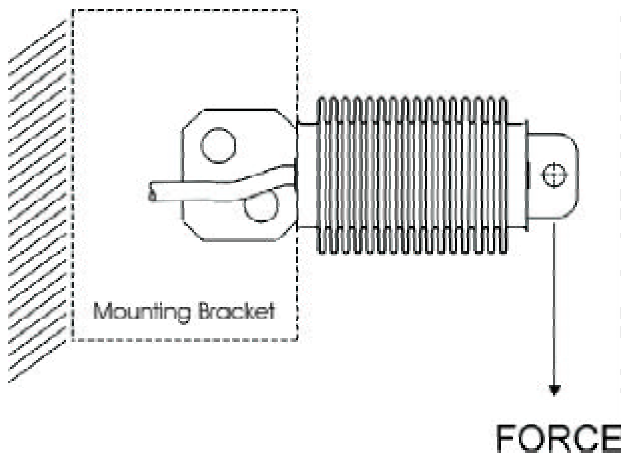


**ALPHA Load Beam Transducers****ALPHA Beam Applications:**

Bench & Portable Scales  
 Low Capacity Batching  
 Medical Weighing Systems  
 Pull/Tear Strength Testing



- Capacity Range - 5.5, 11, 22, 34, 56, and 112 pounds
- Precision Accuracy and Repeatability
- Environmentally Sealed for Washdown Applications
- Fast, Easy 2 Bolt Installation
- FM and CSA Approved
- OIML Certification for 11 to 112 Pound Capacities

**Product 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 IP 67 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® 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 non-automatic weighing instrument EN 45501:1992 and by application of the OIML International Recommendation R 60 (Edition 1991).

**BLH Electronics, Inc.**

*An ISO 9001 Registered Company*

# ALPHA Beam Specifications and Outline Dimensions

## Performance (% Rated Output):

Capacity	5.5, 11, 22, 34, 56, and 112 lb (25, 50, 100, 150, 250, 500 Newtons)
Rated Output (R.O.)	3.0 mV/V nominal
Nonlinearity	0.02% R.O.
Hysteresis	0.02% R.O.
Repeatability	0.01% R.O.
Creep (20 minutes)	0.05% R.O. TYP.

## Temperature:

Safe/Storage Range	-15 to 175°F
Compensated Range	0 to 150°F

## Temperature Effects:

Zero Balance	0.0008% R.OfF
Output	0.0008% LoadPF

## Sealing:

IP 67	all capacities
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## Approvals and Certifications:

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

## Overload Ratings: (% Rated Capacity)

Safe Overload	175
Ultimate Overload	300

## Electrical:

Recommended Excitation	10 Vac/dc
Maximum Excitation	20 Vac/dc
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

## Deflection at Rated Output:

11 to 56 lb	0.01 inch
500 lb	0.02 inch

## Materials:

Element	electroless nickel-plated beryllium copper
Bellows	tin-plated brass

## Mechanical:

Unit Weight	approx. 2 ounces
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BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.

