DAYTRONIC

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LOAD CELLS

MINIATURE LOAD CELLS
[434A SERIES]

MINIATURE GENERAL-PURPOSE LOAD CELLS

The **434A**, and **434AM** Series offer the smallest-size strain gage force transducers where good specification can still be maintained. Operating in both tension and compression from forces of 50 grams to 10,000 pounds, these precision miniature load cells have a rugged stainless-steel weld construction with a "tripled" stack design to eliminate or minimize the off-axis loading effects shown in Fig. LC.3. And the internal construction assures excellent long-term stability for ranges of 1 kg and up.

All the basic engineering concepts of larger load cells are built into these instruments, including precision calibration, stabilizing diaphragms, pressure compensation, etc. Each bonded strain gage unit is built of welded 17-4 PH stainless steel for additional ruggedness.

Load Cell Model	Nominal Load Capacity
434A-5A	±5 lb.
434A-10A	±10 lb.
434A-25A	±25 lb.
434A-50A	±50 lb.
434A-100A	±100 lb.
434A-250A	±250 lb.
434A-500A	±500 lb.
434A-1KA	±1000 lb.

Load Cell Model	Nominal Load Capacity
434AM-50A	±50 grams
434AM-150A	±150 grams
434AM-250A	±250 grams
434AM-500A	±500 grams
434AM-1KA	±1 kilogram

Note as of June 2018: Version has been updated to "A" to denote the transducer is supplied without the 14 pin Amphenol connector pair. For recommended in-line connector pair - use Daytronic part number 64090.00. Technical document 92377.00.

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SPECIFICATIONS

Full-Scale Deflection: 0.0005" to 0.0020"

Bridge:

434A: Four-arm bonded foil gages, 350 ohms nominal

434AM (50 through 500 g): Four-arm bonded semiconductor gages, 500 ohms nominal

434AM (1 kg): Four-arm bonded foil gages, 350 ohms nominal

Insulation Resistance: 5000 M½ at 50 V-DC

Excitation (calibration):

434A (5 and 10 lb.): 5.0 V-DC

434A (25 lb. and greater): 10.0 V-DC

434AM: 5.0 V-DC*

Output (standard):

434A: 2 mV/V

434AM (50 through150 g): 0.1 mV/V/g, maximum

434AM (250 through 500 g): 20 mV/V

434AM (1 kg): 1.5 mV/V, nominal

Linearity and Hysteresis:

434A (5 through 250 lb.): ±0.15% of full scale

434A (500 through 10000 lb.): ±0.2% of full scale

434AM (50 g through 1 kg): ±0.15% of full scale

Repeatability:

434A: ±0.05% of full scale

434AM (50 g through 1 kg): ±0.1% of full scale

Overload Capacity: 150% of nominal rating (static)

Temperature Coefficient (Zero and Span):

434A: ±0.005% of full scale/°F

434AM (50 through 500 g): ±0.015% of full scale/°F

434AM (1 kg): ±0.005% of full scale/°F

Compensated Temperature Range: +60° F to +160° F (+16°C to +71°C)

Operating Temperature Range: -65° F to +250° F (-54°C to +121°C)

Weight (nominal): 2.5 oz.

* Series 434AM load cells may require factory adjustment of excitation voltage when used with some Daytronic Strain Gage Meters.

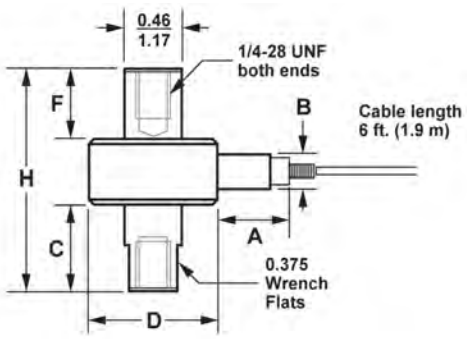

Fig. LC.5(b)
434A/434AM Dimensions

Description	Wire Color
+ Excitation	Red
+ Sense	Red
- Excitation	Black
- Sense	Black
+ Signal	White
- Signal	Green

Load Cell Model	Dimension "A" (in. / cm)	Dimension "B" (in. / cm)	Dimension "C" (in. / cm)	Dimension "D" (in. / cm)	Dimension "F" (in. / cm)	Dimension "H" (in. / cm)	Thread "T"
434A-5, 434A-10	0.31 / 0.79	0.19 / 0.48	0.72 / 1.83	0.75 / 1.91	0.60 / 1.52	1.75 / 4.45	—
434A-25, 434A-50, 434A-100	0.50 / 1.27	0.25 / 0.64	0.72 / 1.83	1.00 / 2.54	0.52 / 1.32	1.75 / 4.45	—
434A-250, 434A-500, 434A-1K	0.50 / 1.27	0.25 / 0.64	0.75 / 1.91	1.00 / 2.54	0.75 / 1.91	2.00 / 5.08	—
434AM-50 through 434AM-500	0.50 / 1.27	0.38 / 0.97	0.52 / 1.32	1.00 / 2.54	0.52 / 1.32	1.75 / 4.45	—
434AM-1K	0.31 / 0.79	0.19 / 0.48	0.72 / 1.83	0.75 / 1.91	0.60 / 1.52	1.75 / 4.45	—