Precision Force and Weight Measurement Technologies



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. 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 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 nonautomatic weighing instrument EN 45501:1992 and by application of the OIML International Recommendation R 60 (Edition 1991).

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An ISO 9001 Registered Company

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ALPHA Beam Specifications and Outline Dimensions

/% Pated Outr ...

OIML

Performance (% Rated Output):		Overload Ratings: (% Rated Capacity)	
Capacity	5.5,11, 22, 34, 56, and 112 lb	Safe Overload	175
	(25, 50, 100, 150, 250, 500	Ultimate Overload	300
	Newtons)		
Rated Output (R.O.)	3.0 mV/V nominal	Electrical:	
Nonlinearity	0.02% R.O.	Recommended Excitation	10 Vac/dc
Hysteresis	0.02% R.O.	Maximum Excitation	20 Vac/dc
Repeatability	0.01% R.O.	Input Resistance	350ohms +/-3.5 ohms
Creep (20 minutes)	0.05% R.O. TYP.	Output Resistance	350ohms +/-3.5 ohms
		Insulation Resistance	2 G-ohms
Temperature:		Electrical Connection	5-ft, 4 conductor shielded
Safe/Storage Range	-15 to 175°F		cable
Compensated Range	0 to 150°F		
		Deflection at Rated Output:	
Temperature Effects:		11 to 56 lb	0.01 inch
Zero Balance	0.0008% R.OfF	500 lb	0.02 inch
Output	0.0008% LoadPF		
		Materials:	
Sealing:		Element	electroless nickel-plated
IP 67	all capacities		beryllium copper
		Bellows	tin-plated brass
Approvals and Certificati	ons:		·
FM (Factory Mutual)	3611	Mechanical:	
CSA	C22.2 (all applicable sections)	Unit Weight	approx. 2 ounces

EN 45501:1992 (11-112 pounds)

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





Thermo BLH Electronics

A Thermo Electron business

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