MT3A

Cable Actuated Sensor
Test Applications • Voltage Divider

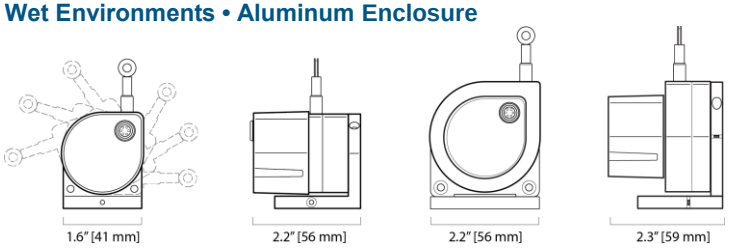
Compact String Pot • Flight/Crash Test Applications

Dual Axis 360° Mounting Bracket

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

Wet Environments • Aluminum Enclosure

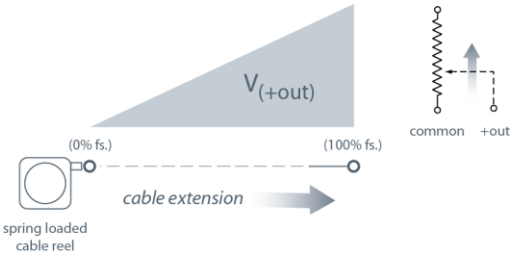
30-inch range model shown with aluminum cover



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

Electrical

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

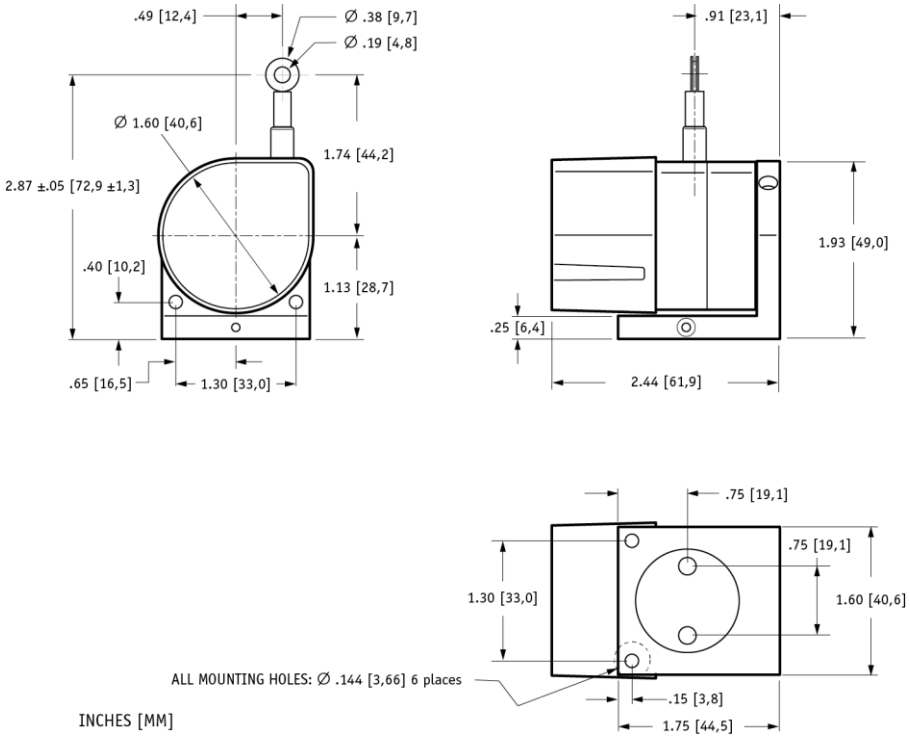
Mechanical

Measuring Cable Tension Options	9, 14 and 33 oz.
Maximum Measuring Cable Acceleration	90 g

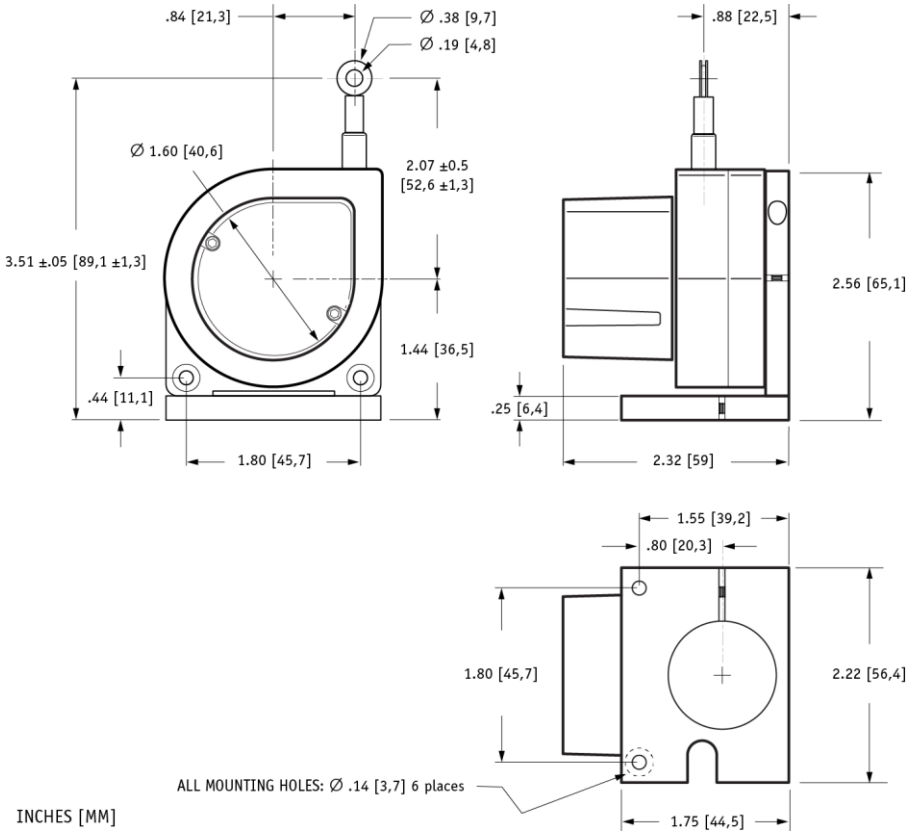
Environmental

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

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



Outline Drawing (0-50-inch range)



Ordering Information

Model Number:

MT3A - ___ ___ - ___ - 10K - ___
order code: Ⓡ Ⓐ Ⓑ Ⓒ

Sample Model Number:

MT3A - 9E - 33 - 10K - C1A

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

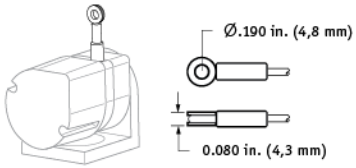
Full Stroke Range:

Ⓡ *order code:*	3	9	15	30	50
full stroke range, min:	3 inches	9 inches	15 inches	30 inches	50 inches
potentiometer cycle-life:	2.5×10^6	8.3×10^5	5.0×10^5	2.5×10^5	2.5×10^5
accuracy (% of full stroke):	1.1 %	.25%	.20%	.15%	.15%

Measuring Cable Termination:

Ⓐ *order code:*

E — Eyelet



L — Leader Cable (24 in. long)

Measuring Cable Tension:

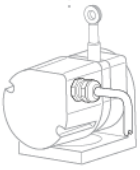
Ⓑ *order code:*	9	14	33
3, 9, 15, 30-in. range options:	9 (±2) oz.	14 (±4) oz.	33 (±6) oz.
max. cable acceleration:	99 g	136 g	136 g

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

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



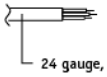
side-mount strain relief

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

blank cover*

Signal Connection Color Code



color	signal
Red	+in
Black	common
Green	+out

24 gauge, shielded

** **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.*

NORTH AMERICA

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