

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.

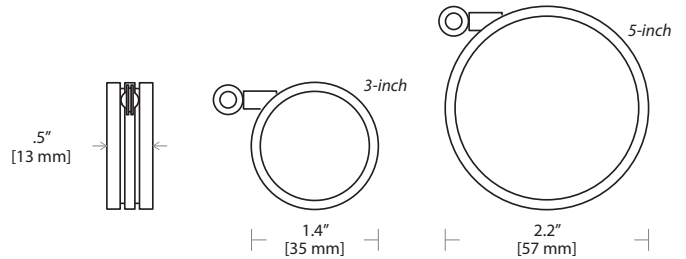
ELECTRICAL

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)

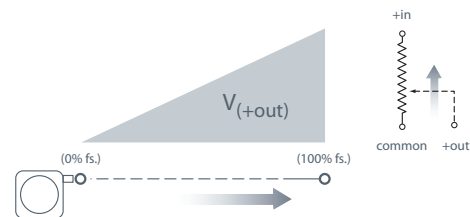
*—potentiometer cycle life is defined as the minimum number of times the measuring cable can be fully extended and retracted before any measurable degradation of the output signal occurs.



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



Ordering Information:

Model Number:

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

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:

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:

A *order code:* **E** **L**

Eyelet Leader Cable

leader cable 24" long

includes:

- 1-eyelet
- 1-snobber
- 5-crimps

Electrical Connection:

B *order code:* **W** **C**

4-inch Wire Leads 40-inch Instrumentation Cable

28 AWG
4 in. [100 mm] length

Ø.2 in. [5 mm]
shielded, 24 AWG multiconductor
w/strain relief
40 in. [1 meter] length

wiring connections

+in	=	brown
+out	=	red
com.	=	orange

wiring connections

+in	=	red
+out	=	green
com.	=	black

sensing circuit

5K ohm

+in

full extension

+out

full retraction

com.

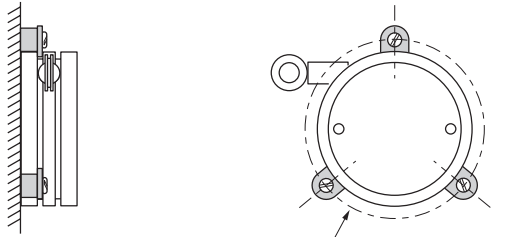
Ordering Information (cont.):

Mounting Options:

① order code:

blank

Servo Clip Mount Option
includes 3) servo-clips and 3) 4-40 screws

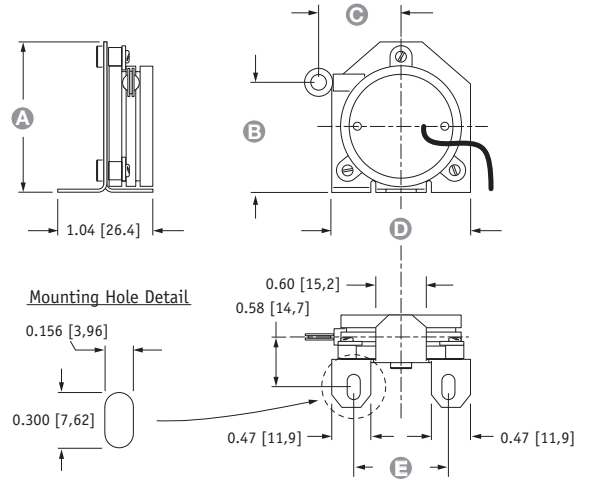


3-in. range: \varnothing 1.65 [41,9] BC. 120° Apart
5-in. range: \varnothing 2.52 [63,9] BC. 120° Apart

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

MB

Mounting Bracket Option



Mounting Hole Detail

	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]

version: 4.0 last updated: January 10, 2013