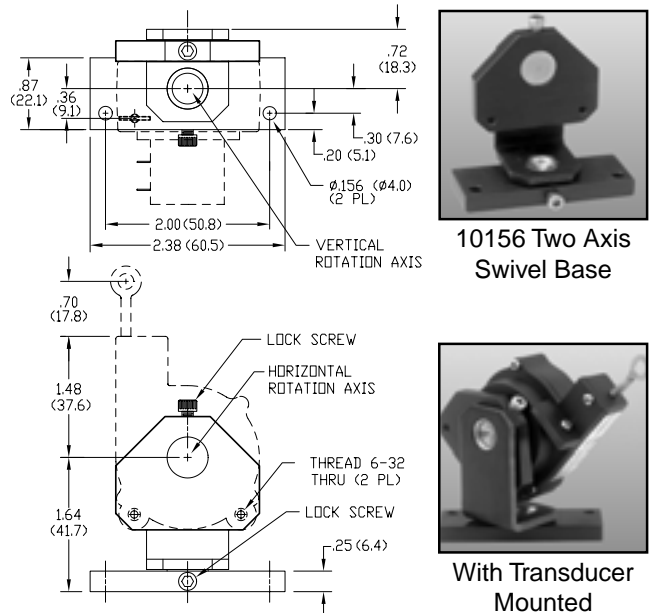
ACCESSORY—10172 ELECTRICAL CABLE (LX-EP ONLY)



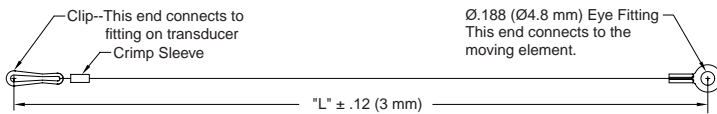
Part No.	Dim "L"
10172-1M	1 m (3 ft)
10172-2M	2 m (6.5 ft)
10172-3M	3 m (10 ft)
10172-4M	4 m (13.5 ft)
10172-5M	5 m (16.5 ft)

ACCESSORY—10156 TWO AXIS SWIVEL BASE

With a capability of 360° rotation about the vertical axis and 245° rotation about the horizontal axis, the 10156 Two Axis Swivel Base allows easy setup of the LX-PA or the LX-EP transducer. The axes may be locked in place after the transducer is oriented. Ideal for quick setups. Order model number: **10156**.



ACCESSORY—10067 AUXILIARY WIRE ROPE EXTENSION KIT



The auxiliary wire rope extension may be used to facilitate mounting the transducer remotely from the measurement point. The clip on the extension attaches to the eye fitting on the transducer. The eye fitting on the opposite end, which is identical to the fitting on the transducer, mounts to the moving element. The extension kit is also available with the clip end unterminated for situations where it is more convenient to size the wire rope length during installation. Clip and crimp fitting are included with the unterminated version.

Ordering

10067- CM-

Dimension "L"
Specify dimension "L" in centimeters to the nearest whole centimeter.
Note 1. 1 cm = 0.394", 1 inch = 2.54 cm
Note 2. Shortest length "L" is 5 cm (approximately 2").

*..... Completed kit (no designator required)
U..... Unterminated clip end (clip and crimp sleeve included in kit)

* Leave blank. No designator required.