

Precision Low Profile Load Cell

INTERNAL AMPLIFIERS

Amplifier specifications	Voltage output: Option 2b	Voltage output: Option 2c	Voltage output: Option 2t	Current three-wire: Option 2j	Current two-wire: Option 2k	Intrinsically safe amp: Option 2n (2N)***
Output signal	±5 V	0-5 V or ±5 V @ 45 mA	0-10 V or ±10 V @ 45 mA	4 mA to 20 mA	4 mA to 20 mA	4 mA to 20 mA
Input power (voltage)	±15 Vdc or 26-32 Vdc	11 Vdc to 28 Vdc	15 Vdc to 28 Vdc	22 Vdc to 32 Vdc	9 Vdc to 32 Vdc	9 Vdc to 28 Vdc
Input power (current)	45 mA	40 mA	40 mA	65 mA	4 mA to 28 mA	4 mA to 24 mA
Freq. response	3000 Hz	3000 Hz	3000 Hz	2500 Hz	300 Hz	2000 Hz
Power supply rejection	60 db	60 db	60 db	60 db	60 db	60 db
Operating temperature	-20 °F to 185 °F	-20 °F to 185 °F	-20 °F to 185 °F	0 °F to 185 °F	0 °F to 185 °F	-20 °F to 185 °F
Reverse volt. protection	Yes	Yes	Yes	Yes	Yes	Yes
Short circuit protection	Momentary	Momentary	Momentary	Yes	Yes	Yes
Wiring code: connector	A (+) Supply B Output common C Supply return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output common** C Supply return** D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output common** C Supply return** D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output common** C Supply return** D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B No connection C No connection D (+) Output E Case ground F No connection	A (+) Supply B No connection C No connection D (+) Output E Case ground F No connection
Wiring code: cable	R (+) Supply Bl Output common G Supply return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl Output com* G Supply return* W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl Output com* G Supply return* W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl Output com* G Supply return* W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl (+) Output W Case ground	R (+) Supply Bl (+) Output W Case ground

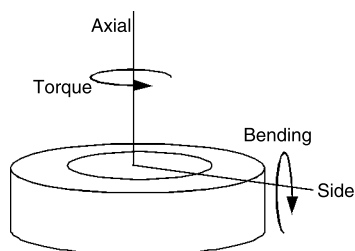
* Black and green wires are internally connected.

** Pins B and C are internally connected.

*** See our Web site (<http://measurementsensors.honeywell.com>) for the most up-to-date information regarding intrinsically safe approvals, ref. #008-0547-00.

ALLOWABLE MAXIMUM LOADS

Capacity (lb)	Side load (lb)	Bending (lb-in)	Torque (lb-ft)
5 to 25	50 %	40 %	25 %
50 to 1000	45 %	35 %	25 %
2000 to 5000	30 %	25 %	25 %
7500 to 30000	20 %	20 %	15 %
50000 to 100000	20 %	20 %	15 %
150000 to 200000	20 %	20 %	15 %
300000	20 %	20 %	10 %
400000	20 %	20 %	10 %
500000	20 %	20 %	10 %



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OPTION CODES

Load ranges	5, 10, 25, 50, 100, 250, 500, 1000, 2000, 5000, 3000, 4000, 7500, 10000, 15000, 20000, 30000, 50000, 75000, 100000, 150000, 200000, 300000, 400000, 500000 lb			
Temperature compensation	1a. 60 °F to 160 °F 1b. 30 °F to 130 °F 1c. 0 °F to 185 °F	1d. -20 °F to 130 °F 1e. -20 °F to 200 °F 1f. 70 °F to 250 °F	1g. 70 °F to 325 °F ¹⁴ 1h. 70 °F to 400 °F ¹⁴ 1i. -65 °F to 250 °F ¹⁴	1j. 0 °C to 50 °C 1k. -20 °C to 85 °C 1m. -25 °C to 110 °C
Internal amplifiers ¹⁰	2b. 4 wire, ±5 Vdc 2c. 0-5 Vdc output	2j. 4-20 mA (three-wire) output 2k. 4 mA to 20 mA (two-wire) ²⁰	2n (2N) 4 mA to 20 mA (wire) intrinsically safe ²⁰ 2t. 0 Vdc to 10 Vdc	2u. Unamplified, mV/V output
Internal amplifier enhancements	3a. Input/output isolation ¹⁹ 3d. Remote buffered shunt calibration ⁸			
Overload stops	4a. Overload stops			
Electrical termination	6a. Bendix PTIH-10-6P 6-pin (ranges to 5000 lb) 6b. MS3102E-14S-6P (ranges 7500 lb and up) ⁹ 6e. Integral cable: Teflon	6f. Integral cable: PVC 6g. Integral cable: Neoprene ⁹ 6h. Integral cable: Silicone	6i. Integral underwater cable ⁹ 6j. 1/2-14 conduit fitting with 5 ft of 4 conductor PVC cable	6q. Molded integral cable polyurethane ⁹ 6v. Phoenix connector on end of cable
Shunt calibration	8a. Precision internal resistor ¹⁴			
Special calibration	9a. 10 point (5 up/5 down) 20 % increments @ 68 °F 9b. 20 point (10 up/10 down) 10 % increments @ 68 °F 9c. ASTM E-74 calibration			
Bridge resistance	12b. 5000 ohm (foil)			
Zero and span adjustment	14a. No access to pots 14b. Top access to pots			
Electrical connector orientation	15a. Horizontal electrical exit port orientation 15b. Vertical electrical exit port orientation		15c. Radial electrical exit port orientation 15d. Connector on end of cable	
Special calibration	30a. Compression only calibration, positive in compression 30b. Tension and compression calibration, positive in tension 30c. Compression only calibration, negative in compression 30d. Tension and compression calibration, positive in compression			
Bridge type	31a. Dual bridge			
Shock and vibration	44a. Shock and vibration resistance			
Interfaces	53e. Signature calibration ¹⁴ 53t. TEDS IEEE 1451.4 module ¹⁵			

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MOUNTING DIMENSIONS

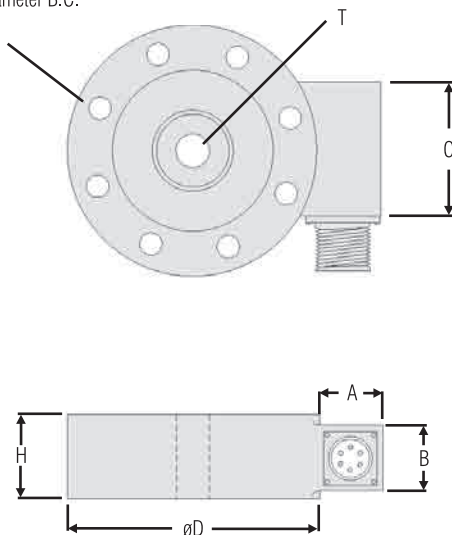
Ranges lb	D mm [in]	H mm [in]	H*** mm [in]	F#	ØG mm [in] B.C.	ØK mm [in] thru	T	A mm [in]	A* mm [in]	B mm [in]	B* mm [in]	C mm [in]
5, 10, 25	63,5 [2.50]	20,32 [0.80]	44,45 [1.75]	6	50,8 [2.000]	4,83 [0.19]	1/4-28 UNF	20,83 [0.82]	63,5 [2.5]	19,05 [0.75]	22,86 [0.9]	31,75 [1.25]
50, 100, 250, 500, 1000	76,2 [3.00]	25,4 [1.00]	44,45 [1.75]	6	57,15 [2.250]	7,11 [0.28]	3/8-24 UNF	20,83 [0.82]	63,5 [2.5]	19,05 [0.75]	22,86 [0.9]	31,75 [1.25]
2000, 3000, 4000, 5000	88,9 [3.50]	25,4 [1.00]	44,45 [1.75]	6	66,68 [2.625]	8,64 [0.34]	1/2-20 UNF	20,83 [0.82]	63,5 [2.5]	19,05 [0.75]	22,86 [0.9]	31,75 [1.25]
7500, 10000, 15000	139,7 [5.50]	45,7 [1.80]	45,7 [1.80]	8	114,3 [4.500]	10,16 [0.40]	1-14 UNS	31,75 [1.25]	58,42 [2.3]	38,1 [1.50]	38,1 [1.5]	50,8 [2.00]
20000, 30000, 50000	152,4 [6.00]	45,7 [1.80]	45,7 [1.80]	8	123,83 [4.875]	13,46 [0.53]	1 1/2-12 UNF	31,75 [1.25]	58,42 [2.3]	38,1 [1.50]	38,1 [1.5]	50,8 [2.00]
75000, 100000	228,6 [9.00]	63,5 [2.50]	63,5 [2.50]	12	196,85 [7.750]	16,76 [0.66]	2-12 UN	31,75 [1.25]	58,42 [2.3]	38,1 [1.50]	38,1 [1.5]	50,8 [2.00]
150000, 200000	279,4 [11.00]	63,5 [2.50]	63,5 [2.50]	12	241,3 [9.500]	19,81 [0.78]	2 1/2-12 UN	31,75 [1.25]	58,42 [2.3]	38,1 [1.50]	38,1 [1.5]	50,8 [2.00]
300000, 400000, 500000	355,6 [14.00]	107,95 [4.25]	107,95 [4.25]	12	298,45 [11.750]	26,16 [1.03]	3 1/2-8 UN	31,75 [1.25]	58,42 [2.3]	38,1 [1.50]	38,1 [1.5]	**

* Length of load cell with amplified option (see option codes)

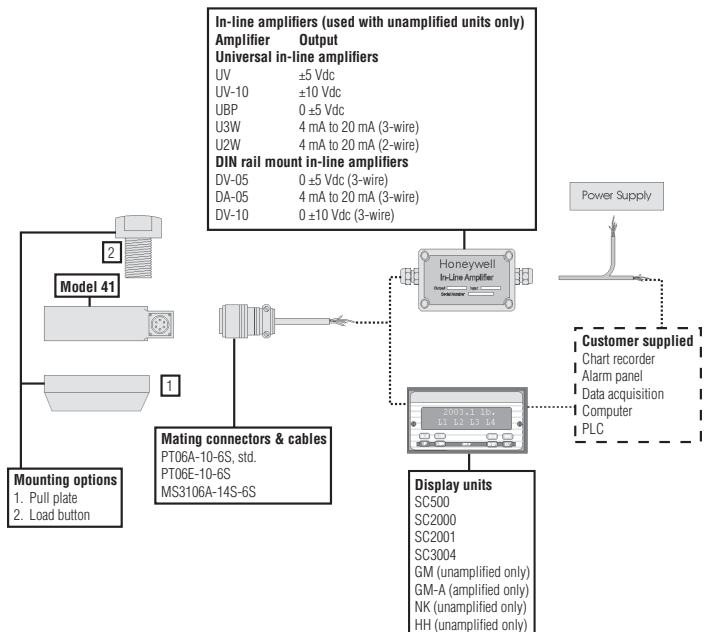
** C dimension varies on high ranges. Consult factory

*** H dimension with 2n(2N) amplifier

F Clearance holes equally spaced on G diameter B.C.
K diameter thru



TYPICAL SYSTEM DIAGRAM



NOTES

1. Allowable maximum loads - maximum load to be applied without damage.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. Interconnecting shunt cal. 1 terminal with shunt cal. 2 terminal provides 50 % (unamplified units), 75 % (4 mA to 20 mA 3-wire units) or 80 % (voltage amplified units) of full scale output for quick calibration. Shunt calibration comes standard with internal amplifier option 2b, 2c, 2t and 2j.
4. O=Orange; Y=Yellow; B=Blue; Bl=Black; R=Red; Br=Brown; W=White; G=Green. Color specifying cable and number or letter specifying connector.
5. No mating connector necessary for cable option.
6. Adding any internal amplifiers on 5 lb to 25 lb ranges will increase delivery time.
7. Option 2n (2N) on 5 to 5000 lb. ranges will typically take 12 weeks for delivery.
8. Option 3d is not available with option 2n (2N) or 2k.
9. Not available with option 1c, 1e, 1f, 1g, 1h or 1i.
10. Consult factory.
11. Availability varies with range, consult factory.
12. Option only pertinent when option 2n (2N) selected.
13. Standard calibration for tension/compression load cells is in tension only.
14. Not available with amplified output.
15. Consult factory for TEDS availability with amplified models.
16. Range dependent; consult factory. Termination dependent; consult factory.
17. Internal amp and termination dependent; consult factory.
18. This unit calibrated to Imperial (non-Metric) units.



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