



XFC200R

Miniature Compression Load Cell

SPECIFICATIONS

- Range from 0-2N to 0-10kN [0-0.45 lbf to 0-2.2 klbf]
- High Stiffness
- Integrated Spherical Load Button
- Linearity < 0,5% FS

The miniature size and lightweight of the **XFC200R** facilitates testing where these conditions are necessary. Unlike sensors with flat force application surfaces, the **XFC200R** incorporates a spherical load button resulting in more precise measurements.

Its high stiffness, for the size and measurement ranges, allows measurements in dynamic applications. A strain relief spring strengthens the cable output. The sensing element is fitted with a fully temperature compensated Wheatstone bridge equipped with high stability micro-machined silicon strain gages.

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

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

FEATURES

- High accuracy for low ranges
- Integrated Spherical Load Button
- High Overload Capacity
- Small design

APPLICATIONS

- Robotics and effectors
- Micro component assembly tools
- Keyboard and phone buttons control
- Mechanical switches control

CHARACTERISTICS (typical values at temperature 23°C)

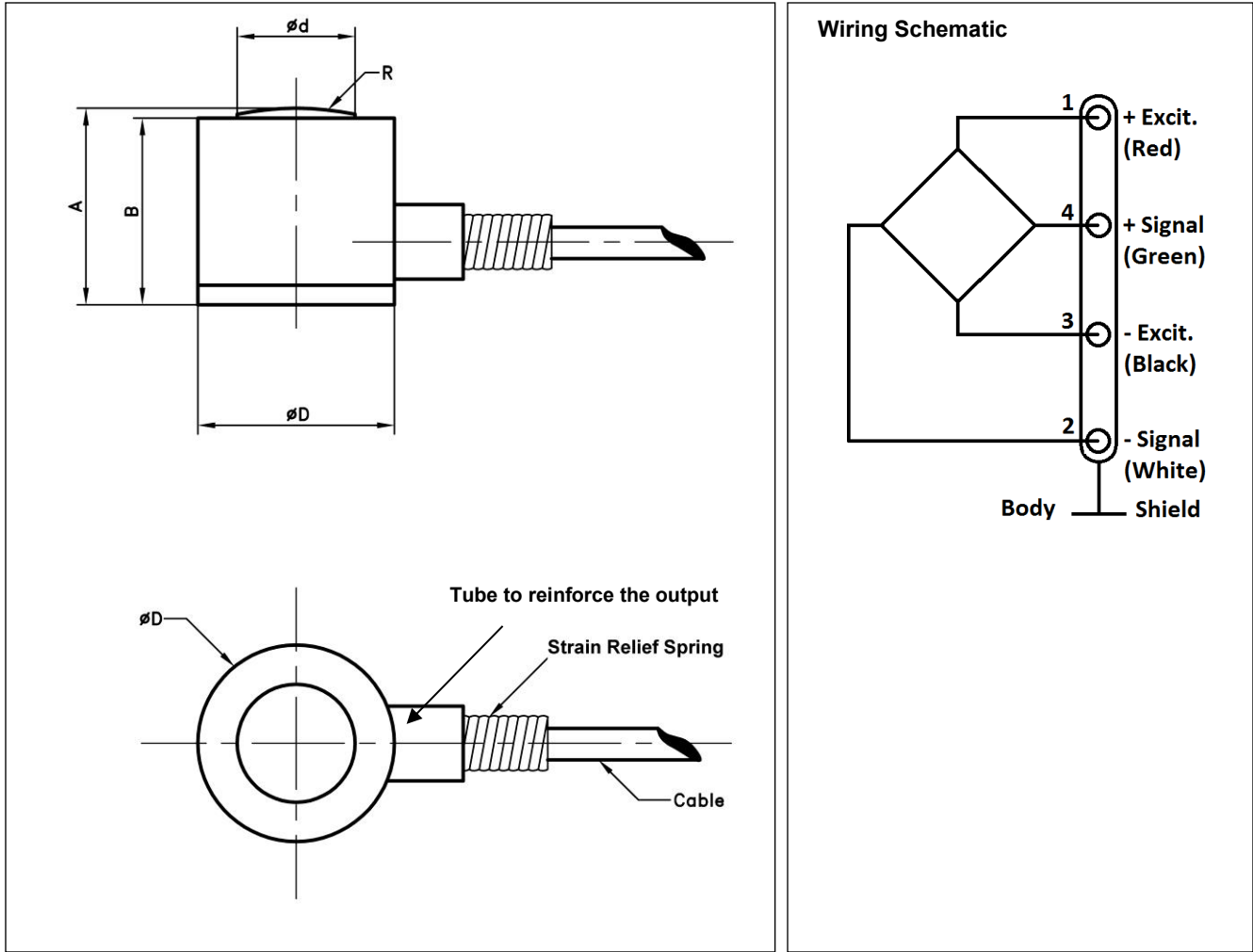
| Ranges (FS) | 2 N | 5 N | 10 N | 20 N | 50 N | 100 N | 200 N | 500 N | 1 kN | 2 kN | 5 kN | 10 kN |
|--------------------|-----------|---------|---------|---------|---------|-----------------|---------|-----------|---------|-----------------|---------|---------|
| Ranges (lbf) | 0.450 | 1.12 | 2.25 | 4.50 | 11.2 | 22.5 | 45.0 | 112 | 225 | 450 | 1124 | 2248 |
| Material | Aluminium | | | | | Stainless Steel | | Aluminium | | Stainless Steel | | |
| Stiffness (N/m) | 3.0E+05 | 7.8E+05 | 2.3E+06 | 4.1E+06 | 9.2E+06 | 2.0E+07 | 3.5E+07 | 1.9E+08 | 1.9E+08 | 4.3E+08 | 4.6E+08 | 1.4E+09 |
| Stiffness (lbf/ft) | 2.1E+04 | 5.3E+04 | 1.6E+05 | 2.8E+05 | 6.3E+05 | 1.4E+06 | 2.4E+06 | 1.3E+07 | 1.3E+07 | 2.9E+07 | 3.2E+07 | 9.6E+07 |
| Sensitivity (FSO) | 150 mV | | | | 120 mV | | | 60 mV | 120 mV | | | |

| Specifications | |
|-------------------------------------|--------------------------------|
| Power supply | 10Vdc |
| Overrange Without Damage | 2 x FS |
| Overrange Without Destruction | 3 x FS |
| Offset | <±10 mV |
| Input Impedance | 1500 ohms |
| Output Impedance | 500 ohms |
| Linearity | < ±0.5% de l'EM |
| Hysteresis | < ±0.5% de l'EM |
| Operating Temperature Range (OTR) | -40°C to +120°C (-40 to 250°F) |
| Compensated Temperature Range (CTR) | 0°C to +60°C (32 to 140°F) |
| Th. Zero Shift in CTR | < 2% de l'EM/50°C |
| Th. Sensitivity Shift in CTR | < 2%/50°C |
| Insulation | > 100 Mohms |
| Protection Index | IP50 |

Notes

1. Signal goes negative in compression with standard wiring configuration
2. Electrical Termination: Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.6 ft] with strain relief spring
3. Material: Body in stainless steel or aluminum alloy
4. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

| F.S. Ranges in N | 2 - 5 | 10 - 20 - 50 | 100 - 200 | 500 - 1000 | 2000 | 5000 - 10000 |
|------------------|------------|--------------|-----------|------------|------|--------------|
| A | 10 [0.39] | | | | | 16 [0.63] |
| B | 9,5 [0.37] | | | | | 15 [0.59] |
| Diameter D | 10 [0.39] | | | | | 16 [0.63] |
| Diameter d | 3 [0.12] | 5 [0.2] | | 6 [0.24] | | 12 [0.47] |
| R | 15 [0.59] | | | | | 30 [1.18] |
| Tube presence | no | | | yes | | |

XFC200R

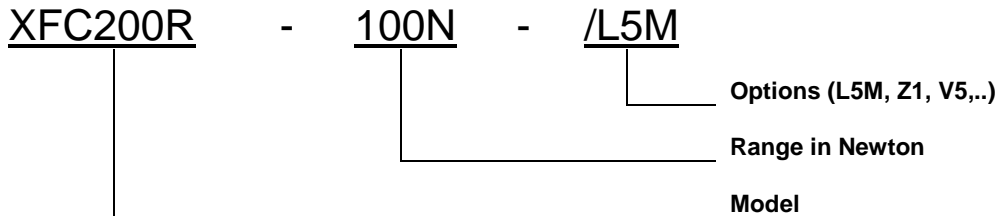
Miniature Load Cell

OPTIONS

| | |
|------|--|
| Z0 | CTR -40°C to +20°C (-40°F to 68°F) |
| Z04 | CTR -40°C to +90°C (-40°F to 194°F) |
| Z1 | CTR -20°C to +40°C (-4°F to 104°F) |
| Z3 | CTR +20°C to +80°C (68°F to 176°F) |
| Z35 | CTR +20°C to +120°C (68°F to 248°F) |
| HA | Accuracy (CNL&H) $\leq \pm 0.5\%$ F.S. |
| V00 | Non-standard power supply calibration, replace "00" with value in Volt |
| L00M | Special cable length, replace "00" with total length in meters |

* Order Flat Force application surface with reference **XFC200**.

ORDERING INFO



NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 1-800-522-6752
Email : customercare.frmt@te.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Phone: +31 73 624 6999
Email: customercare.lcsb@te.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: +86 400-820-6015
Email: customercare.shzn@te.com

TE.com/sensorsolutions

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