

# MT2E

## Cable Actuated Sensor

### Test Applications • Incremental Encoder

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

Dual Axis 360° Mounting Bracket

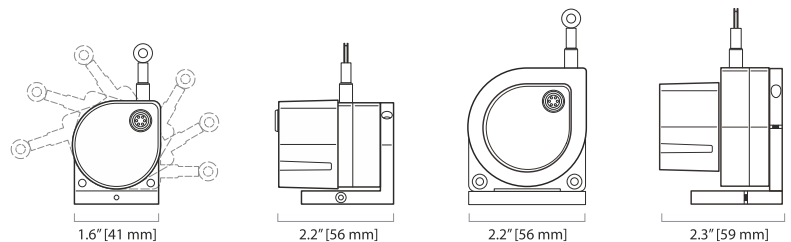
Flight/Crash Test Applications

Aluminum & Polycarbonate Enclosure



The MT2E is our new encoder-based member to our family of rugged, accurate miniature cable-extension position transducers. The Celeco MT2E features a highly-tensioned heavy-duty measuring cable that was designed for the high-acceleration demands encountered in flight testing and automotive crash tests.

The MT2E was designed with 2-axis 360° rotation in its mounting bracket which allows for fast and simple installation in any direction.



30 inch

50 inch

#### GENERAL

**Full Stroke Range Options**

0-30, 0-50 inches

**Output Signal**

incremental encoder

**Accuracy**

0.04% full stroke

**Repeatability**

± 0.02% full stroke

**Resolution:**

**30-inch Range**

316 ± 5 pulses per inch

**50-inch Range**

188 ± 2 pulses per inch

**Measuring Cable**

Ø.019-in. nylon-coated stainless steel

**Enclosure Material**

anodized aluminum

**Sensor Cover**

polycarbonate

**Sensor**

optical incremental encoder

**Weight, 30-inch**

0.5 lb. max.

**Weight, 50-inch**

1.0 lb. max.

#### ELECTRICAL

**Input Voltage**

5 - 26 VDC

**Input Current**

35 mA, no load

**Output Driver**

push-pull, 20 mA source/sink

**Output Voltage**

V<sub>in</sub> = V<sub>out</sub>

**Mating Plug**

LEMO FGG.OB.304.CLAD52

#### MECHANICAL

**Measuring Cable Tension**

see ordering information

**Maximum Acceleration**

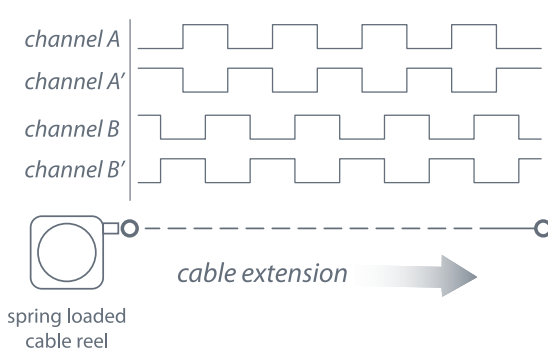
see ordering information

#### ENVIRONMENTAL

**Operating Temperature**

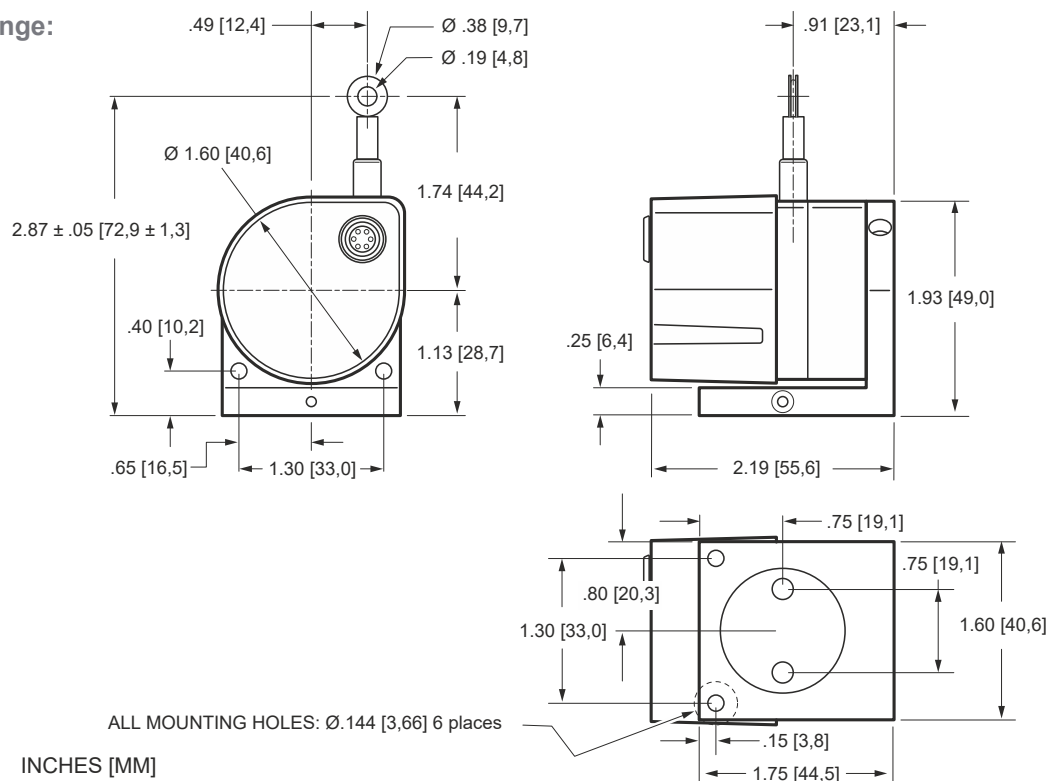
32° to 158° F ( 0° to 70°C)

#### Output Signal

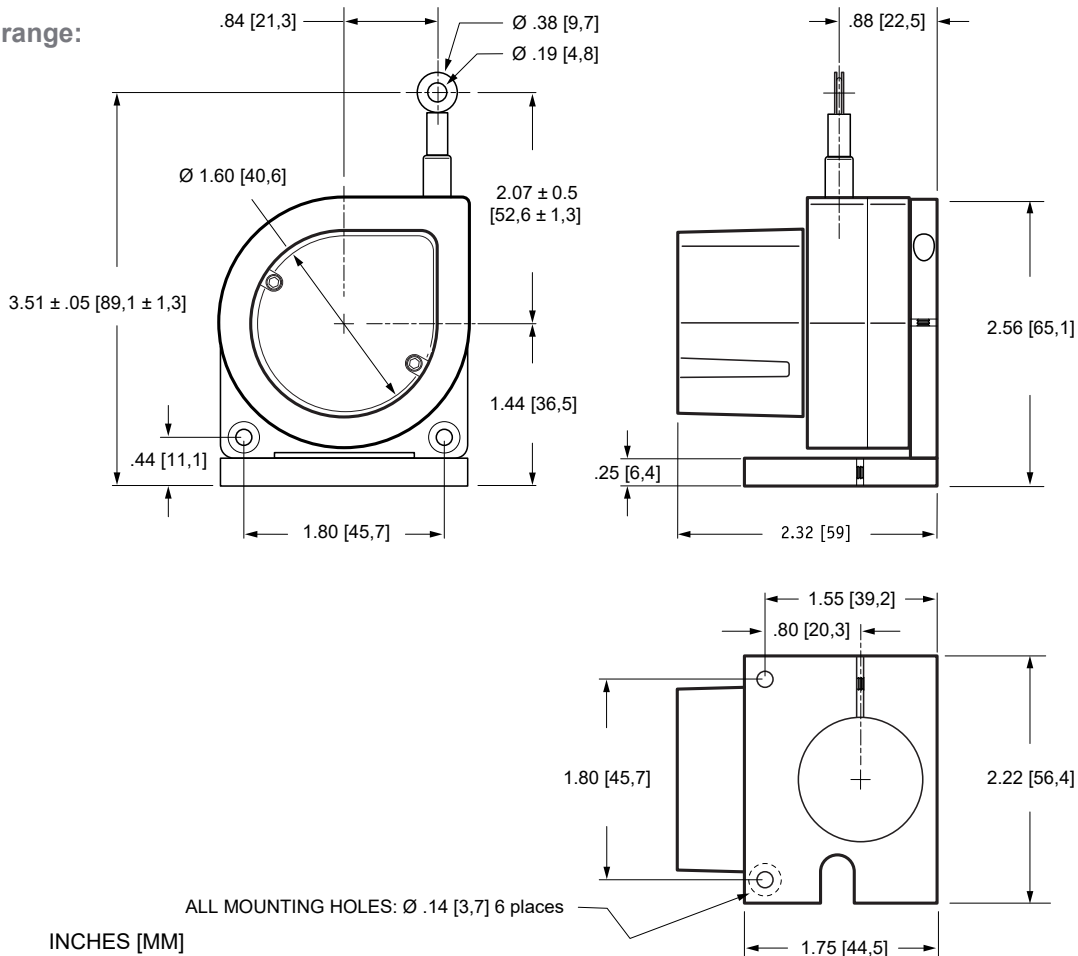


-- see ordering information for available channels

**Outline Drawing, 30-inch range:**



**Outline Drawing, 50-inch range:**



## Ordering Information:

### Model Number:

**30-inch Range**  
Ordering Guide ▶ **MT2E - 30** <sub>order code: A</sub> - <sub>B</sub> - **316** - <sub>C</sub>

Sample Model Number:

**MT2E - 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

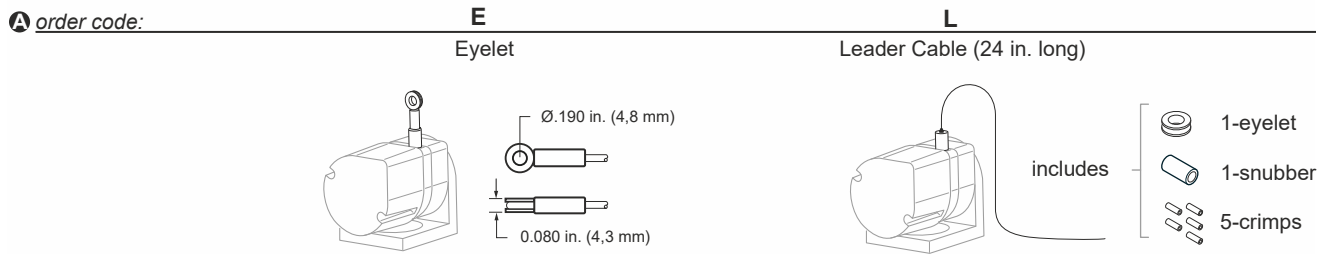
**50-inch Range**  
Ordering Guide ▶ **MT2E - 50** <sub>order code: A</sub> - <sub>B</sub> - **188** - <sub>C</sub>

Sample Model Number:

**MT2E - 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

## Measuring Cable Termination:



## Measuring Cable Tension:

**Border code:** **9** **14** **33**




30-inch range option:	9 (± 3) oz.	14 (± 5) oz.	33 (± 11) oz.
max. cable acceleration:	99 g	136 g	136 g
spring cycle-life, 80% extension:	≥ 1 million	150,000	75,000
spring cycle-life, 50% extension:	≥ 1 million	≥ 1 million	≥ 1 million

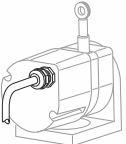
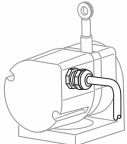

**Border code:** **9** **22**

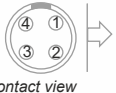
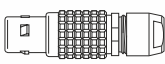
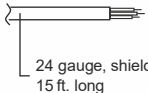
50-inch range option:	9 (± 3) oz.	14 (± 5) oz.
max. cable acceleration:	99 g	136 g
spring cycle-life, 80% extension:	≥ 1 million	150,000
spring cycle-life, 50% extension:	≥ 1 million	≥ 1 million

## Ordering Information (cont.):

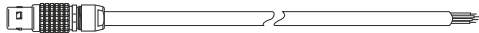
### Electrical Connection:

Order code:	M1	M1A	M2	M2A	M3	M3A
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
available channels:	A, B	A, B	A, B	A, B	A, B	A, B
electrical connection:	 end-mount connector mating plug included		 side-mount connector mating plug included		 top-mount connector mating plug included	

Order code:	C1	C1A	C2	C2A	C3	C3A
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
available channels:	A, A', B, B'	A, A', B, B'	A, A', B, B'	A, A', B, B'	A, A', B, B'	A, A', B, B'
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 Connector		Instrumentation Cable	
contact view	Lemo FGG.OB.304.CLAD52	color	signal
			input voltage (V+) common (gnd.) channel A channel B
		Red Black Green White Blue Brown	input voltage (V+) common (gnd.) channel A channel B channel A 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

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