

# MT3A

## Cable Actuated Sensor

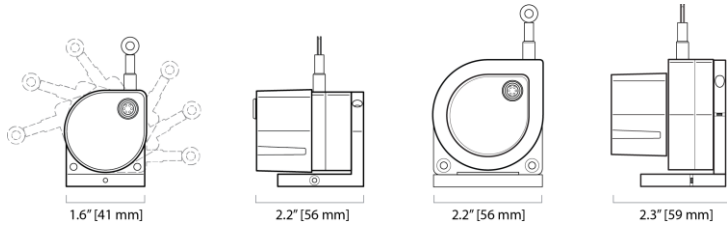
### Test Applications • Voltage Divider

Compact String Pot • Flight/Crash Test Applications

Dual Axis 360° Mounting Bracket

3, 9, 15, 30 and 50-inch Stroke Range Options

Wet Environments • Aluminum Enclosure

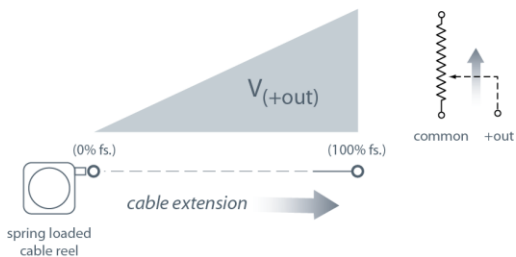


30-inch range model shown with aluminum cover

The MT3A is the solution for high-acceleration test applications in potentially wet environments. Just like the MT2A, the MT3A comes in 5 different full-stroke ranges, has a high-tension heavy-duty measuring cable designed for the demands of flight and automotive crash tests and comes with an easy to use 2-axis 360° rotation mounting bracket for installation in hard to fit areas.

For extreme high impact applications, the MT3A is now available with a rugged all aluminum sensor cover!

### Output Signal



### General

**Full Stroke Range Options** 0-3, 0-9, 0-15, 0-30, 0-50 inches, min.

<b>Output Signal</b>	voltage divider (potentiometer)
<b>Accuracy</b>	± 1.1% to 0.15% full stroke (see ordering information)
<b>Repeatability</b>	± 0.02% full stroke
<b>Resolution</b>	essentially infinite
<b>Measuring Cable</b>	Ø.019-in. nylon-coated stainless steel
<b>Enclosure Material</b>	anodized aluminum
<b>Sensor Cover</b>	aluminum or polycarbonate
<b>Sensor</b>	conductive plastic-hybrid potentiometer
<b>Weight</b>	0.5 lb. max.

### Electrical

<b>Input Resistance</b>	10K ohms (± 10%)
<b>Power Rating, Watts</b>	2.0 at 158°F (70° C), derated to 0 @ 255°F (125°C)
<b>Recommended Maximum Input Voltage</b>	30V (AC or DC)
<b>Electrical Stroke</b>	94% ±4% of input voltage

### Mechanical

<b>Measuring Cable Tension</b>	9, 14 and 33 oz.
<b>Options</b>	
<b>Maximum Measuring Cable Acceleration</b>	90 g

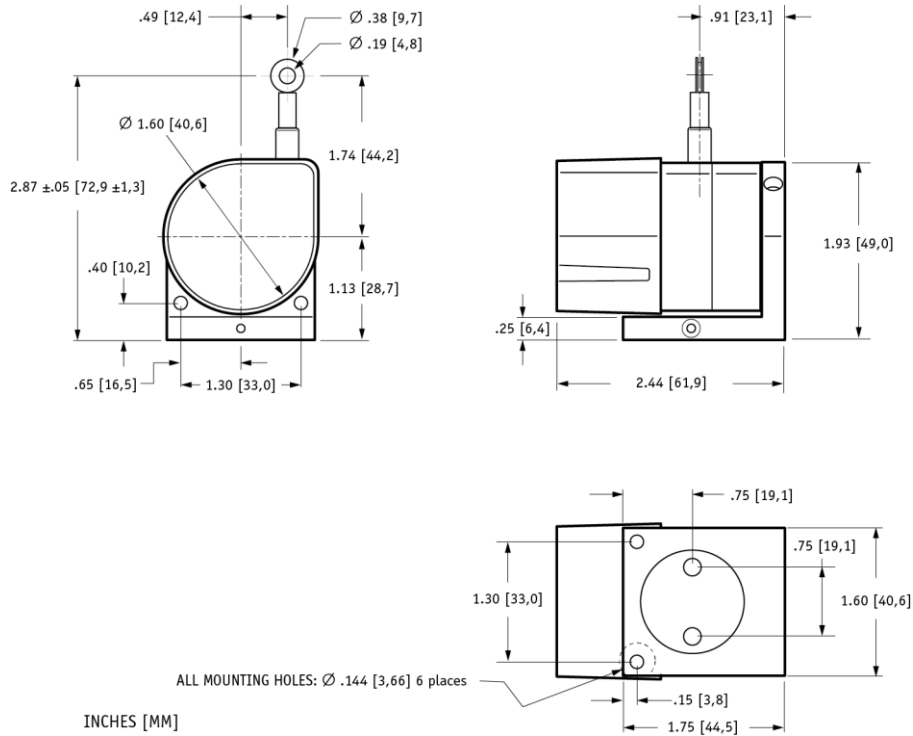
### Environmental

<b>Enclosure</b>	NEMA 4 / IP67
<b>Operating Temperature</b>	-40° to 250° F (-40° to 120°C)

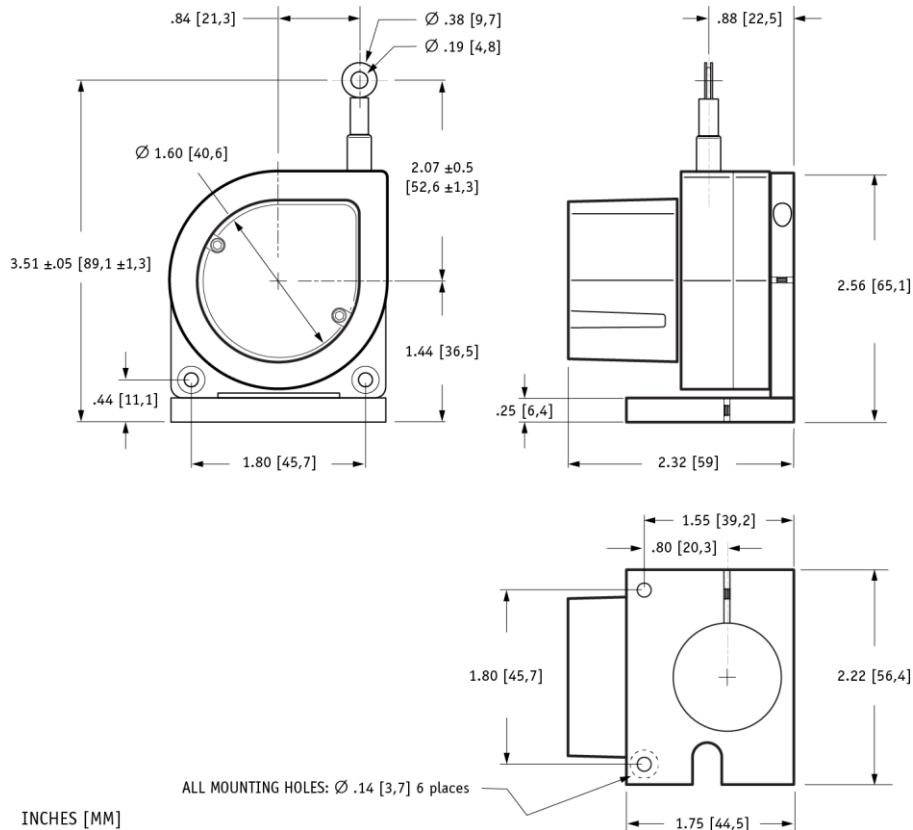
# MT3A

Test Applications • Voltage Divider

## Outline Drawing (0-3 to 0-30-inch ranges)



## Outline Drawing (0-50-inch range)



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Test Applications • Voltage Divider

## Ordering Information

### Model Number:

**MT3A** - **R** - **A** - **B** - **10K** - **G**  
*order code:*

### Sample Model Number:

**MT3A - 9E - 33 - 10K - C1A**

<b>R</b> range:	9 inches
<b>A</b> measuring cable termination:	eyelet
<b>B</b> measuring cable tension:	33 oz. (±6 oz.)
<b>G</b> electrical connection:	15-ft cable w/end-mounted strain relief/aluminum cover

### Full Stroke Range:

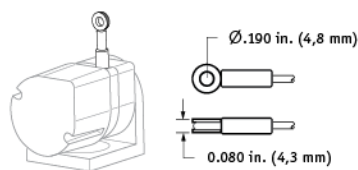
<b>R</b> <i>order code:</i>	<b>3</b>	<b>9</b>	<b>15</b>	<b>30</b>	<b>50</b>
full stroke range, min:	3 inches	9 inches	15 inches	30 inches	50 inches
potentiometer cycle-life:	$2.5 \times 10^6$	$8.3 \times 10^5$	$5.0 \times 10^5$	$2.5 \times 10^5$	$2.5 \times 10^5$
accuracy (% of full stroke):	1.1 %	.25%	.20%	.15%	.15%

### Measuring Cable Termination:

**A** *order code:*

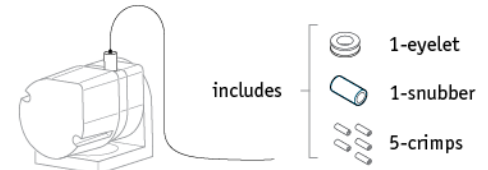
**E**

Eyelet



**L**

Leader Cable (24 in. long)



### Measuring Cable Tension:

**B** *order code:*

**9**

**14**

**33**

3, 9, 15, 30-in. range options:	9 (±2) oz.	14 (±4) oz.	33 (±6) oz.
max. cable acceleration:	99 g	136 g	136 g

**B** *order code:*

**9**

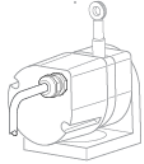
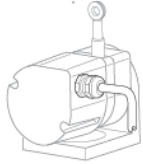


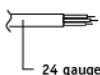
**22**

50-in. range options:	9 (±2) oz.	22 (±6) oz.
max. cable acceleration:	46 g	68 g

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## Electrical Connection/ Sensor Cover:

Order Code	C1	C1A	C4	C4A	C2	C2A	C5	C5A								
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum								
electrical cable length:	15 ft (4.5 m)		30 ft (9 m)		15 ft (4.5 m)		30 ft (9 m)									
end-mount strain relief																
Order Code	C3	C3A	C6	C6A	BC	BCA										
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum										
electrical cable length:	15 ft (4.5 m)		30 ft (9 m)		n/a		n/a									
top-mount strain relief																
Signal Connection Color Code			<table border="1"> <thead> <tr> <th>color</th> <th>signal</th> </tr> </thead> <tbody> <tr> <td>Red</td> <td>+in</td> </tr> <tr> <td>Black</td> <td>common</td> </tr> <tr> <td>Green</td> <td>+out</td> </tr> </tbody> </table>	color	signal	Red	+in	Black	common	Green	+out					
color	signal															
Red	+in															
Black	common															
Green	+out															
					<p><i>* blank cover option is for customers who want to provide their own connector or strain relief. This cover comes without electrical wiring access holes so customer can drill to their requirements.</i></p>											