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

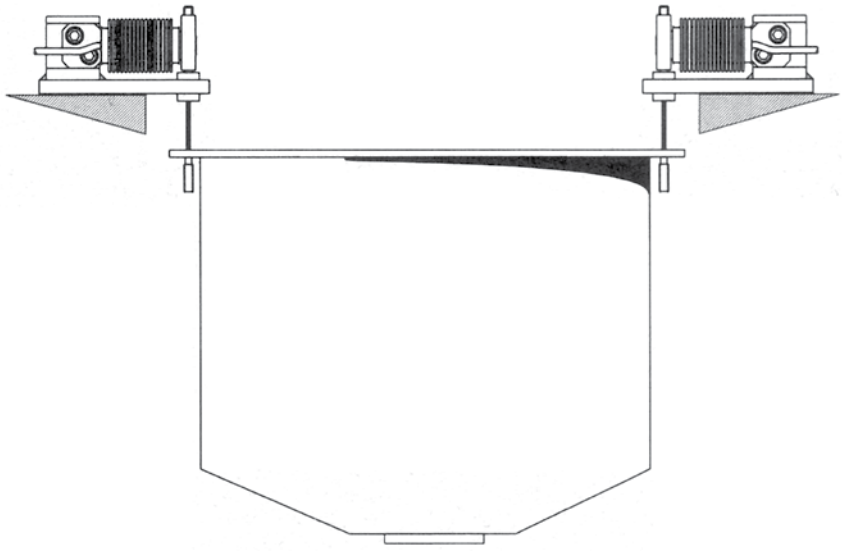
The Alpha Beam is a low capacity differential bending beam transducer designed for use in a wide range of medical, industrial, and testing applications. It's unique features are a combination of superb accuracy and performance in a package that is very well sealed against moisture and solvents. Alpha 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



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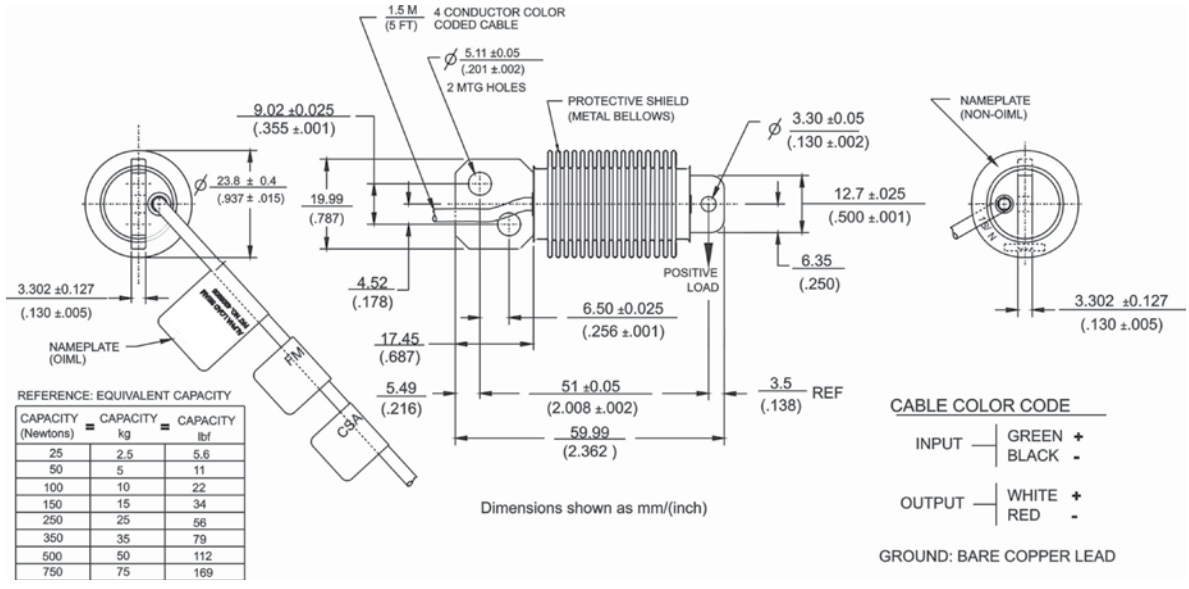
OUTLINE DIMENSIONS in mm (in)



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SPECIFICATIONS

PARAMETER	VALUE
PERFORMANCE	
Capacities	5.5,11, 22, 34, 56, 112 lb (25, 50, 100,150, 250, 500 N)
Rated output (RO)	3 mV/V nominal
Nonlinearity	0.02% RO
Hysteresis	0.02% RO
Repeatability	0.01% RO
Creep (20 minutes)	0.05% RO
TEMPERATURE	
Safe range	–15°F to +175°F
Compensated range	0°F to +150°F
Effect on zero balance	0.0008% RO/°F
Effect on rated output	0.0008% load/°F
ELECTRICAL	
Recommended excitation	10 VAC-VDC
Maximum excitation	20 VAC-VDC
Zero balance	2.0% RO
Input resistance	350 Ω (±3.5)
Output resistance	350 Ω (±3.5)
Insulation Resistance	2 GΩ
Electrical Connection	5-ft, 4-conductor shielded cable

PARAMETER	VALUE
ADVERSE LOAD RATINGS	
Safe overload	175% RO
Ultimate overload	300% RO
MATERIAL	
Element	Electroless nickel-plated berylium copper
Bellows	Tin-plated brass
DEFLECTION AT RATED OUTPUT	
11 to 56 lb	0.01 in
112 lb	0.017 in
SEALING	
Environmental protection	IP67, all capacities
MECHANICAL	
Unit Weight	approx. 2 oz

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

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