

## Load Beam Transducer



### FEATURES

- Capacity range: 5.5, 11, 22, 34, 56, and 112 lb (25, 50, 100, 150, 250, 500 N)
- Precision accuracy and repeatability
- Environmentally sealed for washdown applications
- Fast, easy 2 bolt installation
- FM, CSA and OIML approved
- OIML certification for 11 to 112 pound capacities

### DESCRIPTION

The Alpha Beam is a low capacity differential bending beam transducer designed for use in a wide range of medical, industrial, and testing applications. Its unique features are a combination of superb accuracy and performance in a package that is very well sealed against moisture and solvents. Alpha Beams meet both OIML requirements for accuracy and IP67 requirements for moisture protection.

Rated force capacities range from approximately 5.5 to 112 pounds (25 to 500 Newtons). Within capacity range, Alpha Beams measure force bidirectionally, producing an output mV/V signal directly proportional to the force applied.

The heart of the patented Alpha Beam is the BLH developed SR-4<sup>®</sup> foil strain gage.

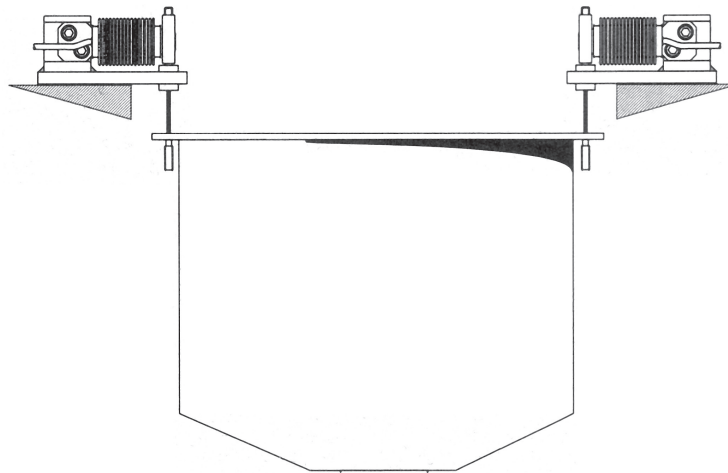
Strain Gages are electrically connected to form a balanced Wheatstone Bridge. Compensation resistors maintain the accuracy of the bridge over a wide range of temperatures. The gaged element within the beam metal bellows is environmentally sealed against all adverse conditions, including water immersion.

Alpha Load Beams are approved by Factory Mutual Research (FM) and the Canadian Standards Association (CSA) for use in Class I, II, and III, Division 1 and 2 hazardous locations. They also are OIML tested and approved in accordance with paragraph 8.1 of the European Standard on Metrological aspects of nonautomatic weighing instrument EN 45501:1992 and by application of the OIML International Recommendation R 60 (Edition 1991).

### APPLICATIONS

- Bench & portable scales
- Low capacity batching
- Medical weighing systems
- Pull/tear strength testing

### CONFIGURATION



### SPECIFICATIONS

#### PERFORMANCE

Capacity	5.5, 11, 22, 34, 56, 112 lb (25, 50, 100, 150, 250, 500 N)
Rated Output (R.O.)	3mV/V nominal
Nonlinearity	0.02% R.O.
Hysteresis	0.02% R.O.
Repeatability	0.01% R.O.
Creep (20 minutes)	0.05% R.O.

#### TEMPERATURE

Safe Temperature	-15 to 175°F
Compensated Range	0 to + 150°F
Effect On Zero Balance	0.0008% RO/°F
Effect On Rated Output	0.0008% Load/°F

#### ELECTRICAL

Recommended Excitation	10 Vac/dc
Maximum Excitation	20 Vac/dc
Zero Balance	2.0% RO
Input Resistance	350ohms +/-3.5 ohms
Output Resistance	350ohms +/-3.5 ohms
Insulation Resistance	2 G-ohms
Electrical Connection	5-ft, 4 conductor shielded cable

#### ADVERSE LOAD RATINGS

Safe Overload	175% RO
Ultimate Overload	300% RO

#### MATERIALS

Element	Electroless nickel-plated beryllium copper
Bellows	Tin-plated brass

#### DEFLECTION AT RATED OUTPUT

11 to 56lb	0.01 inch
112lb	0.017 inch

#### SEALING

IP67	all capacities
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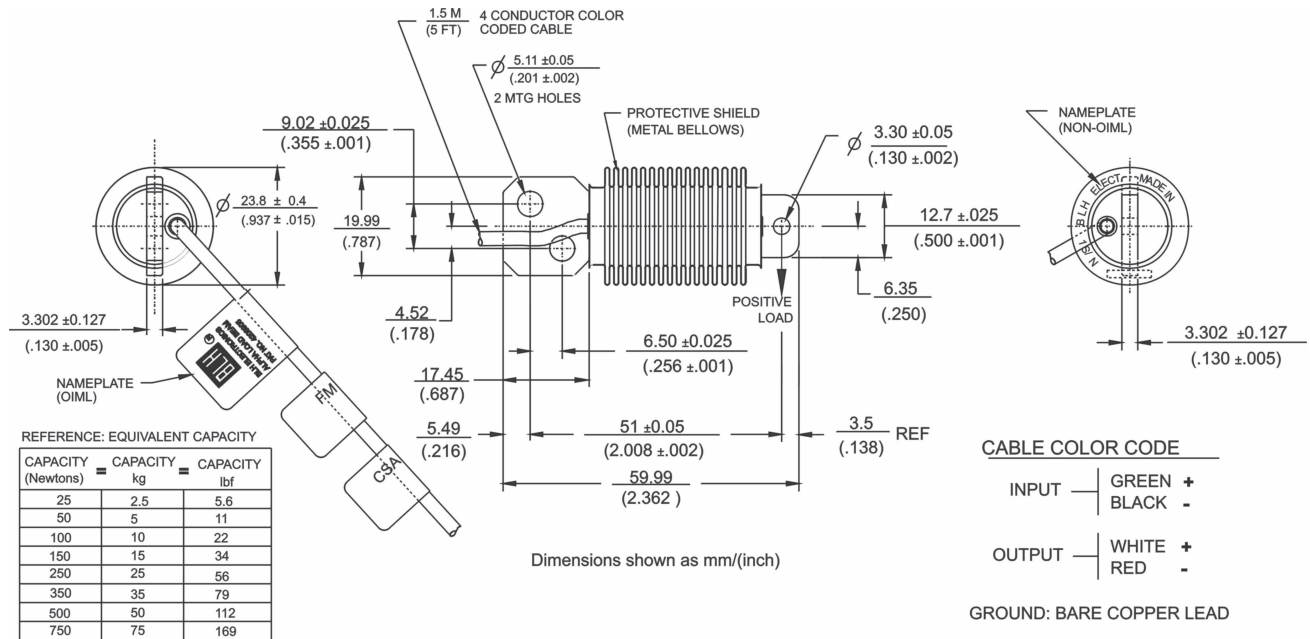
#### APPROVALS

FM	3611
CSA	C22.2 (all applicable sections)
OIML	EN 45501: 1992 (11-112lb)

#### MECHANICAL

Unit Weight	approx. 2 ounces
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### DIMENSIONS



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

## Disclaimer

All product specifications and data are subject to change without notice.

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