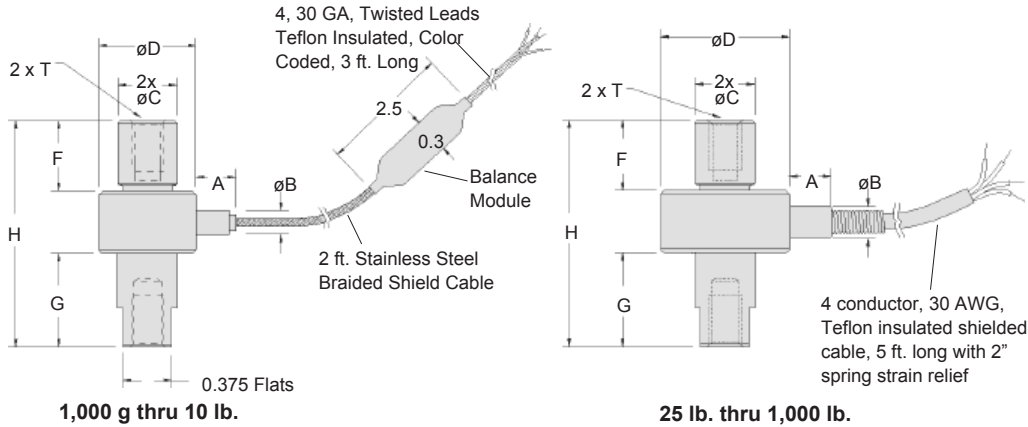


Model 34 Precision Miniature Load Cell

Order Code AL312

- 1000 g to 1000 lb. Range
- Welded Stainless Steel
- Rugged, Small Size
- Tension/ Compression
- 0.15% Accuracy



Wiring Code

Cable/ Unamplified

- Red (+) Excitation
- Black (-) Excitation
- Green (-) Output
- White (+) Output

Dimensions

Ranges (lb.)	D (in.)	H (in.)	A (in.)	B (in.)	C (in.)	F (in.)	G (in.)	T
1000 g; 5; 10 lb.	0.75	1.75	0.31	0.19	0.46	0.60	0.72	1/4-28 UNF
25; 50; 100 lb.	1.00	1.75	0.50	0.25	0.46	0.52	0.72	1/4-28 UNF
250; 500; 1000 lb.	1.00	2.00	0.50	0.25	0.46	0.75	0.75	1/4-28 UNF

Performance

Load Ranges.....	1000 g to 1000 lb.
Linearity	
1000 g to 250 lb.....	+/- 0.15% Full Scale
500 to 1000 lb.....	+/- 0.2% Full Scale
Hysteresis	
1000 g to 250 lb.....	+/- 0.15% Full Scale
500 to 1000 lb.....	+/- 0.2% Full Scale
Non-Repeatability	
1000 g.....	+/- 0.1% Full Scale
5 to 1000 lb.....	+/- 0.05% Full Scale
Tolerance on Output	
1000 g.....	1.5 mV/V (nominal)
5 to 1000 lb.....	2 mV/V
Operation.....	Tension/ Compression (note 3)
Resolution.....	Infinite

Environmental

Temperature, Operating.....	-65° to 250° F
Temperature, Compensated.....	60° to 160° F
Storage Temperature.....	-100° to 300° F
Temperature, Effect	
Zero.....	0.005% Full Scale/° F
Span.....	0.005% Full Scale/° F

Electrical

Strain Gage Type.....	Bonded Foil
Excitation (calibration)	
1000 g to 10 lb.....	5 VDC
25 to 1,000 lb.....	10 VDC
Insulation Resistance.....	5000 Megohms @ 50 VDC
Bridge Resistance.....	350 Ohms
Electrical Termination (std)	
1000 g to 10 lb.....	Teflon Cable (5 ft.) with external balance board
25 to 1,000 lb.....	Teflon Cable (5 ft.)

Mechanical

Maximum Allowable Load.....	150% F.S. (note 1)
Weight.....	See table
Material.....	17-4 PH Stainless Steel
Deflection Full Scale.....	See table
Natural Frequency.....	See table

Model 34 standard

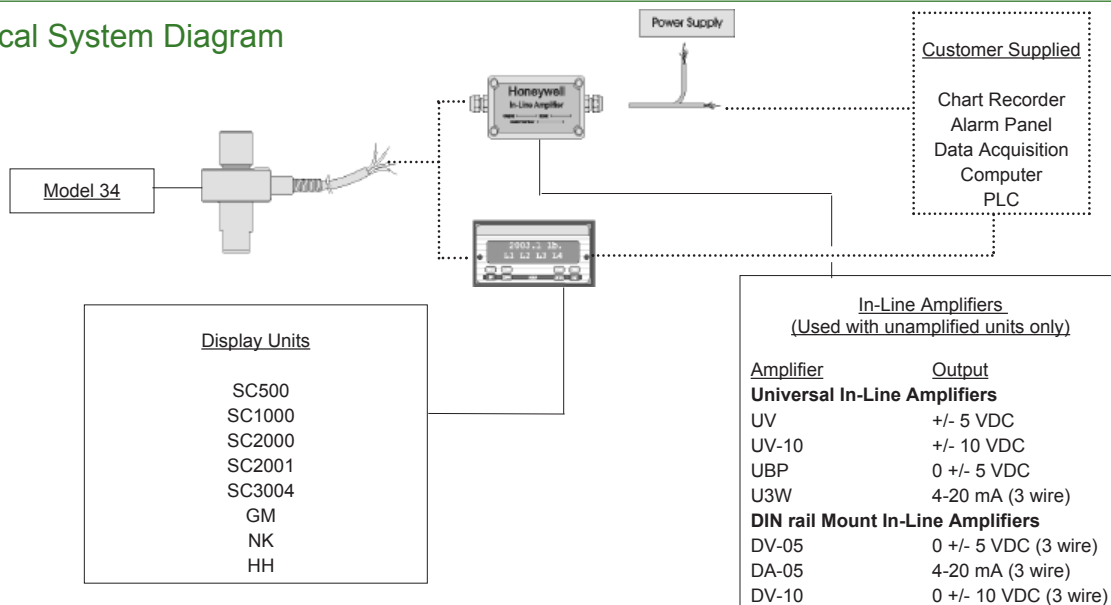
Deflections and Ringing Frequencies

Capacity (lb.)	Deflection at Full Scale (in.)	Ringing Frequency (Hz)	Weight (grams)
1000 g to 10 lb.	0.001	1,000	40
25 to 100	0.001	3,000	80
250 to 1000	0.0015	5,000	100

Range Codes

Range	Range Code	Range	Range Code
1000 g	AR	100 lb.	BR
5 lb.	AT	250 lb.	CN
10 lb.	AV	500 lb.	CR
25 lb.	BL	1000 lb.	CV
50 lb.	BN		

Typical System Diagram



Options

	Fast track manufacture	Build to Order
Load Range	1000 grams 5, 10, 25, 50, 100, 250, 500, 1000 lbs	
Temperature Compensation	1a. 60° to 160° F 1b. 30° to 130° F 1c. 0° to 185° F 1d. -20° to 130° F 1e. -20° to 200° F 1j. 0° to 50° C 1k. -20° to 85° C 1m. -25° to 110° C	1f. 70° to 250° F 1g. 70° to 325° F 1h. 70° to 400° F 1i. -65° to 250° F
Internal Amplifiers	2a. Unamplified, mV/V output	
Electrical Termination	6e. Integral cable: Teflon 6v. Phoenix connector on end of cable	6a. Bendix PTIH-10-6P - 6 pin (max. 250° F) (note 5) 6d. Microtec DR-4S-4H 4 pin 6f. Integral cable: PVC 6g. Integral cable: Neoprene (max 180° F) 6h. Integral cable: Silicone 6i. Integral underwater cable (max 180° F) 15d. Connector on end of cable
Special Calibration	9a. 10 point (5 up/5 down) 20% increments @ 20° C 9b. 20 point (10 up/10 down) 10% increments @ 20° C	
Special Calibration	30a. Compression only calibration, Positive in compression 30b. Tension and Compression calibration, Positive in tension 30c. Compression only calibration, Negative in compression	
Shock & Vibration	44a. Shock and vibration resistance	
Interfaces (note 4)	53e. Signature Calibration 53t. T.E.D.S. IEEE 1451.4 Module	

■ Supplied as standard

Special Customer Requirements (Consult Factory)

OEM Labels
Radiation proof
Different cable lengths

Notes

1. Allowable Maximum Loads- Maximum load to be applied without damage (note 2).
2. Without Damage- loading to this level will not cause excessive zero shift or performance degradation. The user must consider fatigue life for long term use and structural integrity. All structurally critical applications (overhead loading, etc.) should always be designed with safety redundant load paths.
3. Standard calibration for tension/compression load cells is in tension only.
4. Options 53e and 53t are external in-line interfaces.
5. Availability varies with range.

How to Order

Combine the order code, the range code and the options code.

Sample Code: **AL312** **CV** **1b, 30a**
 Model Code Range Code Options Code