

Cable-Extension Position Transducer

Precision Potentiometric Output

Ranges: 0-3 and 0-5 inches

Compact Size • Crash Test • Flight Test • OEM



MTA



The MTA is part of Celesco's new 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 $\pm 0.4\%$ and a repeatability of $\pm 0.02\%$, the MTA conveniently mounts using servo-clips for easy rotational adjustment.

Specification Summary:

GENERAL

Full Stroke Ranges 0-3 and 0-5 inches, min.
 Output Signal voltage divider (potentiometer)
 Accuracy $\pm 0.4\%$ full stroke
 Repeatability $\pm 0.02\%$ full stroke
 Resolution essentially infinite
 Potentiometer Cycle Life 50 million cycles*
 Measuring Cable 0.024-in. dia. nylon-coated stainless steel
 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 ($\pm 10\%$)
 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
 +75...+100°C ± 300 ppm/°C
 Output Signal Change Over Measurement Range 94% $\pm 4\%$ of input voltage

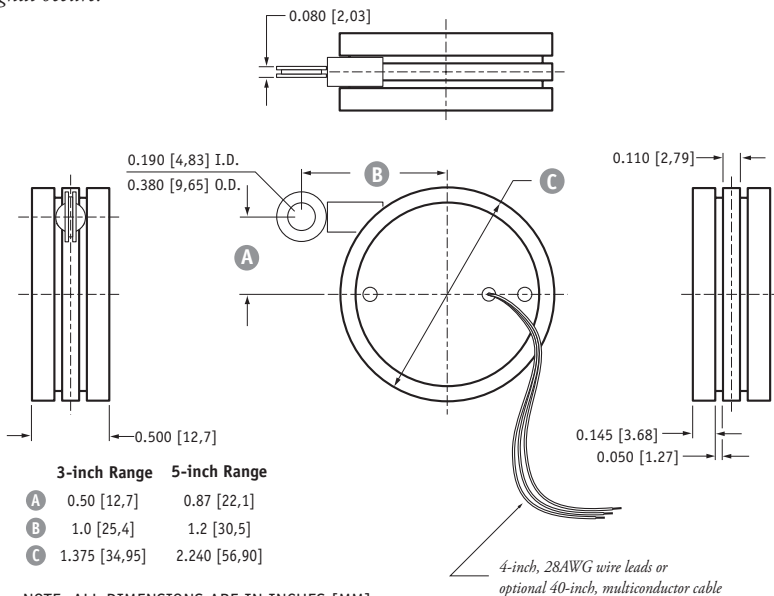
MECHANICAL

Measuring Cable Tension *see ordering information*

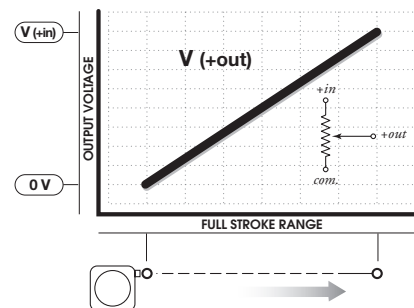
ENVIRONMENTAL

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

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



Output Signal



Ordering Information:

Model Number:

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

Sample Model Number:

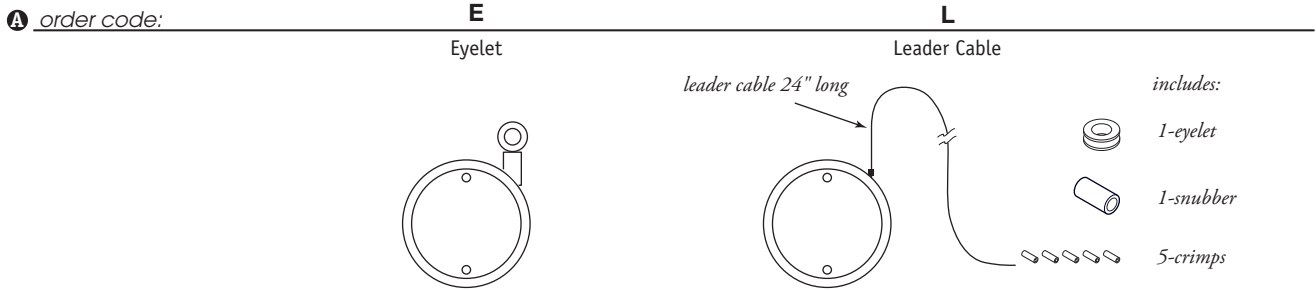
MTA - 3AE - 5KC - MB

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

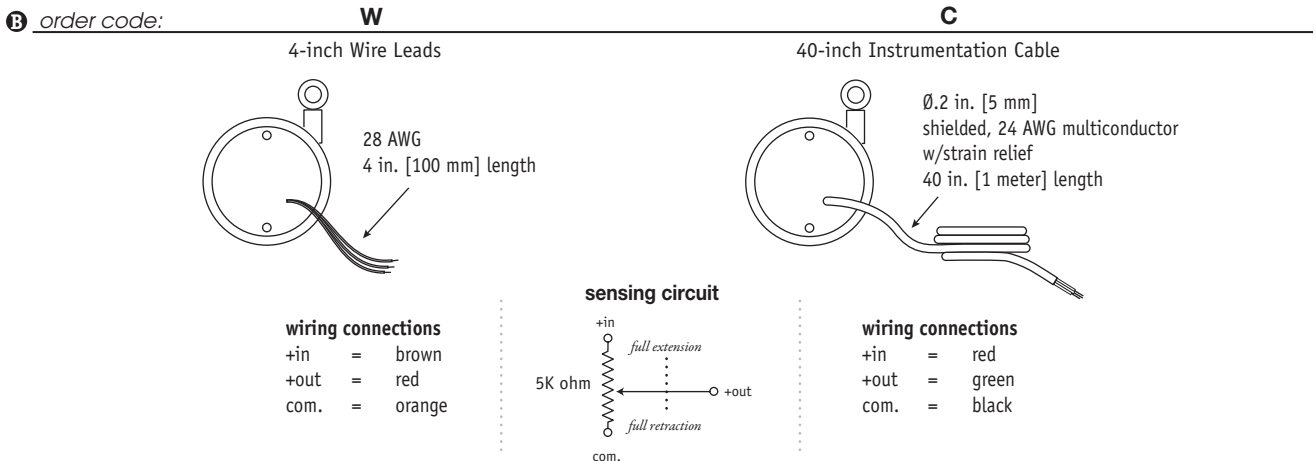
Full Stroke Range:

R <i>order code:</i>	3	3A	5	5A
full stroke range, min:	3 inches		5 inches	
std. cable tension (±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:



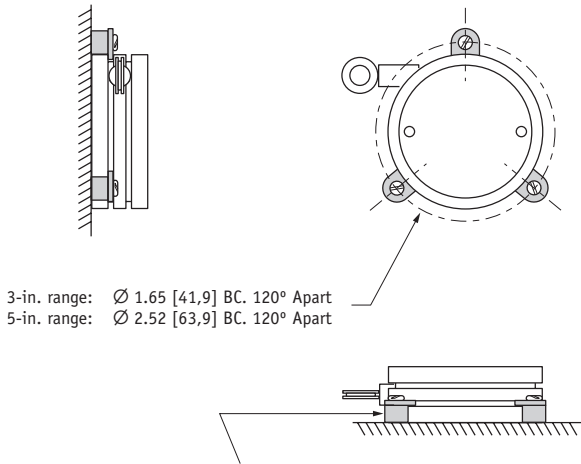
Electrical Connection:



Ordering Information (cont.)

Mounting Options:

ⓐ order code: blank
 Servo Clip Mount Option
 includes 3) servo-clips and 3) 4-40 screws

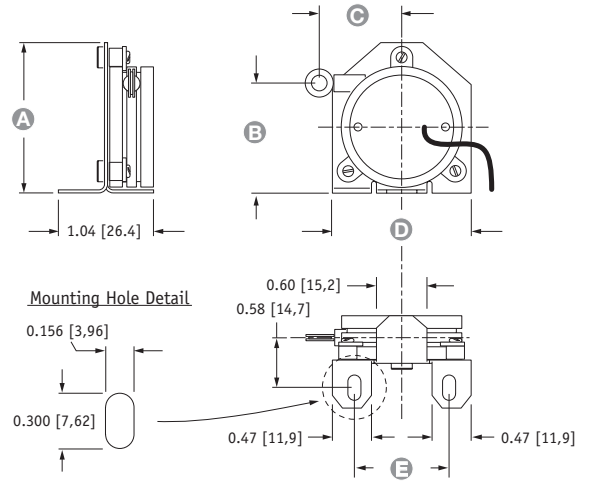


3-in. range: \varnothing 1.65 [41,9] BC. 120° Apart
 5-in. range: \varnothing 2.52 [63,9] BC. 120° Apart

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

MB

Mounting Bracket Option



3-inch Range 5-inch Range

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

INCHES[MM]