

## Load Cell Weigh Module

### FEATURES

- Capacity range: 500, 1K, 2K, 5K, 10K, 20K, and 50K lb (227, 454, 907, 2.27K, 4.5K, 9K, and 22.7K kg)
- 'Checkless' design—no stay or check rods required
- Low profile and integral thermal expansion assembly simplifies installation
- Designed to meet ANSI/ASCE wind load and seismic requirements
- Double cantilever design improves system performance and accuracy
- FM and CSA approved

### APPLICATIONS

- Inventory silos
- Storage tanks
- Process vessels

### DESCRIPTION

Z-BLOK Weigh Modules are specifically designed to meet the requirements of inventory and process weighing applications. Checkless design (no stay or check rods), low profile, and uniform bolt spacing simplify installation on new or existing vessels. The integral expansion assembly, double cantilever design, and temperature compensated full bridge transducer, minimize temperature effects allowing accurate measurement indoors or out, in virtually any environment.

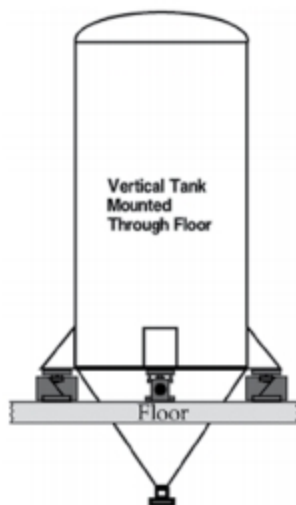
The ANSI/ASCE qualified design provides an efficient balance between performance as a transducer and strength as a structural member when earthquakes or wind resistance is a structural design requirement.



Sideloads of up to 100% full scale capacity, caused by mixer torque, vibration, or other extraneous forces, virtually have no effect on weight measurement.

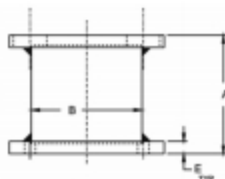
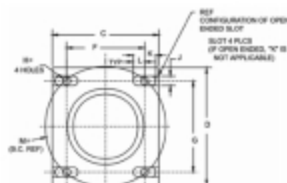
An integral cable conduit fitting, sealed strain gages, and a stainless steel transducer ensure long life in wet or washdown locations. High overload capacity, ductile iron mounting hardware, and high strength assembly bolts enable the Z-BLOK to survive where others fail.

### CONFIGURATION



## Load Cell Weigh Module

## SIMULATED WEIGH MODULES



CAP. LB	A	B <sup>o</sup>	C	D	E	F	G	H <sup>o</sup>	J	K	L	M= BC REF
500/1K	2.69	2 1/2	3 1/2	4.0	.50	2.560	3.000	5/16	5/16	3/4	3/8	3.944
2K & 5K	3.47	3 1/4	4	4 1/2	.50	3.120	3.620	7/16	7/16	—	7/16	4.779
10K	4.55	3 1/2	5	5 1/2	.63	3.920	4.420	7/16	9/16	—	1/2	5.908
20K	5.30	4	5 1/2	6 3/8	.76	4.180	5.090	1/2	11/16	—	9/16	6.563
50K	6.98	4 3/4	7	7 1/2	1.00	5.000	6.000	11/16	13/16	1 1/4	5/8	7.810

## Thermal Insulation Pads

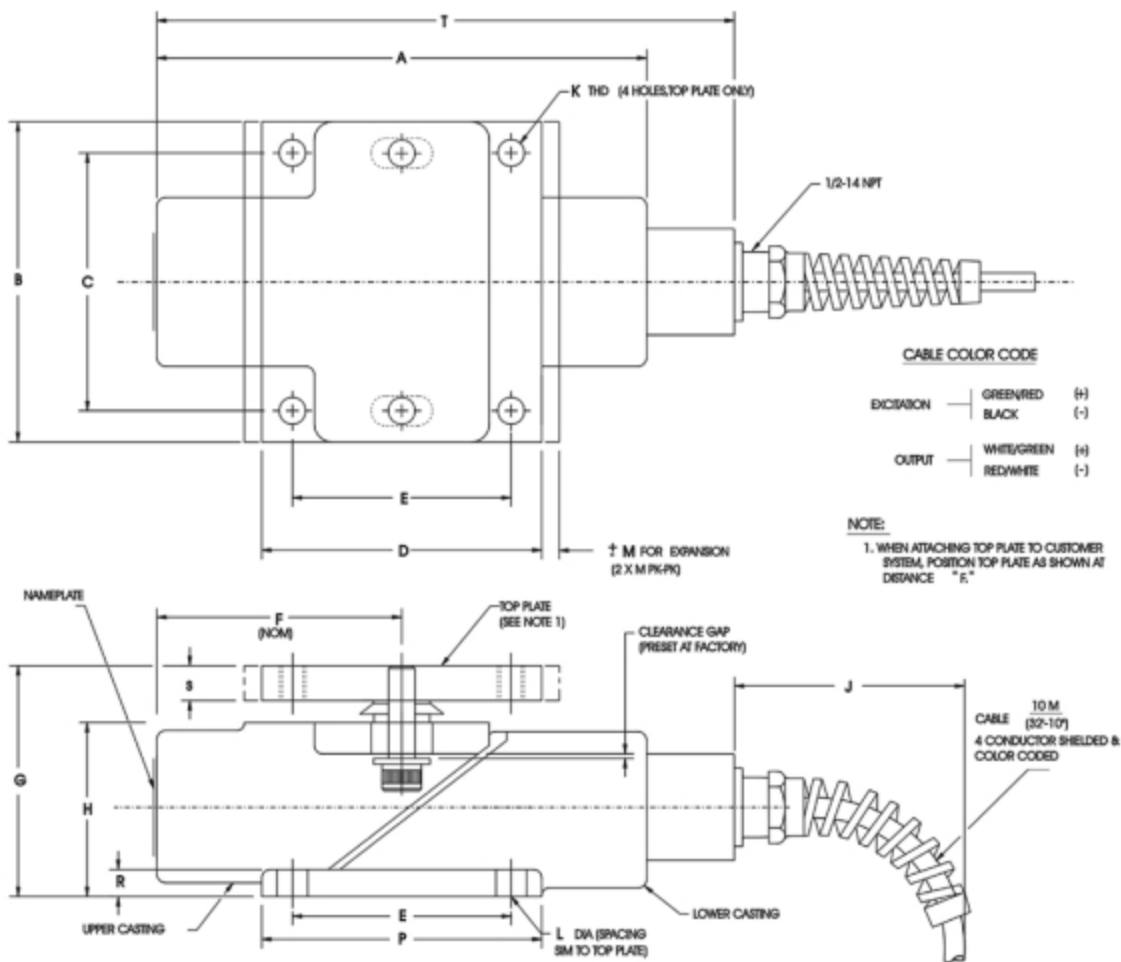
In applications where heat conduction is a concern, BLH Nobel can provide thermal pads to isolate the Z-BLOK modules from the hot vessel. The one inch thick, phenolic glass pads install directly between the Z-BLOK expansion/retainer plate and the vessel gusset/mounting bracket for thermal insulation.

## SPECIFICATIONS

PARAMETER	VALUE
<b>PERFORMANCE</b>	
Capacity	500, 1K, 2K, 5K, 10K, 20K, and 50K lb (227, 454, 907, 2.27K, 4.5K, 9K and 22.7K kg)
Rated output (RO)	2.0 mV/V $\pm$ 0.1% mV/V,
Repeatability	0.01% RO
Combined error (best fit)	0.10% RO
Zero balance	5% RO
Creep (20 minutes)	0.03% RO
Temperature effects on zero balance	0.0017% RO/ $^{\circ}$ F
Temperature effects on span	0.0020% Load/ $^{\circ}$ F
<b>ELECTRICAL</b>	
Recommended excitation	10 VDC (15 VDC max.)
Input resistance	350 $\Omega$ $\pm$ 3 $\Omega$
Output resistance	350 $\Omega$ $\pm$ 3 $\Omega$
Cable length	32 ft, 10 in cable w. conduit fitting
<b>TEMPERATURE</b>	
Safe range	-40 to 220 $^{\circ}$ F
Compensated range	+30 to 130 $^{\circ}$ F

PARAMETER	VALUE	
<b>ADVERSE LOAD RATINGS</b>		
Safe load	150% rated capacity	
Safe sideload	100% rated capacity	
Safe uplift	50% rated capacity	
<b>MATERIAL</b>		
Beams	15-5PH Stainless Steel	
Brackets	painted* ductile iron	
<b>DEFLECTION AND UNIT WEIGHT</b>		
Capacity	Deflection	Weight
500 lb	0.012 in	10 lb
1K lb	0.012 in	10 lb
2K lb	0.013 in	15 lb
5K lb	0.027 in	15 lb
10K lb	0.023 in	35 lb
20K lb	0.047 in	50 lb
50K lb	0.066 in	75 lb

## Load Cell Weigh Module

**OUTLINE DIMENSIONS**


PART NO.	CAPACITY (lb)	A	B	C	D	E	F	G	H	J	K	L	M	P	R	S	T
468630-4	500	182.4	98.4	76.2	88.9	66.0	76.2	68.3	60.5	76.2 (3)	1/4-20	8.13 (.32)	2.2 (.09)	89 (3.5)	7.9 (.31)	9.1 (.36)	190.5 (7.50)
462796-4	1,000	(6.0)	(3.875)	(3.0)	(3.50)	(2.56)	(3.0)	(2.69)	(1.99)		3/8-16	10.9 (.43)	4.0 (.16)	101.6 (4.0)	9.7 (.38)	12.4 (.49)	209.6 (8.25)
462797-4	5,000	(7.0)	(4.80)	(3.62)	(4.0)	(3.12)	(3.60)	(3.47)	(2.49)		1/2-13	10.9 (.43)	4.5 (.18)	127 (5.0)	14.2 (.56)	18.5 (.73)	—
462798-4	10,000	228.6	139.7	112.3	127.0	99.6	114.3	115.6	85.3		5/8-11	12.7 (.50)	4.8 (.19)	139.7 (5.5)	19.1 (.75)	21.8 (.86)	—
462799-4	20,000	254.0	(162.0)	128.5	139.7	106.2	127.0	137.0	99.6		3/4-10	17.5 (.69)	6.3 (.25)	165.1 (6.5)	25.4 (1.0)	24.9 (.98)	—
462800-4	50,000	305.1	190.5	152.4	177.8	127.0	152.4	177.3	126.5								

Dimensions shown in mm (inches)