

FN7110

Double Range Load Cell

SPECIFICATIONS

- ◆ **Double S-Beam Load Cell**
- ◆ **10/100 N to 1k/10k N (2/20 lbf to 200/2k lbf)**
- ◆ **High resolution**
- ◆ **For compression and traction uses**

The **FN7110** features high accuracy measurement channels in two ranges in the same load cell.

The standard ratio between the ranges is 1 to 10, and standard load range combinations go from 0-10 and 0-100 N through 0-1000 and 0-10,000 N. The **FN7110's** percentage accuracy is the same over each range in the load cell. In practice one maintains accuracy of 0.1% over the high force range even in the first 10% of the range.

During measurement, once the lower range sensing element reaches its designed full scale limit, mechanical stops protect it against overloads, in tension and compression, up to 12 times the full scale limit of the higher range sensing element (which is equivalent to 12 times the full scale limit of the lower range). For high-level output, a model with an integrated amplifier is available.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

FEATURES

- ◆ Double Full Scale Range
- ◆ Accuracy : 0.1% F.S. for each range
- ◆ Integrated Mechanical Stops
- ◆ Integrated Amplifier optional

APPLICATIONS

- ◆ Process Control Equipment
- ◆ Robotics and Effectors
- ◆ Product Validation Testing
- ◆ Laboratory and Research

STANDARD RANGES

Ranges in N (FS)	10/100	50/500	100/1k	200/2k	500/5k	1k/10k
Ranges in lbf	2/20	10/100	20/200	40/400	100/1k	200/2k

PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°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]
Thermal Zero Shift in CTR	<0.5% F.S. / 50° C [/100° F]
Thermal Sensitivity Shift in CTR	<1% of reading / 50° C [/100° F]
Over-Range	
Without Damage	1.2 x F.S. of the higher range
Accuracy	
Linearity	±0.1% F.S. of each range

Electrical Characteristics (for each channel)

Model	FN7110 ¹	FN7110-A1	FN7110-A2	
Supply Voltage	2 to 12 Vdc	10 to 30Vdc	10 to 30Vdc	±15Vdc (±12 to 18Vdc)
Sensitivity "FSO" ²	±2mV/V	±2V ±0.2V	±2V ±0.2V	±5V ±0.2V
Zero Offset ²	<±1mV	2.5V ±0.2V	2.5V ±0.2V	0V ±0.2V
Input Impedance/Consumption	150 to 200Ω	<50mA	<50mA	<50mA
Output Impedance	300 to 400Ω	1 kΩ ⁵	1 kΩ ⁵	1 kΩ ⁵
Insulation under 50Vdc	≥100MΩ	≥100MΩ	≥100MΩ	≥100MΩ

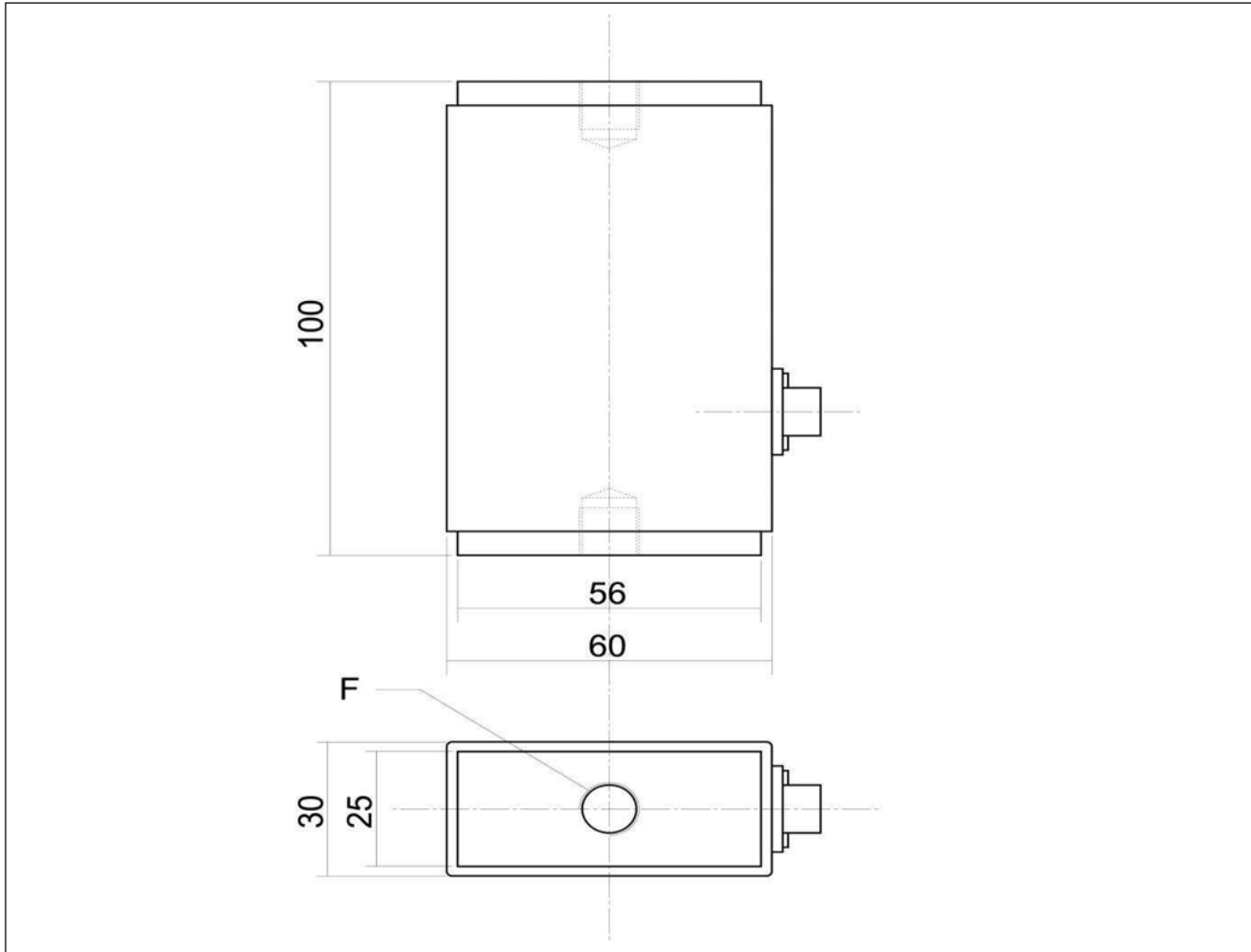
Notes

1. Sensors are calibrated with 10Vdc power supply as standard.
2. Signal goes positive in tension with standard wiring configuration. Other signal output on request
3. Cable Termination: Connector output including mate, prewired, standard length 2 m
4. Material: Body in aluminum alloy or stainless steel depending on F.S.
5. Output impedance < 100Ω on request
6. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



F.S. Ranges in N [in lbf]	10/100 [2/20]	50/500 [10/100]	100/1k [20-200]	200/2k [40/400]	500/5k [100/1k]	1k/10k [200/2k]
F (Thread)	M6	M10				
Material	Aluminium					Stainless Steel

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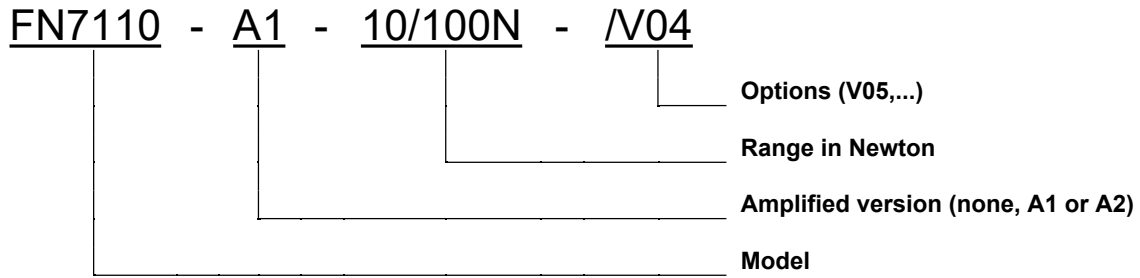
OPTIONS

A1 : Amplified Tension output with unipolar power supply

A2 : Amplified Tension output with bipolar power supply

V00 : Non-standard power supply calibration, replace "00" with value in Volt (standard 10Vdc, unamplified sensor only)

ORDERING INFO



SUPPLIED ACCESSOIRES

EFMX-7M : mating plug Jaeger 530-272-006 with clamp 530-371-006 standard

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