

Precision Force and Weight Measurement Transducers



FEATURES

- Capacity range: 500 to 100K lb (227 to 45K kg)
- Compact - rugged
- Operational: -30° to +175°F
- Low deflection
- Environmentally sealed
- FM and CSA approved

DESCRIPTION

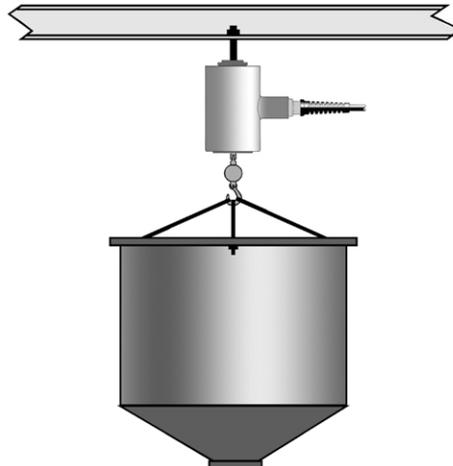
T3 type load cells, developed by BLH, are designed for various types of weighing and force measurement. Construction of the U3 and T3 load cell utilizes all of the advantages of SR-4® strain gages. All cells are fabricated with high strength 'ring' type elements to provide an output signal of 3mV/V at rated capacity. Each cell is designed for minimum deflection and 150% safe overload without damage. U3G1 and U3G2 universal load cells are shipped with calibration data verifying accuracy in both tension and compression modes. U3G2 and T3P2 cells contain a second bridge. The

second bridge can be used simultaneously with the first bridge for dual output or be reserved as a backup in case of failure.

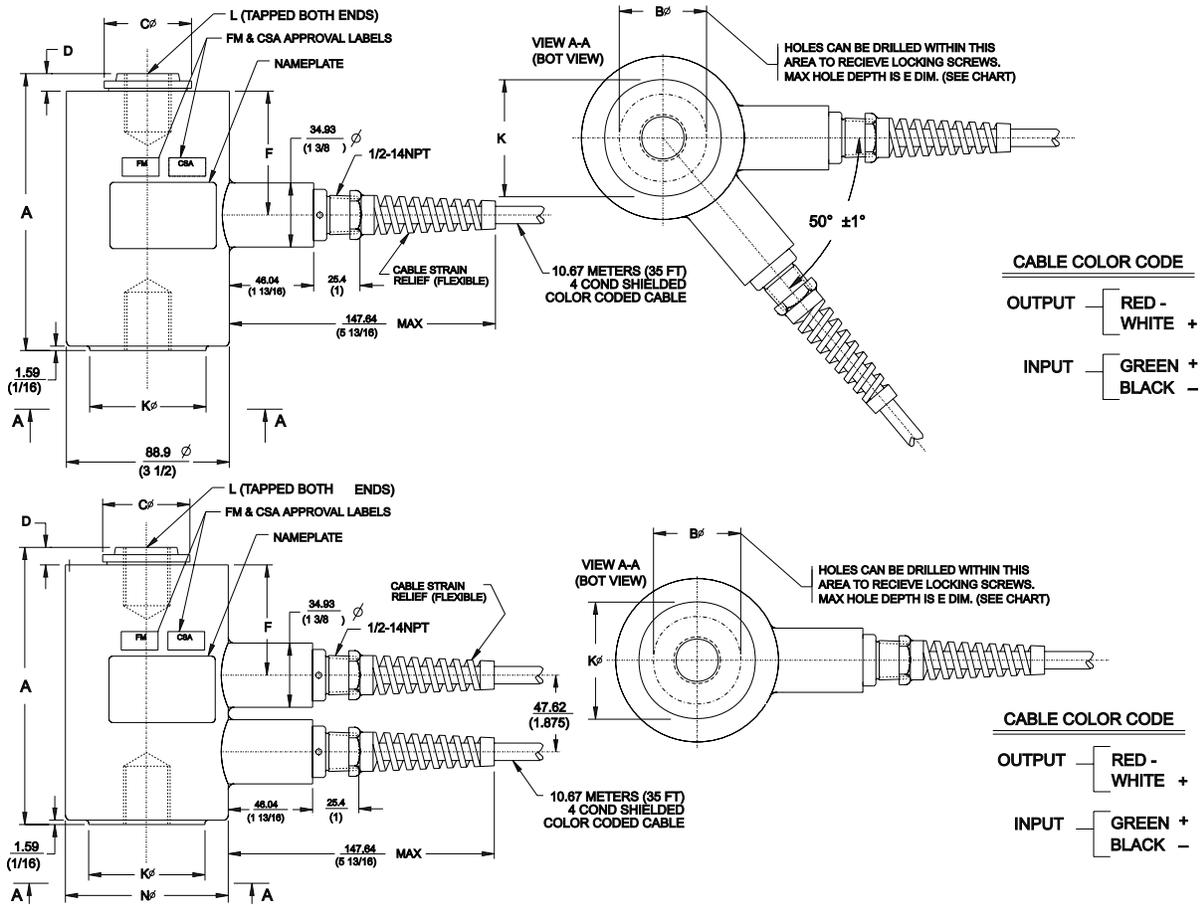
APPLICATIONS

- Dynamometers
- Tensile testing
- Tension and compression weighing

CONFIGURATION



DIMENSIONS



CAP (lb)	A	B DIA.	C DIA.	D	E	F	K DIA.	L (TAPPED)	N DIA.
500 - 3000	49/16	-	11/16	1/4	-	21/4	11/4	1/2-20UNF-2BX1/2DP	-
5000 - 10000	515/16	13/4	17/8	3/8	1/2	221/32	21/2	1-14UNS-2BX11/4DP	-
20000 - 30000	81/2	25/8	23/4	1/2	1	313/32	4	11/2-12UNF-2BX13/4DP	5
50000	117/16	33/4	4	5/8	1	415/32	53/4	2-12UN-2BX21/4DP	61/2
100000	173/4	43/4	51/2	11/8	1	73/8	73/4	3-8UN-2BX41/2DP	9

Capacity (lb)	500	1000	2/3000	5000	10000	20000	50000	100000
Weight (lb)	6	6	6	10	10	25	70	200
Deflection in.	0.007	0.006	0.005	0.007	0.005	0.007	0.010	0.013
Nat. Freq @ Eff. Wt Hz/lb	1250/0.45	1800/0.50	2600/0.56	2200/1.5	3400/1.7	2400/5	1900/15	1350/43

SPECIFICATIONS

Performance

Capacity 500, 1K, 2K, 3K, 5K, 10K, 20K, 50K, and 100K lb (227, 454, 907, 1.4K, 2.3K, 4.5K, 9.1K, 13.6K, 22.7K, and 45.4K kg)

Performance (cont)

	U3	T3
Rated Output (RO)	3mV/V - 0.25%	3mV/V ± 0.1%
Non-Linearity - % RO	0.10	0.05
Hysteresis - % RO	0.02% 1-100K	0.02% 1-50K
	0.05% 500lb	0.05% 500lb
Repeatability - % RO	0.02	0.02
Creep - % RO (20 min.)	0.03	0.03
Variance Ten. - Cmp	0.015mV/V max.	NA

Electrical

Recommended Excitation	10Vac - dc	10Vac - dc
Zero Balance - % RO	1.0	1.0
Input Resistance (Ohms)	350 ± 3.5	350 ± 3.5
Output Resistance (Ohms)	350 ± 3.5	350 ± 3.5
Number of Bridges	single/double	single/double
Min. Insulation Resistance-	megohms (@ 50Vdc)	
Bridge to Ground	5000	5000
Shield to Ground	2000	2000
Electrical Connection	35 foot cable	35 foot cable

Temperature

	U3	T3
Safe Range	-30 to +175°F	-30 to +175°F
Compensated Range	+30 to +130°F	+30 to +130°F
Effect on Zero Balance	0.0015% RO/°F	0.0015% RO/°F
Effect on Rated Output	0.005% load/°F	0.0008% load /°F

Adverse Load Ratings

Safe Overload - % RO	150	150
Max Overload - % RO	300	300

APPROVALS

FM (Factory Mutual)	3611 (Class I, II, III; Div.1,2; Groups A-G)
CSA	C22.2 (Class I, II, III; Div.1,2; Groups A-G)

BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.

Disclaimer

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