

## Hermetically Sealed Bending Beam

### 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 two-bolt installation
- FM, CSA and OIML approved
- OIML certification for 11 to 112 lb capacities



### APPLICATIONS

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



### 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. It's 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.

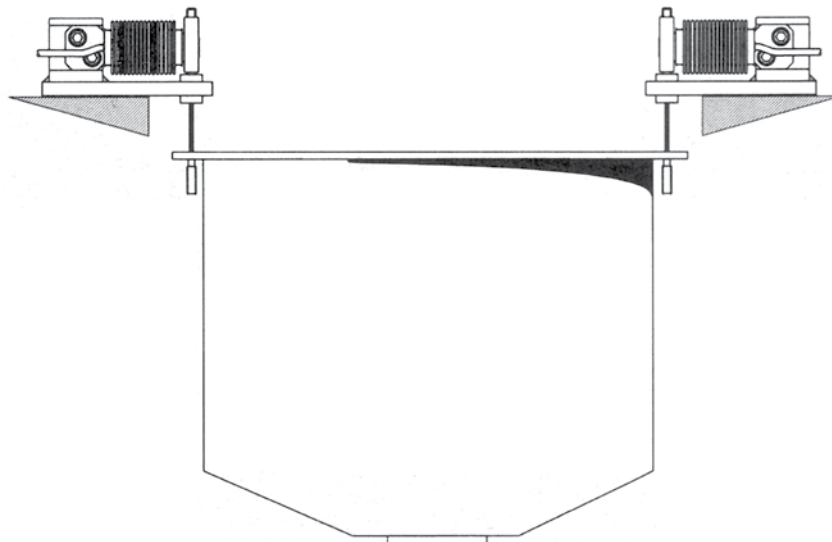
Rated force capacities range from approximately 5.5 to 112 pounds (25 to 500 Newtons). Within capacity range, Alpha Beams measure force bidirectionally, producing an output mV/V signal directly proportional to the force applied.

The heart of the patented Alpha Beam is the BLH Nobel 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.

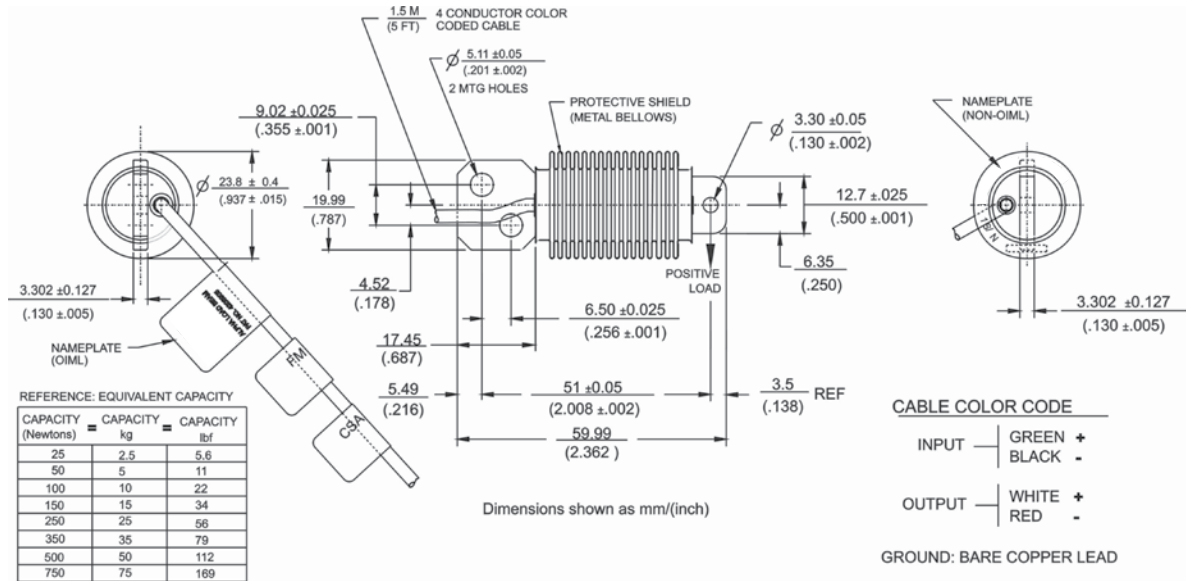
Alpha Load Beams are approved by Factory Mutual Research (FM) and the Canadian Standards Association (CSA) for use in Class I, II, and III, Division 1 and 2 hazardous locations. They also are OIML tested and approved in accordance with paragraph 8.1 of the European Standard on Metrological aspects of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

### CONFIGURATION



## Hermetically Sealed Bending Beam

### OUTLINE DIMENSIONS in mm (in)



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SPECIFICATIONS		PARAMETER	VALUE
<b>PERFORMANCE</b>		<b>ADVERSE LOAD RATINGS</b>	
<b>Capacities</b>	5.5,11, 22, 34, 56, 112 lb (25, 50, 100,150, 250, 500 N)	<b>Safe overload</b>	175% RO
<b>Rated output (RO)</b>	3 mV/V nominal	<b>Ultimate overload</b>	300% RO
<b>Nonlinearity</b>	0.02% RO	<b>MATERIAL</b>	
<b>Hysteresis</b>	0.02% RO	<b>Element</b>	Electroless nickel-plated beryllium copper
<b>Repeatability</b>	0.01% RO	<b>Bellows</b>	Tin-plated brass
<b>Creep (20 minutes)</b>	0.05% RO	<b>DEFLECTION AT RATED OUTPUT</b>	
<b>TEMPERATURE</b>		<b>11 to 56 lb</b>	0.01 in
<b>Safe range</b>	-15°F to +175°F	<b>112 lb</b>	0.017 in
<b>Compensated range</b>	0°F to +150°F	<b>SEALING</b>	
<b>Effect on zero balance</b>	0.0008% RO/°F	<b>Environmental protection</b>	IP67, all capacities
<b>Effect on rated output</b>	0.0008% load/°F	<b>MECHANICAL</b>	
<b>ELECTRICAL</b>		<b>Unit Weight</b>	approx. 2 oz
<b>Recommended excitation</b>	10 VAC-VDC		
<b>Maximum excitation</b>	20 VAC-VDC		
<b>Zero balance</b>	2.0% RO		
<b>Input resistance</b>	350 Ω (±3.5)		
<b>Output resistance</b>	350 Ω (±3.5)		
<b>Insulation Resistance</b>	2 GΩ		
<b>Electrical Connection</b>	5-ft, 4-conductor shielded cable		

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

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