



- Load Pin Design
- Range from 10 to 2000 kN (2 to 400 klbf)
- Other Ranges on Request
- Voltage or Current Output

DESCRIPTION

Measurement Specialties, Inc.'s load pins, model **FN1010**, are designed to fit in the place of the regular mounting unit. The implantation is facilitated by the possibility of modifying a certain number of dimensions. The **FN1010** is suitable for numerous applications on lifting motors and handling equipment. The load pins can be used to measure forces on rotating components (pulleys, sheaves, etc.) and can be directly mounted on shackles.

The sensing element is fitted with thin film strain gauges in a Wheatstone bridge circuit. All **FN1010** Load Pins incorporate a keyed anti-rotation slot. Optionally, the load pins may be made watertight for certain applications while resting insensitive to hydrostatic pressure effects. Additionally, the **FN1010** is available with an integrated high-level analogue output.

With many years of experience as a designer and manufacturer of sensors, Measurement Specialties, Inc. often works with customers to design or customize sensors for specific uses and testing environments.

To meet your needs we also offer complete turnkey systems. The matched components (sensor, power, amplifier and digital display) are formatted, calibrated and ready for immediate use.

FEATURES

- Full Scale Range : from 0-10 to 0-2000 kN (0-2 to 0-400 klbf)
- Tension and Compression
- Optional: Watertight
- High Coefficient of Security
- Optional: Watertight
- Bidirectional Versions Available
- Level Output Model with Integrated Amplifier

APPLICATIONS

- Crane Monitoring
- Building Machine Monitoring
- Load-Limited Device
- Offshore

STANDARD RANGES

Ranges in N	10k	20k	50k	100k	200k	500k	1 000k	2 000k
Ranges in lbf	2k	4k	10k	20k	40k	100k	200k	400k

FN1010 Load Pin

PERFORMANCE SPECIFICATIONS

All values are typical at temperature 20±1°C

PARAMETERS	
Operating Temperature Range (OTR)	-20 to 80° C [-4 to 176° F]
Compensated Temperature Range (CTR)	0 to 60° C [32 to 140° F]
Zero Shift in CTR	<0.5% F.S. / 50° C [/100° F]
Sensitivity Shift in CTR	<1% of reading / 50° C [/100° F]
Range (F.S.)	0-10 to 0-2000 kN [0-2 to 0-400 klb _f]
Over-Range	
Without Damage	1.5 x F.S.
Without Destruction	5 x F.S.
Accuracy	
Combined Non-Linearity & Hysteresis	±1% F.S.

Electrical Characteristics

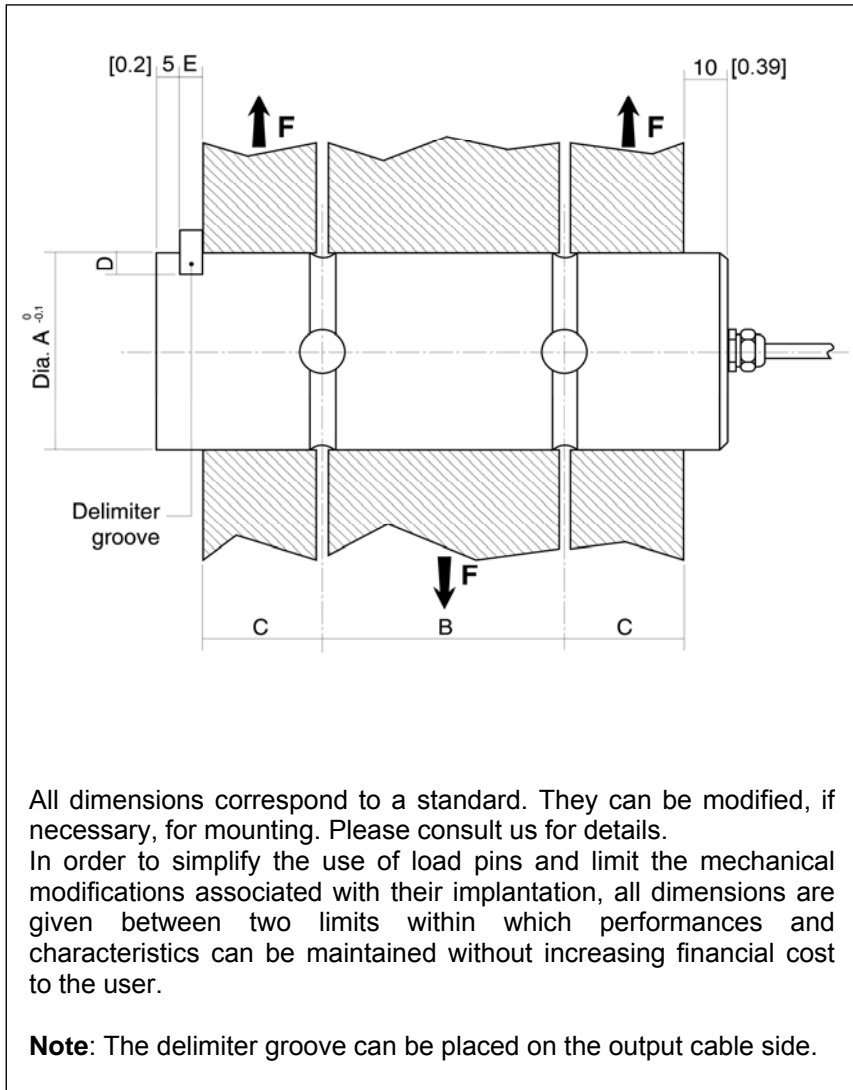
Model	FN1010	FN1010-A1	FN1010-A2	FN1010-A3 (2 wires)
Supply Voltage	10Vdc	10–30Vdc	±15Vdc (±12 to ±18Vdc)	12-36Vdc
F.S. Output ³	±1.5mV/V	±2V ±5% F.S.	±5V ±5% F.S.	4–20mA (4-12-20)
Zero Offset ³	<±5% F.S.	2.5V ±5% F.S.	0V ±5% F.S.	4 (or 12mA)
Input Impedance/Consumption	350 to 700Ω	<50mA	<50mA	-
Output Impedance	350 to 700Ω	1 kΩ ⁴	1 kΩ ⁴	-
Insulation under 50Vdc	≥100MΩ	≥100MΩ	≥100MΩ	≥100MΩ

Notes

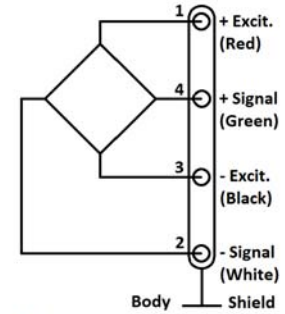
1. Electrical Termination: Shielded cable; standard length 2m [6.5ft]
2. Materials: Body in stainless steel
3. Other output signal on request
4. Output impedance < 100 Ω on request
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

FN1010 Load Pin

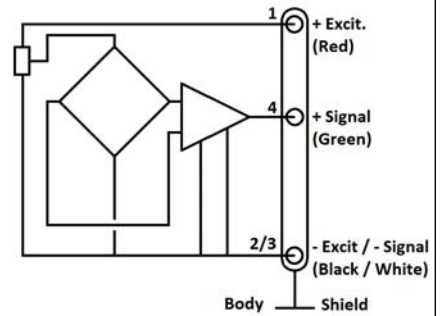
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



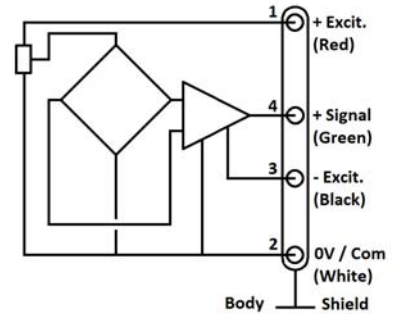
Wiring Schematic



Version -A1



Version -A2



Dimensions in mm [inch]

F.S. Ranges in N [Lbf]		10k [2k]		20k [4k]		50k [10k]		100k [20k]		200k [40k]		500k [100k]		1000k [200k]		2000k [400k]	
A	Min.	22	[0.87]	27	[1.06]	30	[1.18]	42	[1.65]	54	[2.13]	82	[3.23]	110	[4.33]	150	[5.91]
	Nominal	25	[0.98]	30	[1.18]	35	[1.38]	45	[1.77]	60	[2.36]	90	[3.54]	120	[4.72]	160	[6.30]
	Max.	30	[1.18]	35	[1.38]	40	[1.57]	50	[1.97]	65	[2.56]	100	[3.94]	130	[5.12]	170	[6.69]
B	Min.	25	[0.98]	25	[0.98]	30	[1.18]	40	[1.57]	50	[1.97]	65	[2.56]	80	[3.15]	120	[4.72]
	Nominal	30	[1.18]	30	[1.18]	40	[1.57]	50	[1.97]	70	[2.76]	90	[3.54]	110	[4.33]	160	[6.30]
	Max.	35	[1.38]	35	[1.38]	50	[1.97]	65	[2.56]	90	[3.54]	115	[4.53]	140	[5.51]	200	[7.87]
C	Min.	10	[0.39]	10	[0.39]	15	[0.59]	20	[0.79]	25	[0.98]	30	[1.18]	40	[1.57]	60	[2.36]
	Nominal	15	[0.59]	15	[0.59]	20	[0.79]	25	[0.98]	30	[1.18]	40	[1.57]	55	[2.17]	80	[3.15]
	Max.	20	[0.79]	20	[0.79]	25	[0.98]	30	[1.18]	35	[1.38]	50	[1.97]	70	[2.76]	100	[3.94]
D	D	3	[0.12]	3	[0.12]	4	[0.16]	5	[0.20]	5	[0.20]	5	[0.20]	5	[0.20]	5	[0.20]
E	E	5	[0.20]	5	[0.20]	5	[0.20]	10	[0.39]	10	[0.39]	10	[0.39]	15	[0.59]	15	[0.59]

FN1010 Load Pin

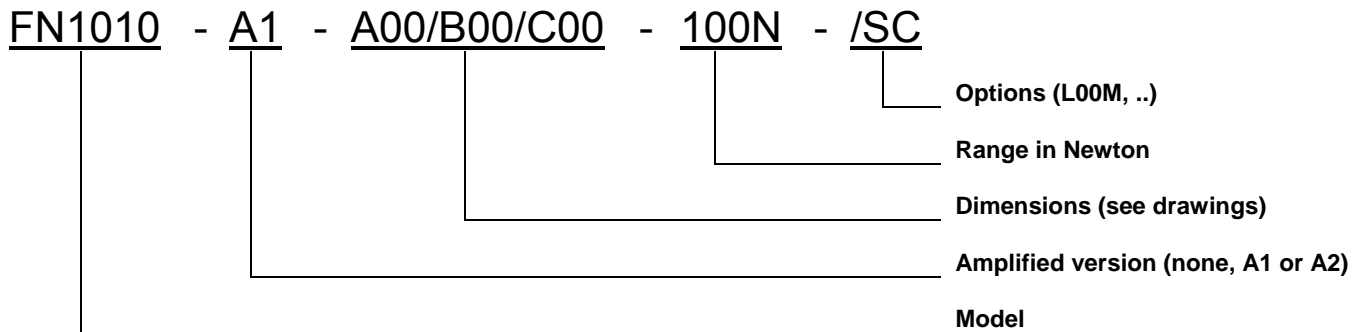
OPTIONS

A1 : Amplified Tension output with unipolar power supply

A2 : Amplified Tension output with bipolar power supply

A3 : Current output (2 wires)

ORDERING INFO



联系方式



深圳市亿为测控电子有限公司
Shenzhen Bill-Well Measurement & Control Electronics Co., Ltd.

广东省深圳市南山区创业路怡海广场东座2407 邮编：518000

电话：+86 755 2641 9890 传真：+86 755 2641 9680

电子邮箱：sales@bill-well.com