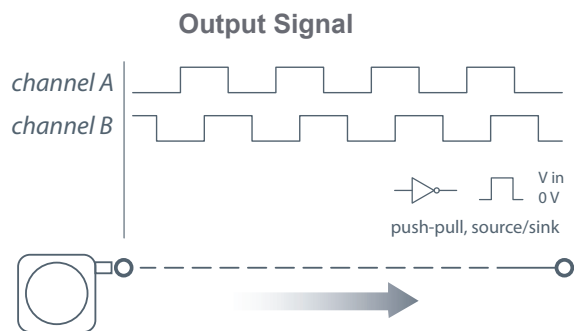




The MT2E1 is the encoder-based member of our family of rugged, accurate miniature cable-actuated position transducers. The MT2E1 features a highly-tensioned heavy-duty measuring cable that was designed for the high-acceleration demands encountered in drop testing and automotive crash tests.

The MT2E1 was designed with 2-axis 360° rotation in its mounting bracket which allows for fast and simple installation in any direction.



# MT2E1

## Cable-Actuated Position Sensor

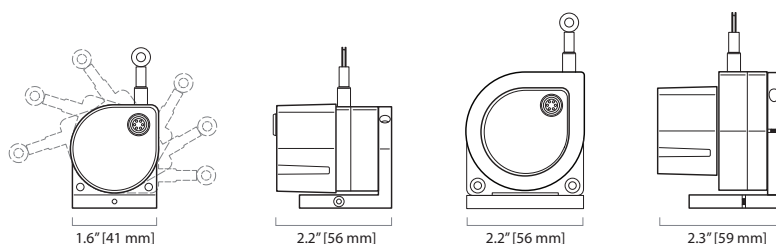
### Incremental Encoder Output • Test Applications

#### Compact String Pot • 0-30 & 0-50 inch Stroke Range Options

#### Dual Axis 360° Mounting Bracket

#### Drop and Crash Test Applications

#### Aluminum & Polycarbonate Enclosure



30 inch

50 inch

#### GENERAL

##### Full Stroke Range Options

##### Output Signal

##### Accuracy

##### Repeatability

##### Resolution:

##### 30-inch Range

##### 50-inch Range

##### Measuring Cable

##### Enclosure Material

##### Sensor Cover Options

##### Sensor

##### Weight, 30-inch

##### Weight, 50-inch

0-30, 0-50 inches

incremental encoder

0.04% full stroke

± 0.02% full stroke

316 ± 5 pulses per inch

188 ± 2 pulses per inch

Ø.019-in. nylon-coated stainless steel

anodized aluminum

polycarbonate and aluminum

optical incremental encoder

0.5 lb. max.

1.0 lb. max.

#### ELECTRICAL

##### Input Voltage, Vin

##### Input Current

##### Output Driver

##### Output Voltage, Vout

##### Mating Plug

5 - 26 VDC

50 mA (max, no load)

push-pull (sink/source, 20mA max.)

Vout = Vin

LEMO FGG.OB.304.CLAD52

#### MECHANICAL

##### Measuring Cable Tension

##### Maximum Acceleration

see ordering information

see ordering information

#### ENVIRONMENTAL

##### Operating Temperature

-32° to 158° F (0° to 70°C)

Fig. 1 - Outline Drawing, 30-inch range:

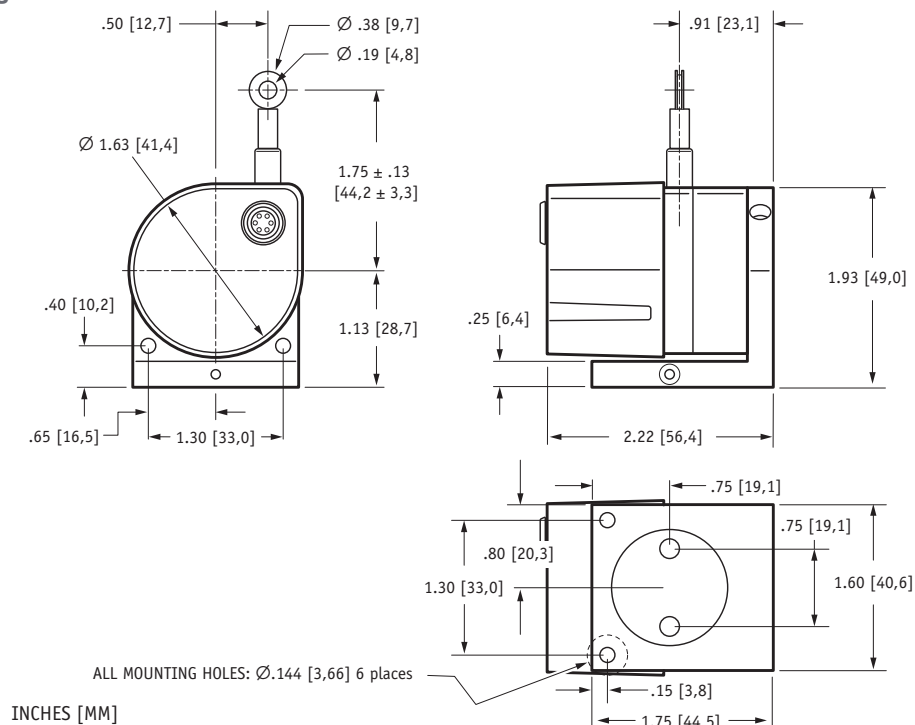
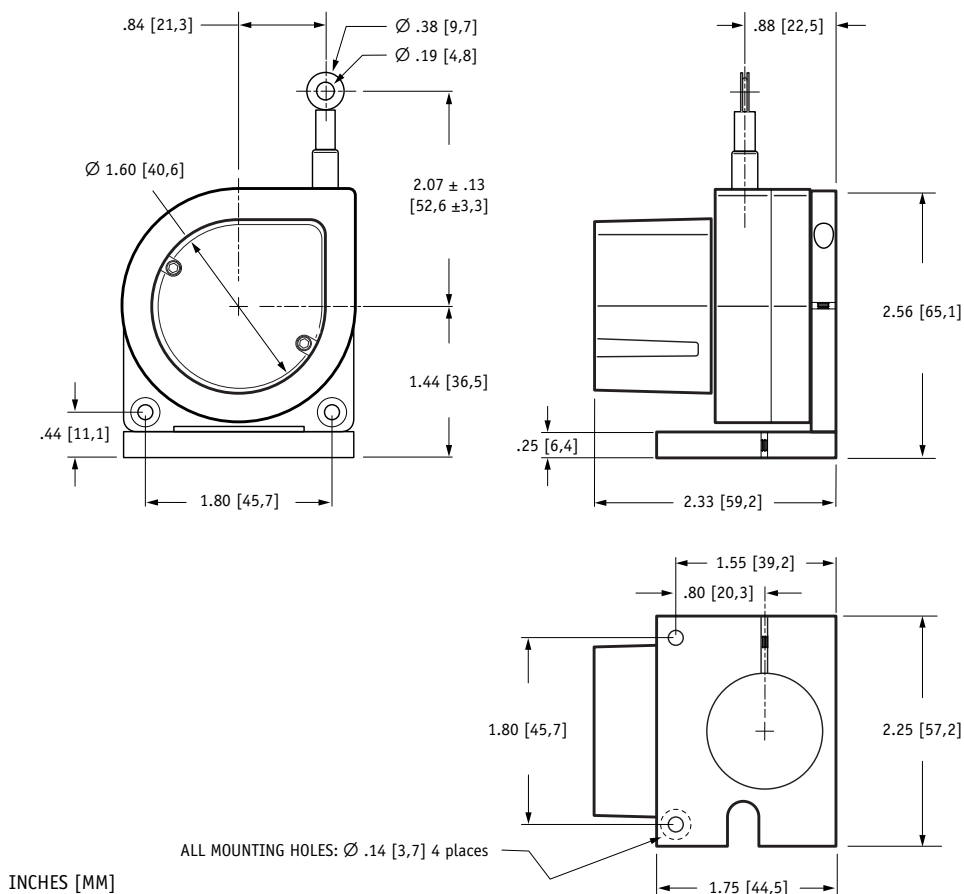


Fig. 2 - Outline Drawing, 50-inch range:



## Ordering Information:

### Model Number:

#### 30-inch Ordering Guide

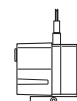
**MT2E1 - 30**     A     -     B     - **316** -     C    

order code:

Sample Model Number:

**MT2E1 - 30E - 33 - 316 - M1**

**R** range: 30 inches  
**A** measuring cable termination: eyelet  
**B** measuring cable tension: 33 oz. (±6 oz.)  
**C** electrical connection: end-mounted connector



see fig. 1

#### 50-inch Ordering Guide

**MT2E1 - 50**     A     -     B     - **188** -     C    

order code:

Sample Model Number:

**MT2E1 - 50E - 22 - 188 - M1**

**R** range: 50 inches  
**A** measuring cable termination: eyelet  
**B** measuring cable tension: 22 oz. (±6 oz.)  
**C** electrical connection: end-mounted connector



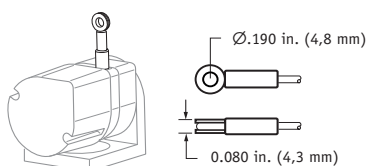
see fig. 2

### Measuring Cable Termination:

**A** order code:

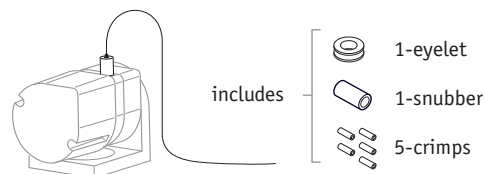
**E**

Eyelet



**L**

Leader Cable (24 in. long)



### Measuring CableTension:

**B** order code:

**9**

**14**

**33**

30-inch range option: 9 (±3) oz.  
 max. cable acceleration: 99 g  
 spring cycle-life, 80% extension: ≥ 1 million  
 spring cycle-life, 50% extension: ≥ 1 million

14 (±5) oz.  
 136 g  
 150,000  
 ≥ 1 million

33 (±10) oz.  
 136 g  
 75,000  
 ≥ 1 million

**B** order code:

**9**

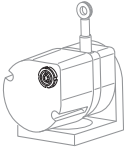


**22**

50-inch range option: 9 (±3) oz.  
 max. cable acceleration: 46 g  
 spring cycle-life, 80% extension: ≥ 1 million  
 spring cycle-life, 50% extension: ≥ 1 million

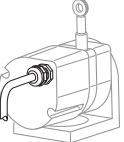
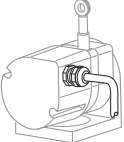
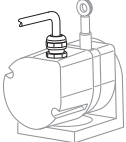
22 (±7) oz.  
 68 g  
 150,000  
 ≥ 1 million


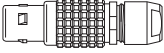
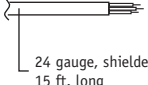
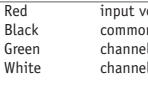
Ordering Information (cont.):

Electrical Connection:

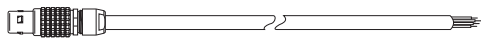
	M1		M2		M3	
	order code:		order code:		order code:	
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
electrical connection:		end-mount connector mating plug included		side-mount connector mating plug included		top-mount connector mating plug included

	C1		C2		C3	
	order code:		order code:		order code:	
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
electrical connection:		end-mount instrumentation cable 15-ft. long, 24 gauge shielded		side-mount instrumentation cable 15-ft. long, 24 gauge shielded		top-mount instrumentation cable 15-ft. long, 24 gauge shielded

4-pin Mating Plug		Instrumentation Cable	
			
contact view	Lemo FGG.0B.304.CLAD52	24 gauge, shielded, 15 ft. long	
		pin#	color
		1	Red
		2	Black
		3	Green
		4	White
		signal	signal
		input voltage (V+)	input voltage (V+)
		common (gnd.)	common (gnd.)
		channel A	channel A
		channel B	channel B

Accessories:



Part Number	Description
9603957-0015	15 ft. long cordset. Includes mating connector with 15 ft., 24 gauge, shielded multiconductor cable. Signals: V+, Gnd, Channel A, Channel B