# FN7178-2 Shock Absorber Load Cell

- **Measures force in three directions**
- **On-car mounting**
- **Accuracy to 0.5% on each channel**
- **Rugged construction**

Single axis version also available as models **FN3228** and **FN3229**

## DESCRIPTION

The **FN7178-2** is designed specifically to be mounted in series with a front wheel shock absorber on a vehicle. It measures the force in three directions to study ride characteristics under a wide range of driving conditions.

Mono-directional versions suited for rear wheel absorbers are available under reference **FN3228** and **FN3229.** Consult your MEAS' representative for technical specification.

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

## FEATURES

- Measures Fx, Fy & Fz simultaneously
- Available as 3 or 1 axis sensor
- Custom designs and interfaces available
- Optional integrated amplifier
- Minimal Cross Effects

## APPLICATIONS

- Quality control test benches
- Laboratory and research
- On-board monitoring
- Automotive testing

## STANDARD RANGES

| Model | FN7178-2 | | |
|---|---|---|---|
| | X axis | Y axis | Z axis |
| **Range in N** | 1000 | 1000 | 2500 |
| **Range in lbf** | 200 | 200 | 500 |

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## PERFORMANCE SPECIFICATIONS

**All values are typical at temperature 20±1ºC**

| **PARAMETERS** | |
|---|---|
| Operating Temperature Range (OTR) | -20 to 80° C [-4 to 176° F] |
| Compensated Temperature Range (CTR) | 0 to 60º C [32 to 140° F] |
| Zero Shift in CTR | <1% F.S. / 50º C [/100° F] |
| Sensitivity Shift in CTR | < 2% of reading / 50º C [/100° F] |
| Ranges (F.S.) | See table |
| **Over-Range** | |
| Without Damage | 1.5 x F.S. |
| **Accuracy** | |
| Combined non-linearity and hysteresis | ±0.5% F.S. on each axis |

**Electrical Characteristics**

| **Model** | **FN7178-2** |
|---|---|
| Supply Outage | 10 Vdc |
| F.S. Output channels Fx & Fy<br>F.S. Output channel Fz | ± 5 mV/V<br>± 2 mV/V |
| Zero Offset | ±5% F.S. |
| Insulation under 50Vdc | ≥100MΩ |

**Notes**

1. Electrical Termination: cable gland with 2m shielded cable
2. Wiring schematic depends on the sensor and number of channels
3. Materials: Body in stainless steel cover in aluminium alloy
4. Protection index: IP50
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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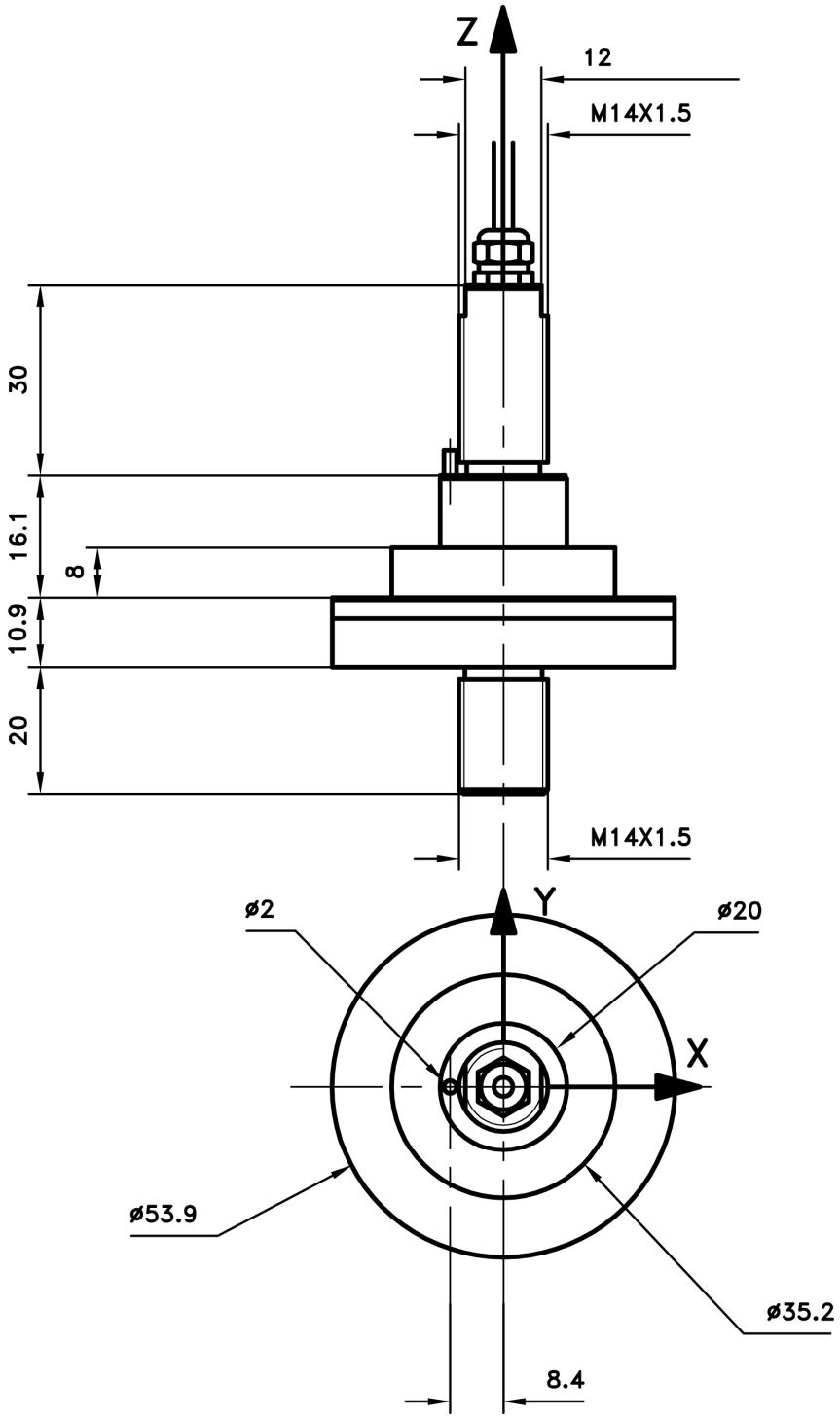
## DIMENSIONS & WIRING SCHEMATIC (IN METRIC)




**Dimensions are in mm.**
**The drawings correspond to FN7178-2 and can change depending on technical specifications.**

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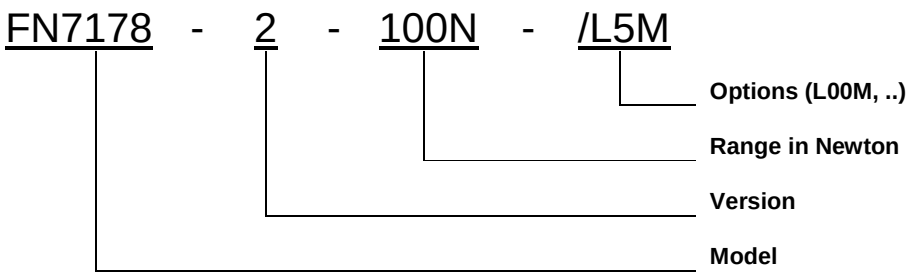
## OPTIONS

**L00M**: Special Cable Length, replace “00” with total length in meter

## ORDERING INFORMATION





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