



MT2E1

Cable-Actuated Position Sensor

Incremental Encoder Output • Test Applications

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

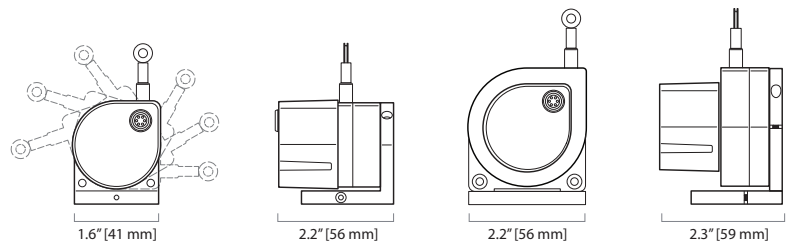
Dual Axis 360° Mounting Bracket

Drop and Crash Test Applications

Aluminum & Polycarbonate Enclosure

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.



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 Options

polycarbonate and aluminum

Sensor

optical incremental encoder

Weight, 30-inch

0.5 lb. max.

Weight, 50-inch

1.0 lb. max.

ELECTRICAL

Input Voltage, V_{in}

5 - 26 VDC

Input Current

50 mA (max, no load)

Output Driver

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

Output Voltage, V_{out}

$V_{out} = V_{in}$

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)

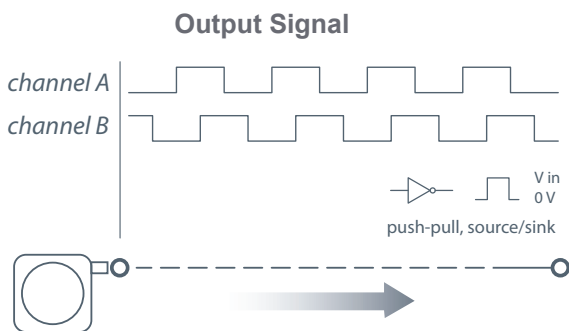


Fig. 1 - Outline Drawing, 30-inch range:

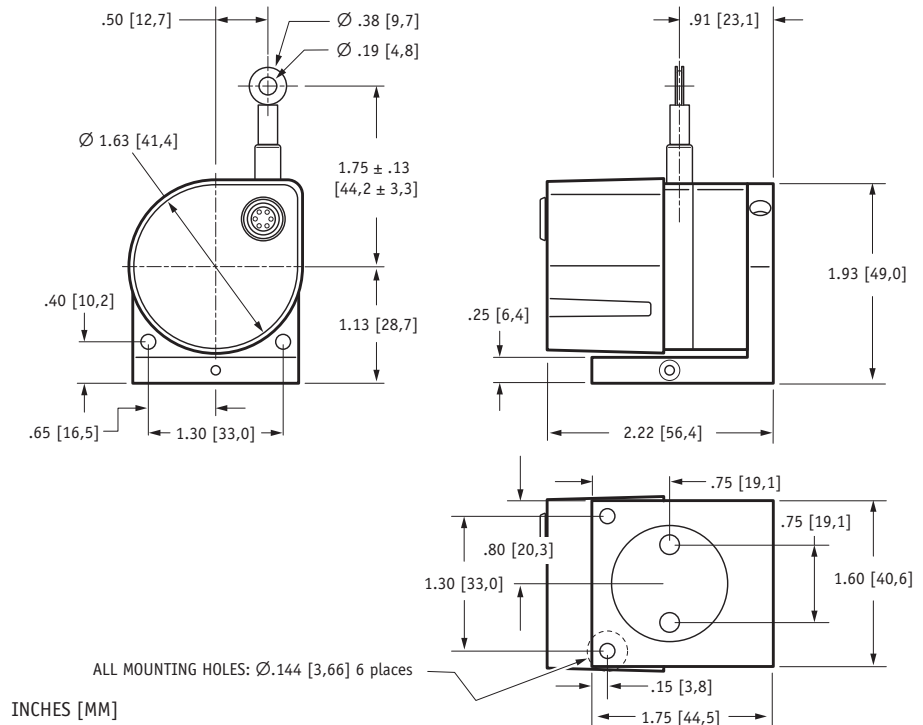
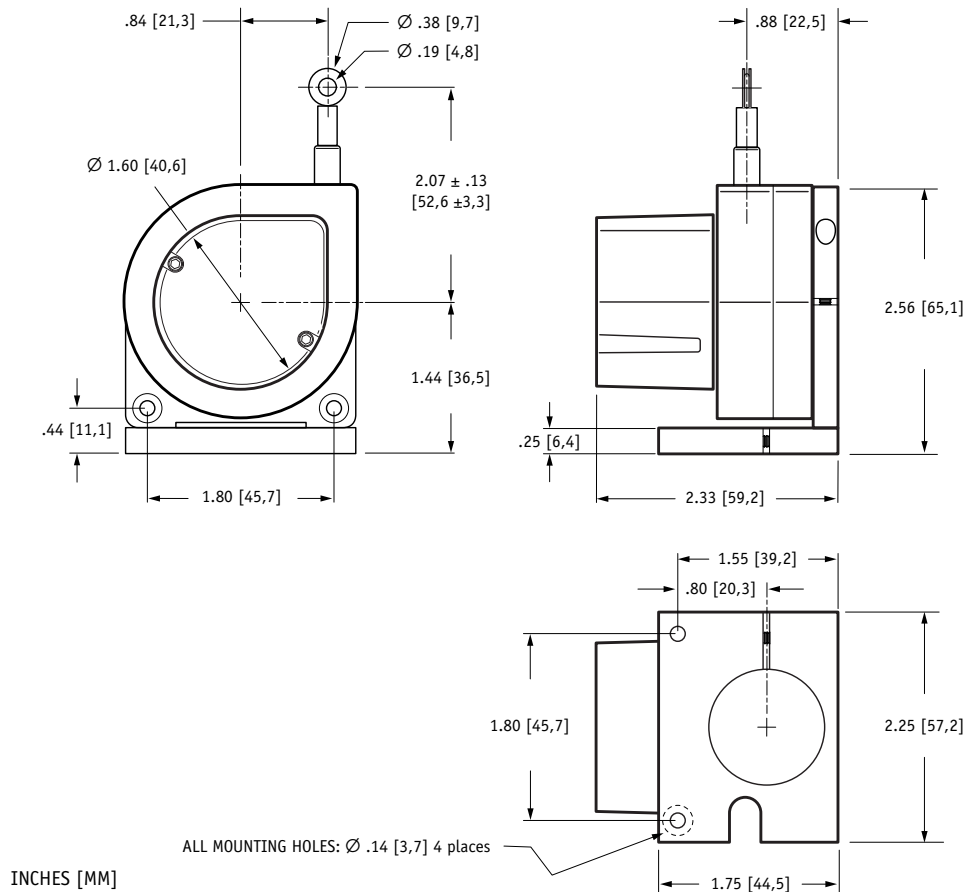


Fig. 2 - Outline Drawing, 50-inch range:



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



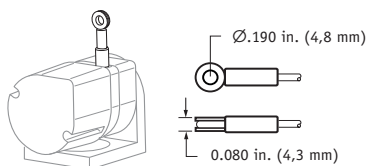
see fig. 2

Measuring Cable Termination:

A *order code:*

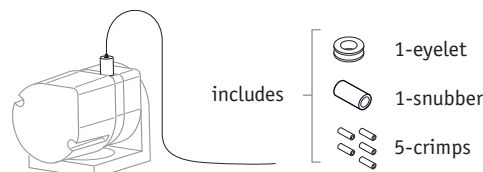
E

Eyelet



L

Leader Cable (24 in. long)



Measuring Cable Tension:

B *order code:*

9

14

33

30-inch range option:	9 (±3) oz.	14 (±5) oz.	33 (±10) 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

B *order code:*

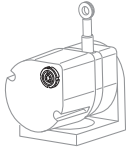
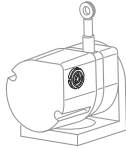

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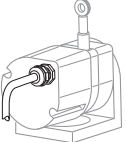
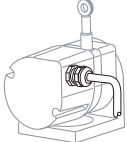
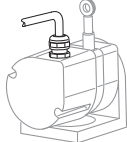
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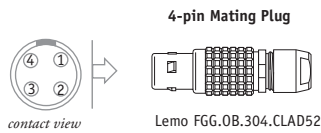
50-inch range option:	9 (±3) oz.	22 (±7) oz.
max. cable acceleration:	46 g	68 g
spring cycle-life, 80% extension:	≥ 1 million	150,000
spring cycle-life, 50% extension:	≥ 1 million	≥ 1 million

Ordering Information (cont.):

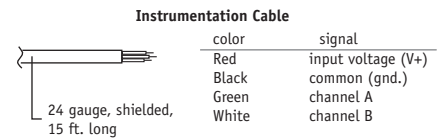
Electrical Connection:

	M1	M1A	M2	M2A	M3	M3A
order code:						
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
electrical connection:		end-mount connector <i>mating plug included</i>		side-mount connector <i>mating plug included</i>		top-mount connector <i>mating plug included</i>

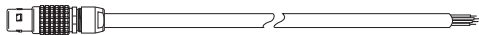
	C1	C1A	C2	C2A	C3	C3A
order code:						
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
electrical connection:		end-mount instrumentation cable <i>15-ft. long, 24 gauge shielded</i>		side-mount instrumentation cable <i>15-ft. long, 24 gauge shielded</i>		top-mount instrumentation cable <i>15-ft. long, 24 gauge shielded</i>



pin#	signal
1	input voltage (V+)
2	common (gnd.)
3	channel A
4	channel B



Accessories:



Part Number

9603957-0015

Description

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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