

AVAILABLE
with Signature
Calibration
SEE PG. IN-5

Precision, Fatigue Rated Pancake Load Cells

Model 73 and 75

LONG FATIGUE LIFE

50 TO 200,000 lb.

HIGH OVERLOAD



Model 73
(Compression Only)



Model 75
(Tension/Compression)



Models 73 and 75, Fatigue Rated Load Cells are engineered for applications such as materials or product fatigue testing, which involve an extremely large number of cycles or occasional overload conditions. These fatigue rated load cells have load ranges from 50 to 200,000 lbs and achieve a non-linearity of 0.1% full scale. The superior design of these bonded foil, strain gage compression and/or tension load cells permits a fatigue life of 1 billion cycles (zero to full scale). Model 75 measures tension/compression while Model 73 measures compression only. Both models must be used on a smooth flat surface to achieve rated specifications. The load button on Model 73 is an integral part of the load cell and cannot be removed or changed. The tension/compression Model 75 is designed with the threaded hole running completely through the center of the cell. Models 75 and 73 utilize two stabilizing diaphragms, which are welded to the sensing member to reduce off-center and side-loading effects. Applications include spring testing, shock absorber testing and electrohydraulic shaker systems.

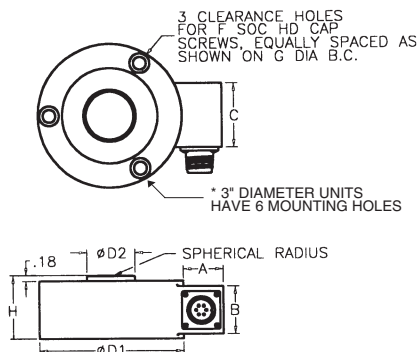
Dimensions (inches)

Note, standard calibration for tension/compression load cells is in tension only.

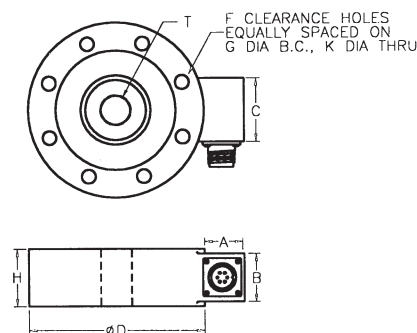
Model 73 (Order code BL113)

Available Ranges	D1"	D2"	H"	F" Typ.	G" Dia. B.C.	A"	B"	C"
50; 100; 250; 500 lb.	3.00	0.56	1.18	1/4	2.250	0.82	0.75	1.25
1,000; 2,000 lb.	3.50	0.69	1.18	5/16	2.625	0.82	0.75	1.25
3,000; 4,000; 5,000; 7,500; 10,000 lb.	4.50	1.50	2.00	3/8	3.790	1.25	1.50	2.00
15,000; 20,000; 30,000; 50,000 lb.	4.50	1.50	2.00	3/8	3.790	1.25	1.50	2.00
75,000; 100,000 lb.	5.50	2.00	2.18	3/8	4.812	1.25	1.50	2.00
150,000; 200,000 lb.	7.50	2.50	2.68	3/8	6.750	1.25	1.50	2.00

Model 73 (Compression Only)



Model 75 (Tension/Compression)



Model 75 (Order code BL114)

Available Ranges	D" Dia.	H"	F"	G" Dia. B.C.	K" Dia. Thru	T	A"	B"	C"
50; 100; 250; 500 lb.	3.00	1.00	6	2.250	0.28	3/8-24UNF	0.82	0.75	1.25
1,000; 2,000 lb.	3.50	1.00	6	2.625	0.34	1/2-20UNF	0.82	0.75	1.25
3,000; 4,000; 5,000; 7,500 lb.	5.50	1.80	8	4.500	0.40	1-14UNS	1.25	1.50	2.00
10,000; 15,000; 20,000 lb.	6.00	1.80	8	4.875	0.53	1-1/2-12UN	1.25	1.50	2.00
30,000; 50,000 lb.	7.50	2.00	8	6.000	0.78	2-12UN	1.25	1.50	2.00
75,000; 100,000 lb.	9.00	2.50	12	7.750	0.66	2-1/2-12UN	1.25	1.50	2.00
150,000; 200,000 lb.	14.00	4.25	12	11.750	1.03	3-1/2-8UN	1.25	1.50	*

NOTE: Bolt holes (K) are counter-bored for ranges 7500 lb. and below.
* "C" dimension varies on high ranges. Consult SENSOTEC.

Options (See Appendix)

Temperature compensated 1b, 1c, 1d, 1e, 1f; Int. shunt cal 8a ($\geq 1,000$ lb. only); Special calibration 30a, 30b (Model 75 only); Signature calibration 53e

Premium Options: 1i; 2n or 2N intrinsically safe amp see page AP-6; 2q; 3a; 6e; 6f; 6g; 6h; 6i; 6j; Int. amps 2a (Model 73), 2b (Model 75),

Accessories: Mating connectors and connector/cable assemblies; Pull plates; Load buttons

		Model 73 (Compression only) Order Code BL113	Model 75 (Tension/Compression) Order code BL114
PERFORMANCE	Load Ranges.....	50 to 200,000 lb.	50 to 200,000 lb.
	Non-Linearity (max)	$\pm 0.1\%$ F.S.	$\pm 0.1\%$ F.S.
	Hysteresis (max)	$\pm 0.1\%$ F.S.	$\pm 0.1\%$ F.S.
	Non-repeatability(max).....	$\pm 0.03\%$ F.S.	$\pm 0.03\%$ F.S.
	Output (standard)	2mV/V	2mV/V
	Resolution	Infinite	Infinite
ENVIRONMENTAL	Life cycle	1 billion	1 billion
	Temperature, Operating.....	-65° F to 250° F	-65° F to 250° F
	Temperature, Compensated	60° F to 160° F	60° F to 160° F
	Temperature Effect		
	- Zero (max)	0.002% F.S./° F	0.002% F.S./° F
	- Span (max)	0.002% Rdg./° F	0.002% Rdg./° F
ELECTRICAL	Strain Gage Type.....	Bonded Foil	Bonded foil
	Excitation (calibration).....	10VDC	10VDC
	Bridge Resistance.....	350 ohms	350 ohms
	Wiring Code (std)	#2 (See Pg. AP-8)	#2 (See Pg. AP-8)
	Electrical Termination (std)		
	50 to 2,000 lbs	PTIH-10-6P or equiv. (Hermetic stainless)	PTIH-10-6P or equiv. (Hermetic stainless)
MECHANICAL	3,000 to 200,000 lbs	MS3102E-14S-6P or equiv.	MS3102E-14S-6P or equiv.
	Mating Connector (not incl.)		
	50 to 2,000 lbs	PT06A-10-6S or equiv.	PT06A-10-6S or equiv.
	3,000 to 200,000 lbs	MS3106A-14S-6S or equiv.	MS3106A-14S-6S or equiv.
	Static Overload Capacity	200% of capacity	200% of capacity
	Thread Size.....	N/A	See table
INTERNALLY AMPLIFIED UNITS* (Optional)	Material		
	50 thru 100,000 lb.	Stainless Steel	Stainless Steel
	125,00 thru 200,00 lbs	Stainless Steel	Carbon Steel
	Deflection-Full Scale		
	10-1000lbs	0.0022"	0.0035"
	≥ 1000 lbs	0.0022"	0.0035"
INTERNALLY AMPLIFIED UNITS* (Optional)	Outputs Available	± 5 VDC, 4-20mA	0-5VDC, 4-20mA

NOTES: *Standard calibration for tension/compression load cells is in tension only.
Internal amplifiers are available for all ranges. Internal amplification for ranges $< 3,000$ lb.
("H" dimension < 1.80 ") may increase height.

ALLOWABLE EXTRANEEOUS FORCE WITHOUT DAMAGE

(% of load capacity)

Ranges	Side Load (lb)	Bending (in-lb)	Torque (in-lb)	Total Extraneous Force
50; 100; 250; 500 lb.	75%	60%	35%	100%
1,000; 2,000 lb;	45%	35%	35%	100%
3,000; 4,000; 5,000; 7,500	30%	30%	25%	100%
10,000; 15,000; 20,000 lb.				
30,000; 50,000; 75,000	30%	30%	15%	100%
100,000; 150,000; 200,000 lb.				

General Information

How to order (See Pg. AP-19)
Load cell selection flow chart (See Pg. LO-1)