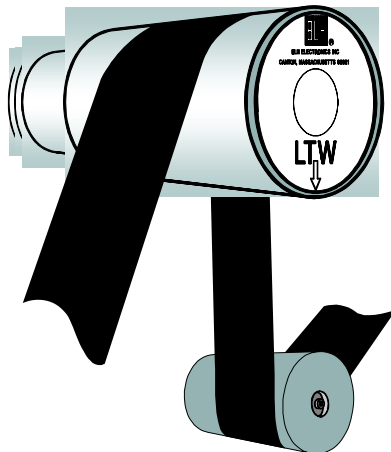# Narrow Web - LTW Transducer

LTW Narrow Web Transducer Applications:
Film/Foil/Tags Labels/Fabrics/Paper Plastics/Filaments

- **Precision Accuracy - Repeatability Better Than 0.02% Rated Output**

- **Reliable Readings - Low Range**

- **Rugged Aluminum Construction with Heavy Duty Ball Bearings**

- **Single Bolt Installation**

- **Wide Range of Operating Tensions**

- **Factory Calibration Eliminates Need for On-Site Test Weights**

Product Description

LTW Narrow Web Tension Transducer design incorporates BLH strain gage technology and ball bearings into a web tension measurement device superior to any currently available. LTW units mount in-line, perpendicular to the roll axis, and accommodate web widths up to twelve inches. LTW's are used on single side machines equipped with cantilevered idler rollers. Typical applications include label/tag/tape machines, and paper-film-foil converting equipment; winders, reminders, slitters, coaters, etc.

All LTW narrow web tension transducers are machined from high strength aluminum and include a full Wheatstone bridge that is temperature compensated and dead weight calibrated to yield precision specifications. Repeatability is typically 0.02% of rated output. This approach offers wide rangeability for different web widths and allows on-site system calibration via keypad.

LTW Narrow Web Tension Transducers offer the inherent advantage of all BLH strain gage devices - excellent stability, accuracy, reliability, and infinite resolution. They contain shielded bearings designed for high speed, continuous operation. The modules are available with full-scale ranges in excess of 3.2 pli (75 lb module).

New BLH DXp-40 Web Tension Transmitters measure and display tension data from multiple LTW transducers. Along with measurement, these units provide four analog control signal outputs and a digital RS-485, Allen-Bradley Remote I/O interface.

LTW Specifications and Outline Dimensions

Performance (% Rated Output)

Capacity	12, 45, 75 lb (6, 20, 35 kg)*
Rated Output (R.O.)	2.0 mVN nominal
Nonlinearity	0.015% R.O.
Hysteresis	0.015% R.O.
Repeatability	0.02% R.O.
Creep (20 minutes)	0.02% R.O.

Temperature

Safe/Storage Range	14 to 122°F (-10 to 50°C)
Compensated Range	14 to 122°F (-10 to 50°C)
Temperature Effects:	
Zero Balance	0.0023% R O.PF (0.004%PC)
Output	0.0007% LoadPF (0.0012%/°C)

Overload Ratings: (% Rated Capacity)

Safe Load	150
Ultimate Load	Lesser of 500% R.O. or 200 lb with overload stops
Uplift Load	100
Transverse Load	100
Web Shift Error	<0.1

Electrical

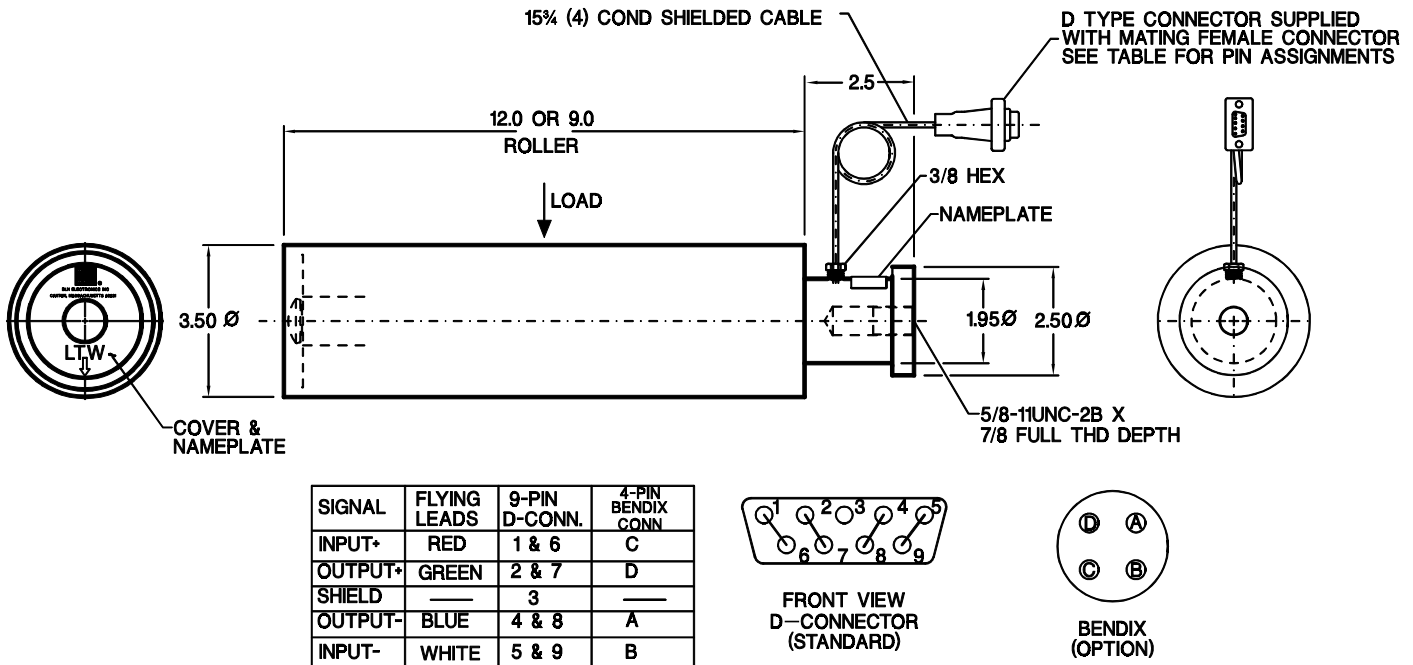|	
Recommended Excitation	10 Vac/dc
Maximum Excitation	15 Vac/dc
Input Resistance	420 ohms nominal
Output Resistance	350 ohms +/-5 ohms
Insulation Resistance	2 G-ohms

Material

Beam	aluminum
Roller	aluminum, hard anodized
Frame	aluminum
Bearings	Hardened Steel
Mounting Bolt	5/8-11 UNC grade 3 min (not supplied by BLH)

Mechanical

Unit Weight	7.5 pounds, all capacities
Roller/Bearing Weight	4.5 pounds
Deflection	0.020 inch, all capacities

*includes roller/bearing dead weight of 4.5 lb

SIGNAL	FLYING LEADS	9-PIN D-CONN.	4-PIN BENDIX CONN
INPUT+	RED	1 & 6	C
OUTPUT+	GREEN	2 & 7	D
SHIELD	——	3	——
OUTPUT-	BLUE	4 & 8	A
INPUT-	WHITE	5 & 9	B

DIMENSIONS SHOWN IN INCHES

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