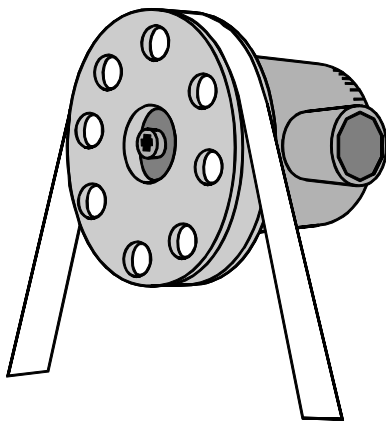
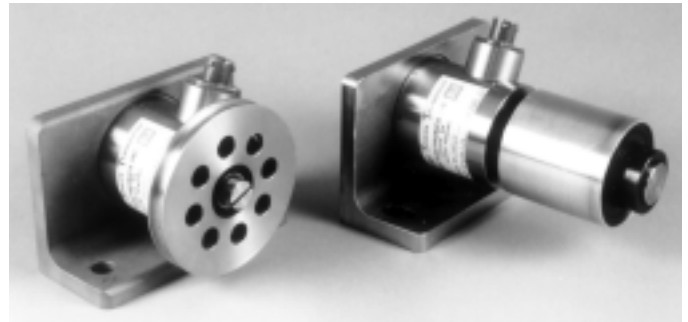


## **LTT Narrow Web/Wire Applications**

**Film/Foil/Tapes/Wire  
Labels/Filaments/Cable  
Paper/Plastic**



- **Precision Accuracy - Repeatability  
Better than 0.02% Rated Output**
- **Compact Size with High Overload  
Capability; Adapts to Customer  
Supplied Rollers or Pulleys**
- **Measures Low Resultant Tension  
Forces with Small Wrap Angles**
- **Approved for Intrinsically Safe  
Tension Systems**
- **Wide Range of Operating Tensions**
- **Factory Calibration Eliminates Need  
for On-Site Test Weights**



### **Product Description**

The cantilever mounted narrow web LTT Transducer is designed to measure single strand or narrow web tensions in any moving web material that requires low force measurement with high accuracy. Accuracy and long-term reliability are assured through the LTT differential bending beam design and the installation of precision strain gages connected into a full Wheatstone Bridge. Each unit is temperature compensated and factory calibrated to permit on-site push-button calibration.

The LTT is not limited by difficult applications. Accurate tension signals are provided with small wrap angles, high roll weight to tension force ratios, or wide ranges of operating tension.

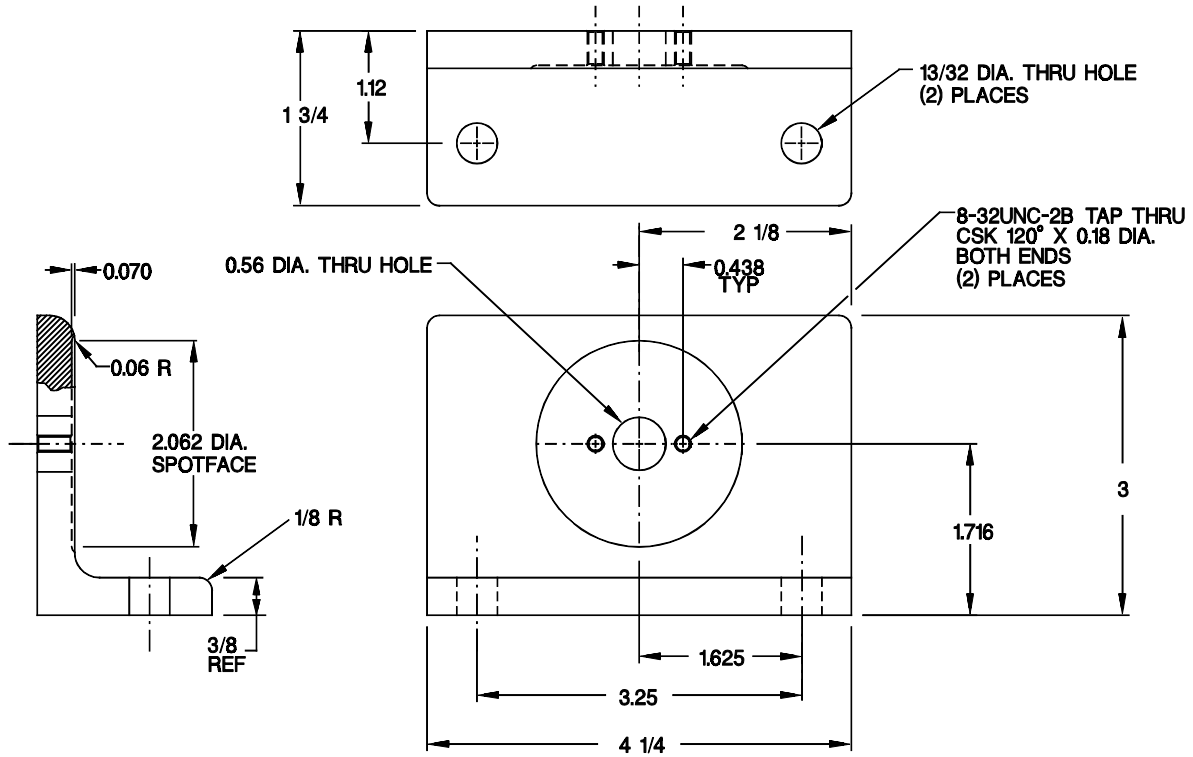
The compact LTT is available with a roller for narrow webs up to 4 inches wide or a standard pulley required for wire/filament applications. LTT design also allows for the installation of customer supplied rollers or pulleys.

BLH DXt, DXp, and LCp instruments provide load cell excitation, analog outputs, and digital RS-485 or Allen-Bradley Remote I/O outputs that interface with PLC/DCS systems.

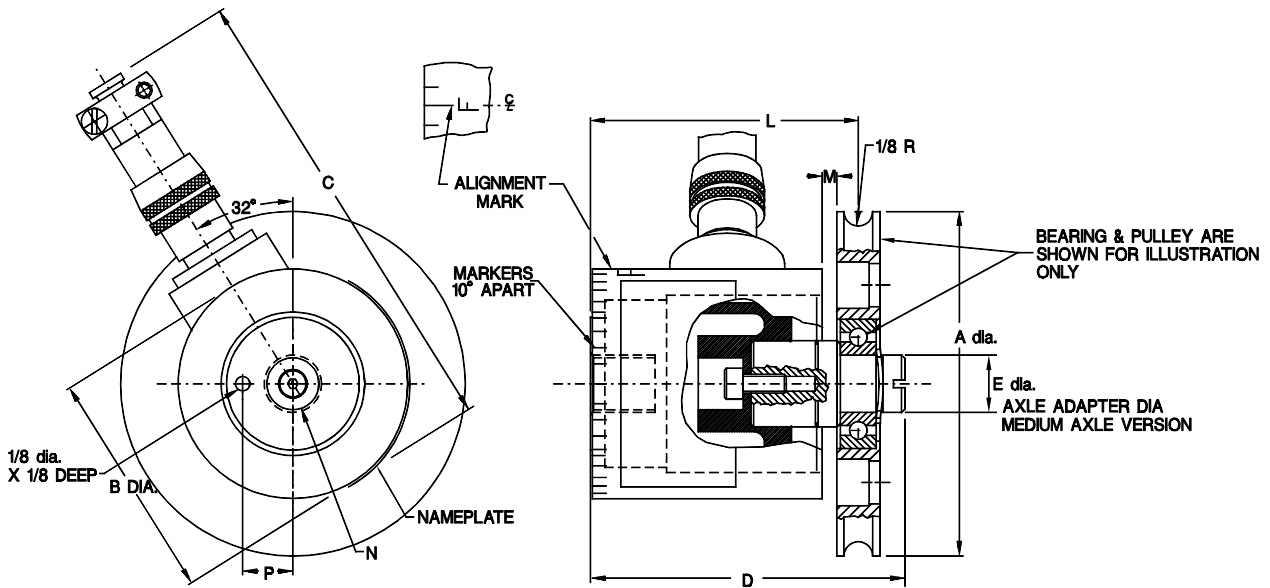
**BLH Electronics, Inc.**

*An ISO 9001 Registered Company*

# Stainless Steel Pillow Block Mounting Bracket (20 - 100 lb)



## Narrow Web LTT with Pulley Adapter



Part No.	CAP. (lbs)	A (PD)	B	C	D (max)	E	L	M	N	P
LTT 20	20									
LTT 50	50	3.00	1.97	4 3/8	2.78	0.49	2.33	0.13	1/2-20UNF -2B X 9/16 DEEP	0.44
LTT 100	100									

CONNECTOR COLOR CODE		
EXCITATION	GREEN (+)	C
	BLACK (-)	B
OUTPUT	WHITE (+)	D
	RED (-)	A

All dimensions on this page shown in inches

# Performance Specifications

## Performance (% Rated Output)

Rated Output (RO), nom.	2.000 mV/V +/-0.25%
Maximum Combined Error	0.05% RO
Repeatability	0.02% RO
Creep (20 Minutes)	0.03% RO
Zero Balance	5.0% RO

## Temperature

Operating Range	-40 to 220°F (-40 to 105°C)
Compensated Range	+15 to 150°F (-10 to 66°C)
Effect on Zero Balance	0.002% RO/°F (0.0036% RO/°C)
Effect on Rated Output	0.002% of reading/°F (0.0036% of reading/°C)

## Electrical

Input Resistance	350 ohms +/-3 ohms
Output Resistance	350 ohms +/-3 ohms
Recommended Excitation	10 Vac/dc
Maximum Excitation	15 Vac/dc

## Overload Rating

Safe Load	200% Rated Capacity
Ultimate Load	
LTT - 20 lb	1000% Rated Capacity
LTT - 50 lb	750% Rated Capacity
LTT - 100 lb	500% Rated Capacity

## Materials

All Pulley load cell parts	Stainless Steel
Bendix Connector	Aluminum, Cadmium plated with chromate after-treatment
Roller	Aluminum

## Deflection at Rated Capacity

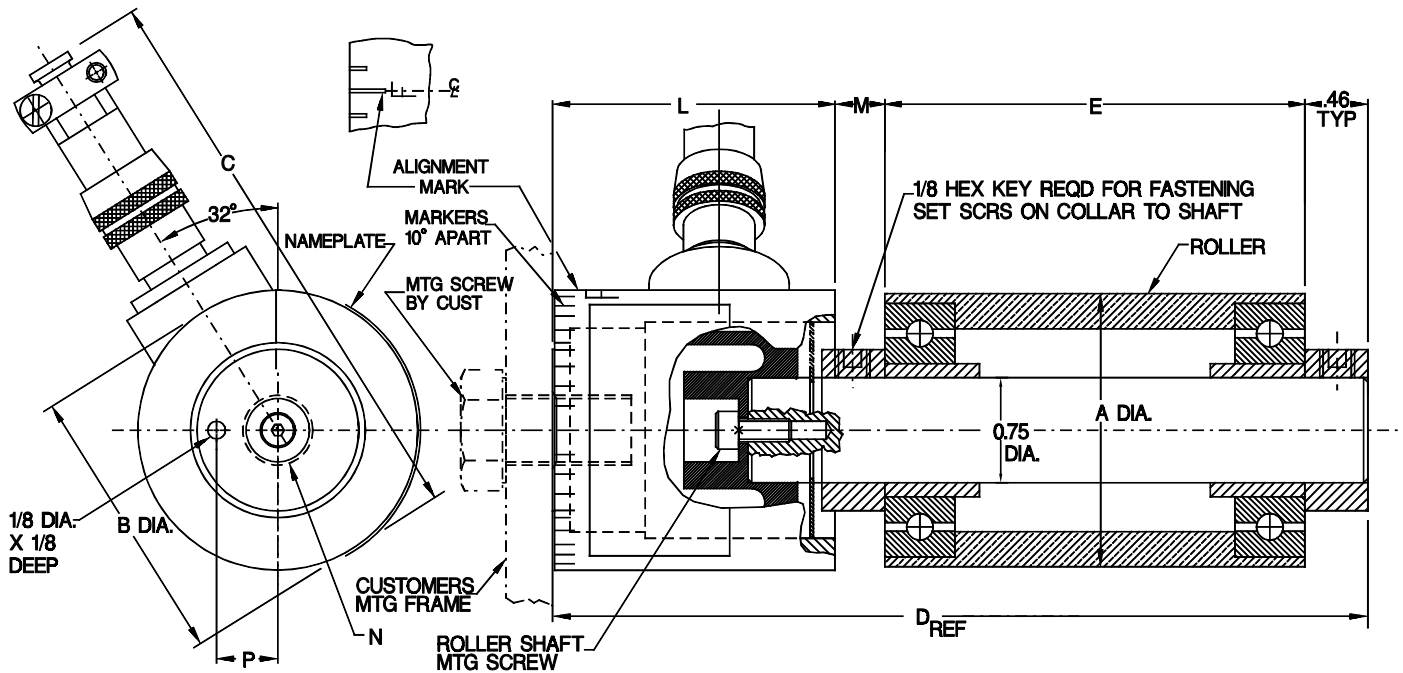
LTT - 20 lb	0.0055 inches
LTT - 50 lb	0.0045 inches
LTT - 100 lb	0.0035 inches

## FM Approval

FM approved intrinsically safe for Class I, II, and III Div 1, Groups A-G when installed in accordance with BLH drawing #468872-2.

CL I Div 2, Groups A-D; CL III Div 2, Groups F, G when installed in accordance with BLH drawing #468873-2

# Narrow Web LTT with Roller



Part No.	CAP. (lbs)	A	B	C	D REF	E - Roller Face LGTH	L	M	N	P
LTT 20	20				4.82	2				
LTT 50	50	2.00	1.97	4 3/8	5.82	3	2.017	.35	1/2-20UNF-2B	0.44
LTT 100	100				6.82	4			X 9/16 DEEP	
					7.32	4.5				

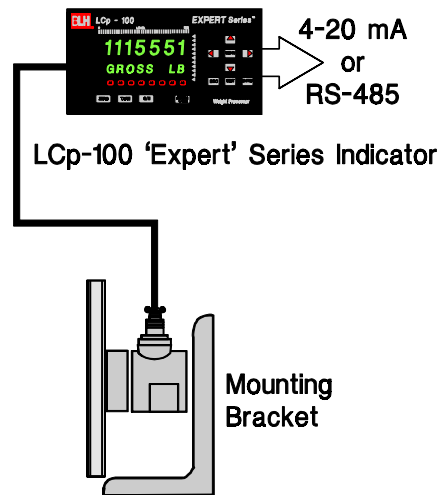
CONNECTOR COLOR CODE		
EXCITATION	GREEN (+)	C
	BLACK (-)	B
OUTPUT	WHITE (+)	D
	RED (-)	A

All dimensions on this page shown in inches

# Typical System Configurations

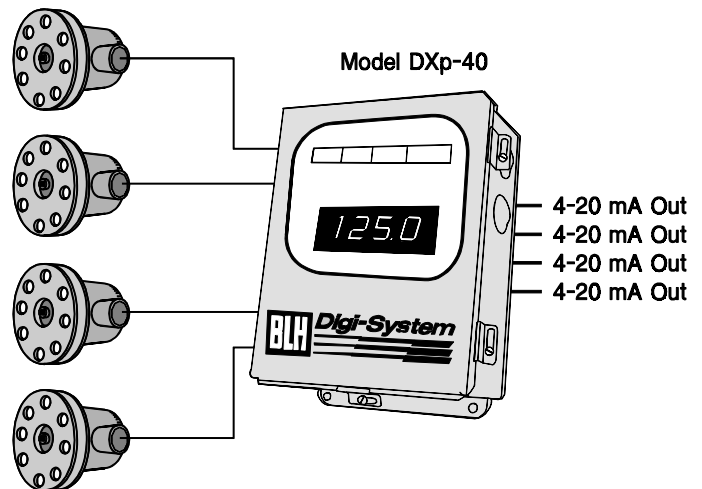
## Basic Tension System

- 0.40 Microvolt-per-Count Sensitivity
- 7 Digit Display of Total Tension
- High Resolution (16 Bit) 4-20 mA Analog Output
- RS-485 Serial Output to Computer
- High A/D Conversion Speed (120 Updates/Sec.)
- Display Units = pli, lb, kg, N and N/m



## Network Tension System

- Keypad calibration eliminates need for on-site test weights
- Individually Digitized Transducer Data
- Continuous 'Expert System' diagnostics
- Dynamic Digital Filter
- 750,000 count resolution per channel; 20 updates per second
- Multiple Analog Output Control Signals
- Display Units = pli, lb, kg, N and N/m



**DXt-15**



Display Transmitter

**DXt-40**



Tension Display  
Left, Right, or Total

**DXp-10/15**



Blind Transmitter

**BLH Electronics, Inc.**

*ISO 9001 Registered*

U.S.A. Facility