

FN2114 Pedal Load Cell



- 200 to 3000 N (40 to 600 Lbf)
- Aluminum body
- Cable Gland Output
- Built In Amplifier on request

An similar pedal load cells with thicker dimension exists as model **FN2570**

DESCRIPTION

The **FN2114** load cell has been developed for pedal load testing. Its size allows the sensor to be easily installed on the pedals of any vehicle or a fatigue/endurance test bench.

Since the forces to be investigated on the brake, clutch or accelerometer pedals are different, and vary from a small car to a heavy goods vehicle, Measurement Specialties offers different measurement ranges from 200 N up to 2500 N.

With an internal mechanical decoupling system, accuracy is 1% F.S., regardless of the point of force application. Integrated amplifier for high level output is optionally available for all ranges.

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

- Compression measurements
- Accuracy 1% regardless of force application point
- Rugged design
- Tension output available

APPLICATIONS

- On-board vehicle equipment
- Test bench equipment
- Laboratory and Research

STANDARD RANGES

Ranges in N	200	500	1000	2000	3000
Ranges in lbf	40	100	200	400	600

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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.)	0-200 to 0-3000 N [0-40 to 0-600 lbf]
Over-Range	
Without Damage	1.5 x F.S.
Without Destruction	3 x F.S.
Accuracy	
Combined non-linearity & hysteresis	≤±1% F.S.

Electrical Characteristics

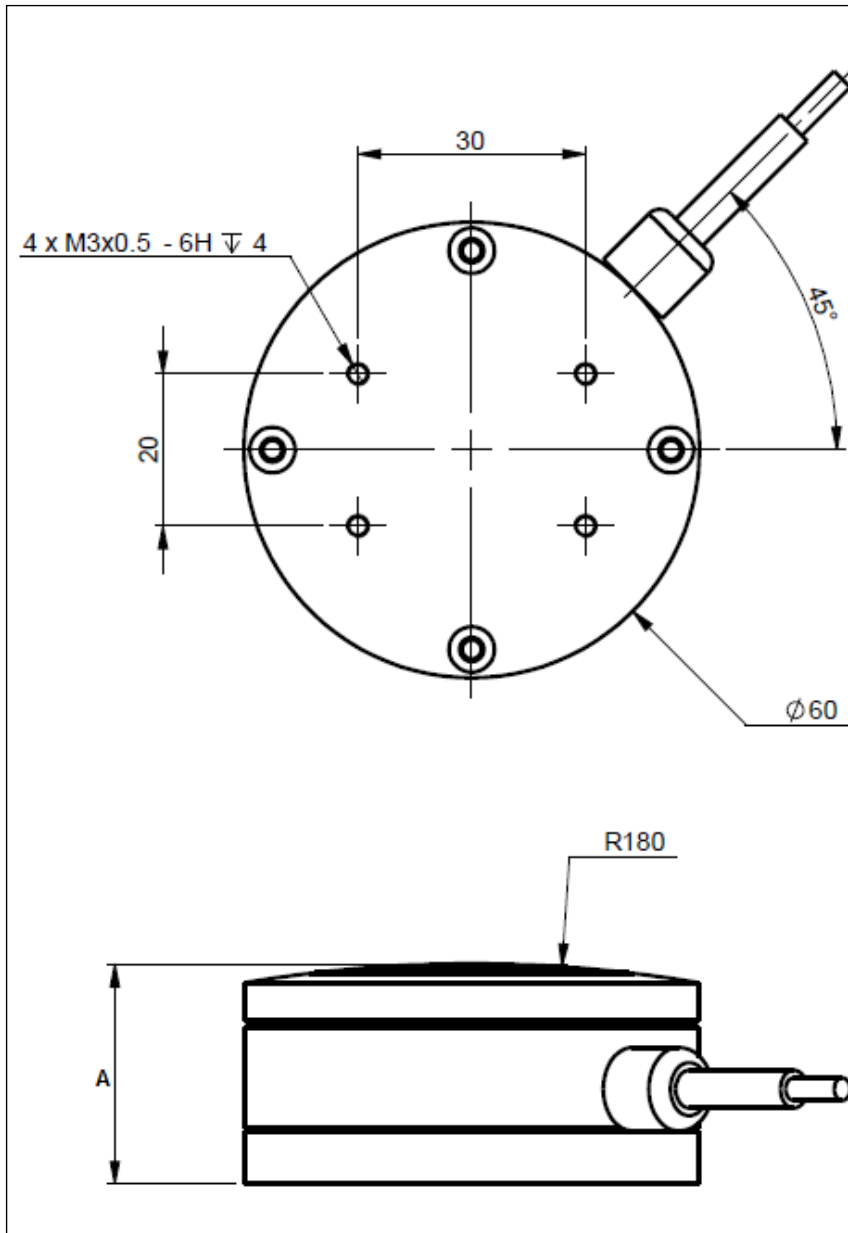
Model	FN2114	FN2114-A1	FN2114-A2
Supply Outage	10Vdc	10 – 30Vdc	±15Vdc (±12 to ±18Vdc)
F.S. Output ⁴	±2mV/V	4V ±5% F.S.	5V ±5% F.S.
Zero Offset ⁴	±5% F.S.	0.5V ±5% F.S.	0V ±5% F.S.
Input Impedance/Consumption	700Ω	<50mA	50mA
Output Impedance	700Ω	1 kΩ ⁵	1 kΩ ⁵
Insulation under 50Vdc	≥100MΩ	≥100MΩ	≥100MΩ

Notes

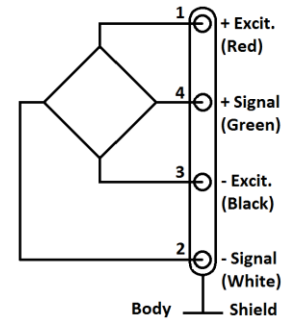
1. standard electrical termination: cable gland with Ø3mm shielded cable, 2meters length
2. Material: aluminum alloy.
3. Protection Index: IP50
4. Other signal output on request
5. Output impedance < 100Ω on request
6. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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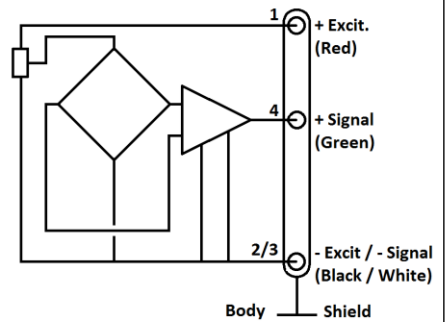
DIMENSIONS & WIRING SCHEMATIC (IN METRIC)



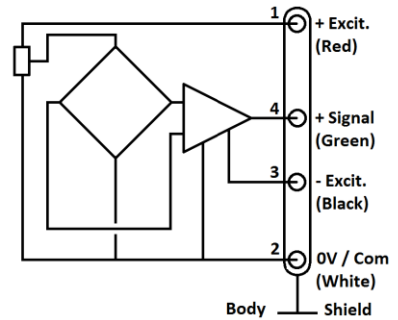
Wiring Schematic



Version -A1



Version -A2



Dimension A :

28 mm for ranges 200N, 500N

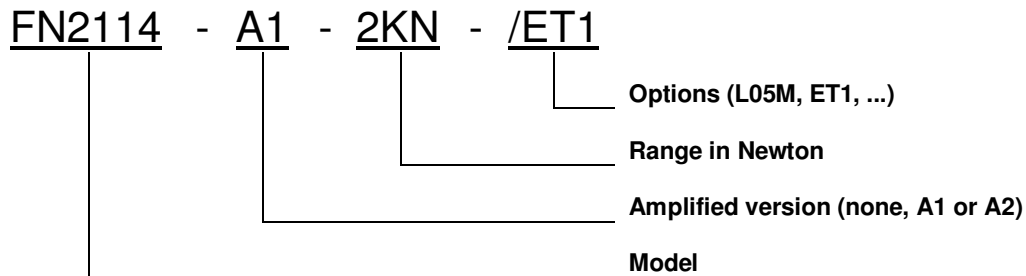
29 mm for ranges 1kN, 1.5kN, 2kN, 2kN, 3kN

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OPTIONS

ET1 : CTR -20 to 100° C OTR = CTR
L00M : special cable length, replace "00" with total length in meters

ORDERING INFO



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