

# MTA

## Voltage Divider Output

Compact String Pot • Absolute Linear Position

0-3, 0-5 inch Stroke Range Options

High Cycle Applications

Crash Testing • Flight Testing • OEM



### GENERAL

Full Stroke Ranges	0-3 and 0-5 inches, min.
Output Signal	voltage divider (potentiometer)
Accuracy	±0.4 % full stroke
Repeatability	±0.02% full stroke
Resolution	essentially infinite
Potentiometer Cycle Life	50 million cycles*
Measuring Cable	0.024-in. dia. nylon-coated stainless steel
Measuring Cable Tension	see ordering information
Enclosure Material	anodized aluminum
Sensor	conductive plastic potentiometer
Weight (maximum)	3-inch: 0.10 lbs., 5-inch: 0.26 lbs.

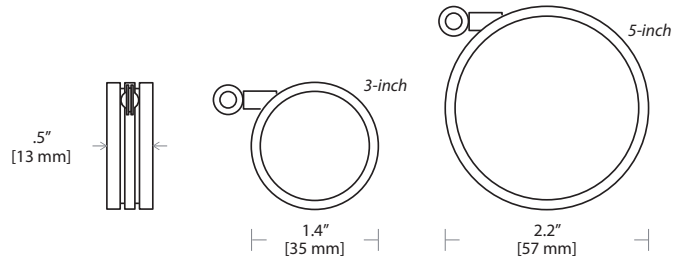
### ELECTRICAL

Input Resistance	5K ohms (±10%)
Power Rating, Watts	1.0 at 40° C (derated to 0 @ 110°C)
Recommended Maximum Input Voltage	30V (AC or DC)
Temperature coefficient of voltage dividing ratio	< 2 ppm/°C
Temperature coefficient of resistance, -50...+75°C	±200 ppm/°C
Temperature coefficient of resistance, +75...+100°C	±300 ppm/°C
Maximum Output Signal	94% ±4% of input voltage

### ENVIRONMENTAL

Enclosure Design	NEMA 12, IP55
Operating Temperature	-67° to 212°F (-55° to 100°C)

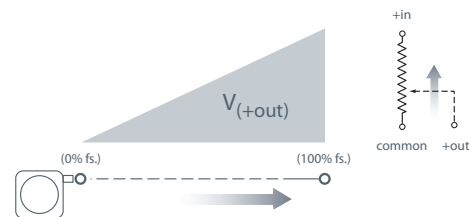
\*—potentiometer cycle life is defined as the minimum number of times the measuring cable can be fully extended and retracted before any measurable degradation of the output signal occurs.



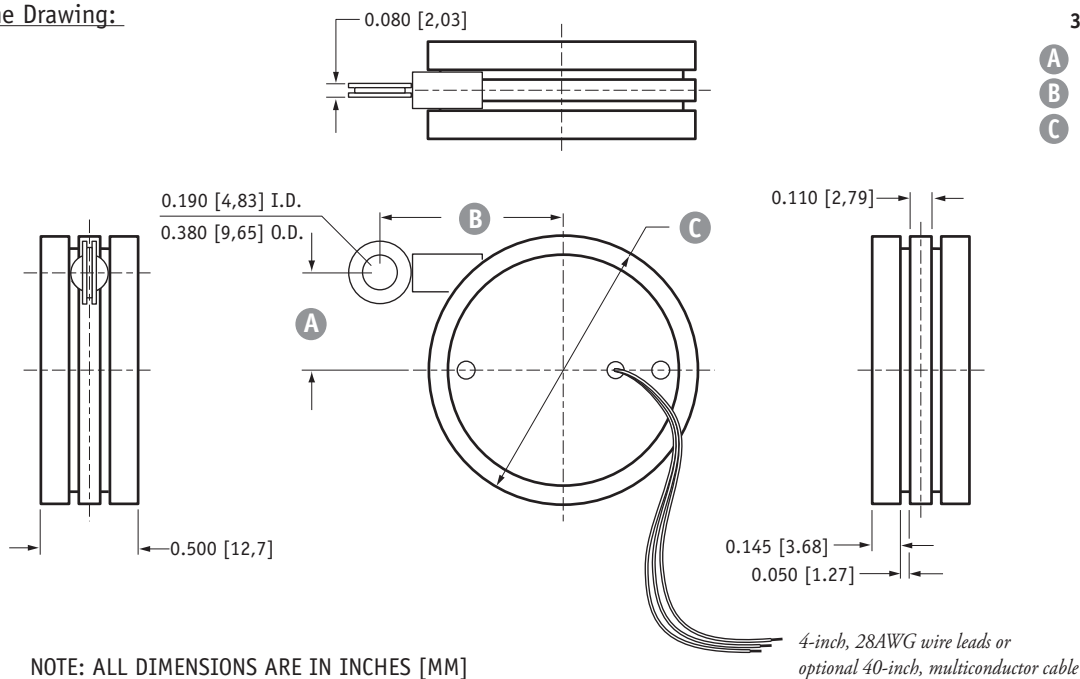
The MTA is part of Celesco's miniature line of cable-extension position transducers that is perfect for short-ranged testing and control applications where space is at a premium.

This transducer uses a high-cycle conductive plastic potentiometer to provide a precision voltage divider feedback signal for measurement ranges of 3 or 5 inches full stroke. With an accuracy of ±0.4% and a repeatability of ±0.02%, the MTA conveniently mounts using servo-clips for easy rotational adjustment.

### Output Signal



Outline Drawing:



	3-INCH Range	5-INCH Range
<b>A</b>	0.50 [12,7]	0.87 [22,1]
<b>B</b>	1.0 [25,4]	1.2 [30,5]
<b>C</b>	1.375 [34,95]	2.240 [56,90]

NOTE: ALL DIMENSIONS ARE IN INCHES [MM]

Ordering Information:

**Model Number:**

**MTA** - **R** - **A** - **5K** - **B** - **C**  
*order code:*

Sample Model Number:

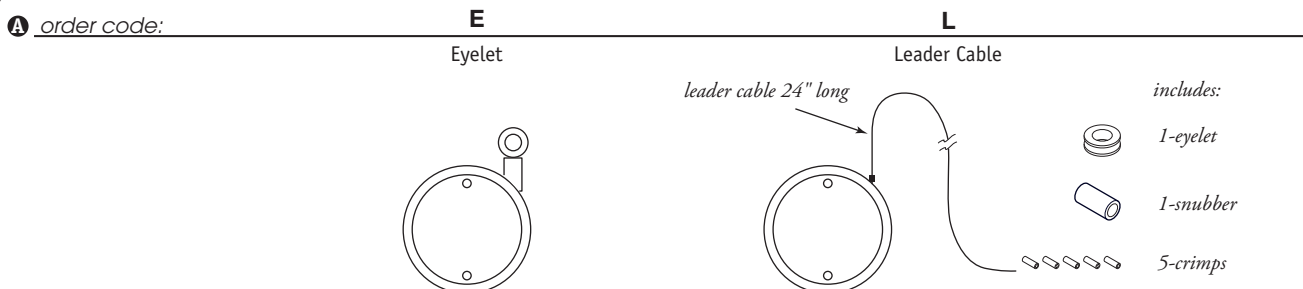
**MTA - 3AE - 5KC - MB**

- R** range/cable tension: 3 inches/4 oz.
- A** measuring cable termination: eyelet
- B** electrical connection: instrumentation cable, 40-in.
- C** mounting bracket: yes

**Full Stroke Range:**

<b>R</b> <i>order code:</i>	<b>3</b>	<b>3A</b>	<b>5</b>	<b>5A</b>
full stroke range, min:	3 inches		5 inches	
std. cable tension ( $\pm 25\%$ ):	2.0 oz.	4.0 oz.	1.2 oz.	2.4 oz.
max. acceleration:	30 G's	60 G's	3 G's	6 G's

**Measuring Cable Termination:**



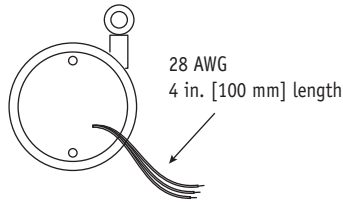
Ordering Information (cont.):

**Electrical Connection:**

ⓑ order code:

**W**

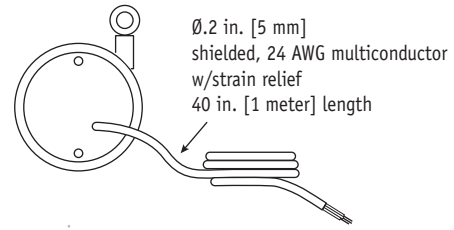
4-inch Wire Leads



**wiring connections**  
 +in = brown  
 +out = red  
 com. = orange

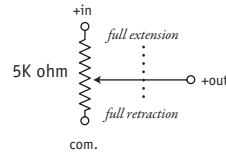
**C**

40-inch Instrumentation Cable



**wiring connections**  
 +in = red  
 +out = green  
 com. = black

**sensing circuit**



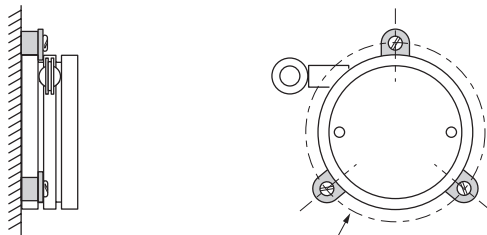
**Mounting Options:**

Ⓒ order code:

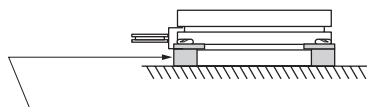
*blank*

Servo Clip Mount Option

*includes 3) servo-clips and 3) 4-40 screws*



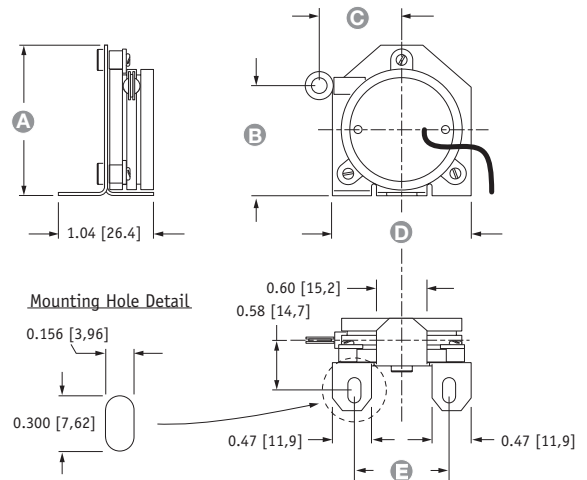
3-in. range:  $\varnothing$  1.65 [41,9] BC. 120° Apart  
 5-in. range:  $\varnothing$  2.52 [63,9] BC. 120° Apart



*use 4-40 or M3 screws and servo-clips to mount sensor.*

**MB**

Mounting Bracket Option



**3-inch Range 5-inch Range**

<b>A</b>	1.8 [46]	3.0 [75]
<b>B</b>	1.3 [33]	2.3 [59]
<b>C</b>	1.0 [25]	1.2 [31]
<b>D</b>	1.7 [42]	2.4 [62]
<b>E</b>	1.13 [28,6]	1.87 [47,6]

INCHES[MM]

version: 5.0 last updated: March 31, 2015