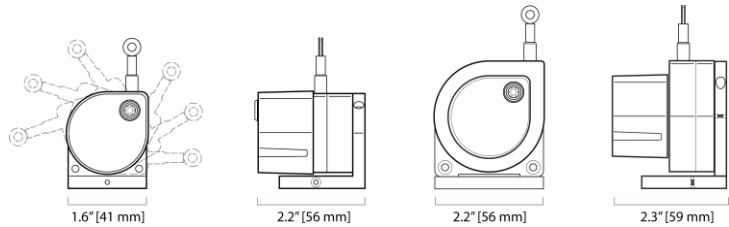


MT2A

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
Aluminum & Polycarbonate Enclosure • GAM Certification

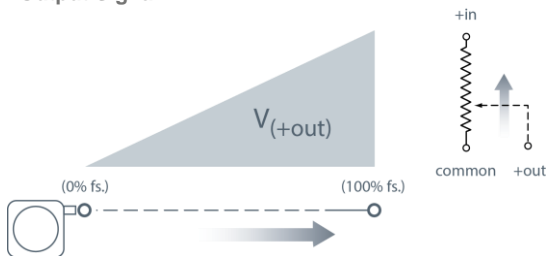


The MT2A is a member of our family of rugged, accurate miniature cable-extension position transducers designed specifically for test applications. One of the major benefits to this sensor is its 2-axis 360° rotating mounting bracket to allow for fast and simple installation in any direction.

The MT2A comes in 5 different measuring ranges: 0-3", 0-9", 0-15", 0-30", 0-50" and features a highly-tensioned heavy-duty measuring cable designed for the high-acceleration demands encountered in flight testing and automotive crash tests.

For extreme impact applications, a new rugged all aluminum sensor cover is now available!

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 Options	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
Mating Plug	LEMO FGG.OB.304.CLAD52

Mechanical

Measuring Cable Tension Options	see ordering information
Maximum Measuring Cable Acceleration	136 g

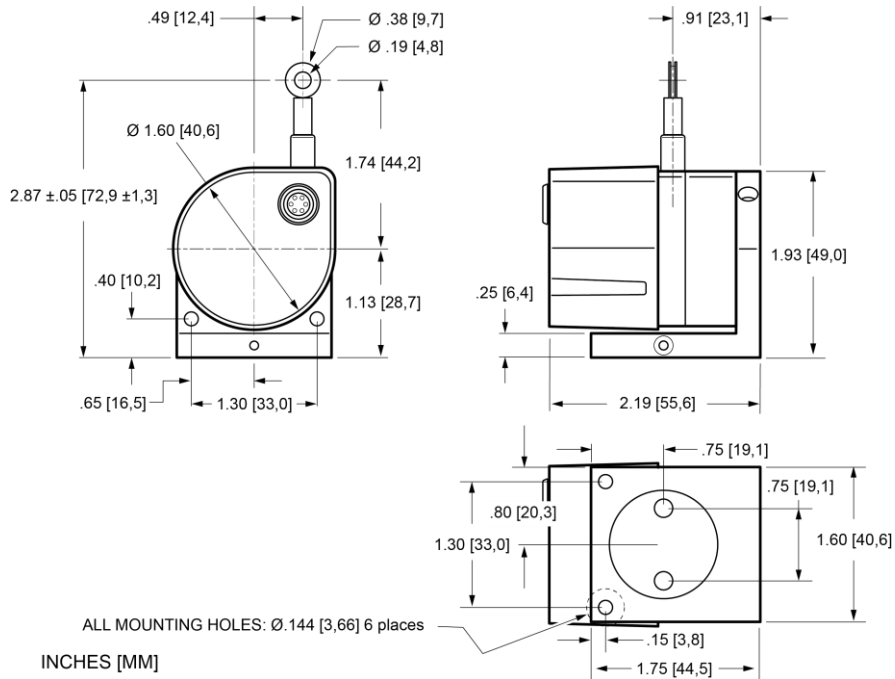
Environmental

Operating Temperature	-65° to 255° F (-55° to 125°C)
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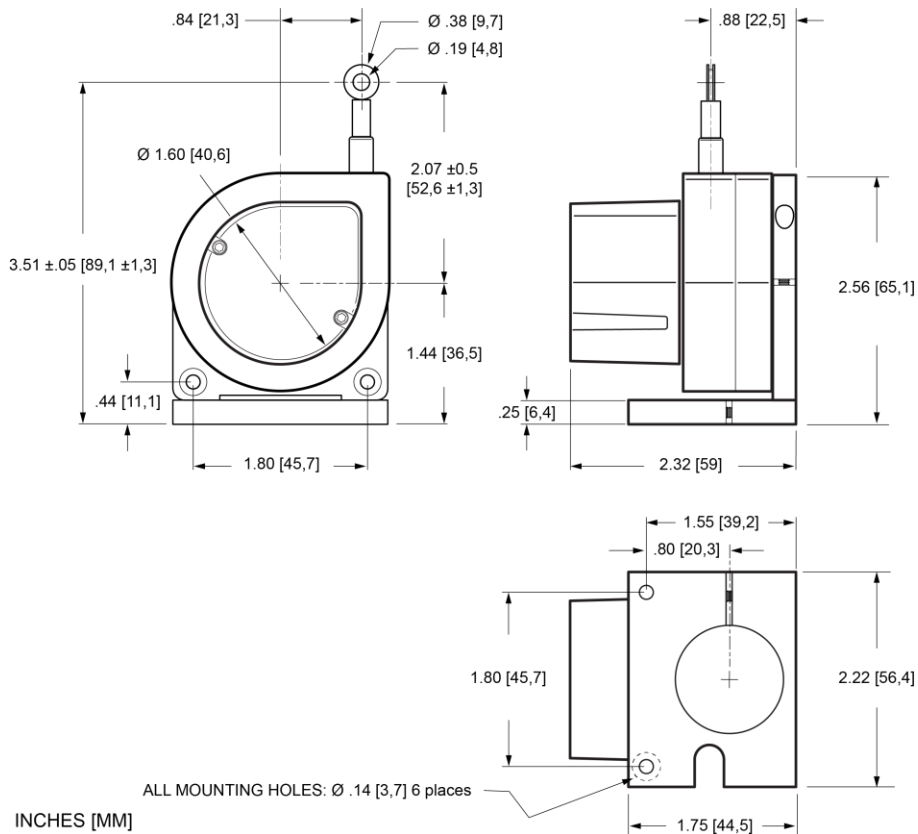
MT2A

Test Applications • Voltage Divider

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



Outline Drawing (0-50 inch range)



MT2A

Test Applications • Voltage Divider

Ordering Information

Model Number:

MT2A - - - **10K** -

order code: **R** **A** **B** **C**

Sample Model Number:

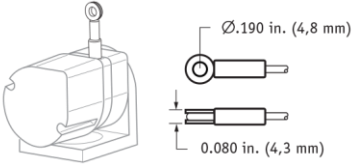
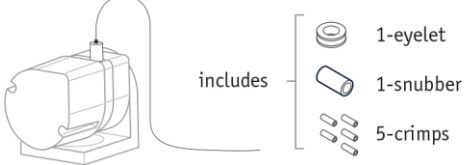
MT2A - 9E - 33 - 10K - M1A

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




Full Stroke Range:

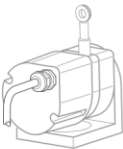
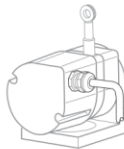

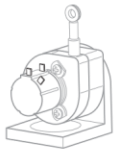
R order code:	3	9	15	30	50
full stroke range, min:	3 inches	9 inches	15 inches	30 inches	50 inches
potentiometer cycle-life:	2.5×10^6	8.3×10^5	5.0×10^5	2.5×10^5	2.5×10^5
accuracy (% of full stroke):	1.1 %	.25%	.20%	.15%	.15%

Measuring Cable Tension:


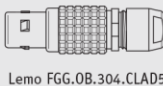

A order code:	E	L
	Eyelet	Leader Cable (24 in. long)
	 <p>Ø.190 in. (4,8 mm) 0.080 in. (4,3 mm)</p>	 <p>includes</p> <ul style="list-style-type: none"> 1-eyelet 1-snubber 5-crimps

Electrical Connection/ Sensor Cover:

C order code:	M1	M1A	M2	M2A	M3	M3A
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum
electrical connection:		end-mount connector*		side-mount connector*		top-mount connector*

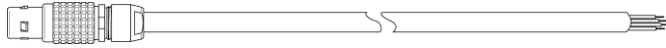
C order code:	C1	C1A	C2	C2A	C3	C3A	S
sensor cover:	polycarbonate	aluminum	polycarbonate	aluminum	polycarbonate	aluminum	none**
electrical connection:							
	end-mount, instrumentation cable (15-ft. long, 24 ga., shielded)		side-mount, instrumentation cable (15-ft. long, 24 ga., shielded)		top-mount, instrumentation cable (15-ft. long, 24 ga., shielded)		solder terminals

4-pin mating plug		Instrumentation Cable		Solder Terminals	
pin#	signal	color	signal	terminal	signal
1	+in	Red	+in	CW	+in
2	common	Black	common	CCW	common
3	+out	Green	+out	S	+out

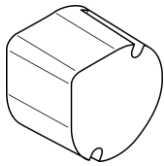
 contact view
  Lemo FGG.0B.304.CLAD52
  24 ga., shielded

*mating plug included **blank cover available, see **Accessories** on next page

Accessories



Part Number 9603957-0015	Description 15 ft. long cordset. Includes mating connector with 15 ft., 24 gauge, shielded multiconductor cable
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*Additional blank sensor covers can be ordered separately. This cover comes without electrical wiring access holes so customer can drill to their requirements.
Includes screws and gasket.*

Part Number 9604197-0000 9603958-0000	Description Aluminum sensor cover Polycarbonate sensor cover
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GAM EG 13 Certification (0-3 to 0-30 inch ranges only)

QUALIFICATION LEVEL FOR CLIMATIC AND THERMAL ENVIRONMENT

External Overpressure, operating (GAM EG 13 Fasc.21)

5 cycles: 1...4.5 Bar in 3 min., 4.5 Bar for 12 hours, 4.5...1 Bar in 1 min.

1 cycle: 1...3.2 Bar in 7.5 min., 3.2 Bar for 2 min., 3.2...8 Bar in 5 sec., 8 Bar for 2 hours, 8...1 Bar in 2 Bar/sec.

1 cycle: 1...4.5 Bar in 20 msec. 4.5 Bar for 5 sec, 4.5...1 Bar in 20 msec.

Thermal Vacuum Transitory, operating (GAM EG 13 Fasc.10)

Room pressure and temperature (1 Bar A; 20°C ±2°C)

1...10-3 mBar in 100 seconds

Vacuum (10-3 mBar) for 10 min.

Climatic Cycles (GAM EG 13 Fasc.8)

Dry heat: 24 hours @ 70°C ±2°C Relative Humidity < 50%

Wet heat: 24 hours @ 70°C ±2°C Relative Humidity = 50%

Cold: 24 hours @ -10°C ±2°C Relative Humidity < 50%

Wet heat: 24 hours @ 70°C ±2°C Relative Humidity = 100%

Dry Heat (Relative Humidity <50%)

Room temperature to 70°C in 30 min

70°C for 5 hours, non-operating

70°C for 5 hours, operating

70°C to room temperature in 20 minutes

QUALIFICATION LEVEL FOR MECHANICAL ENVIRONMENT

Random Vibrations (GAM EG 13 Fasc.42 mod. Op1)

20...2000 Hz, 3 min. per axis, operating, 34 g.

20...2000 Hz, 20 sec. per axis, operating, 45 g.

Random Vibrations (GAM EG 13 Fasc.41 mod. Op3)

Compensated Levels, short duration

3...300 Hz @ .2 – .002 g²/ Hz.

Research Critical Frequency

Logarithmic Run, 1 octave / min., 1...2000 Hz.

Steady Acceleration, operating (GAM EG 13 Fas.45)

37 g, 3 min. per direction (2 directions per axis)

Sinusoidal Vibrations, operating (Gam EG 13 Fasc.41 mod. Op3)

Logarithmic run, 1 octave/min. on 3 axis

3...50 Hz. 9 hours per axis @0.6...1.25 g

Sinusoidal Vibrations, operating (Gam EG 13 Fasc.41 mod. Op3)

Logarithmic run, 1 octave/min. on 3 axis

5...2 KHz. 3 axis @12...25 g.

Average Shock (GAM EG 13 Fasc.43 Mode Op1)

1 shock, 1/2 sinusoidal, 100g. 6 msec. operating, with longitudinal and back direction

Free Fall (GAM EG 13 Fasc.43 Mode Op4)

6 consecutive drops on wood table, height = 100mm

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MT2A 12/01/2015

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