



## XFC200R

### Miniature Compression Load Cell

#### SPECIFICATIONS

- ◆ Range from 0-2N to 0-10kN [0-0.45 lbf to 0-2.2 klf]
- ◆ 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

#### 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)

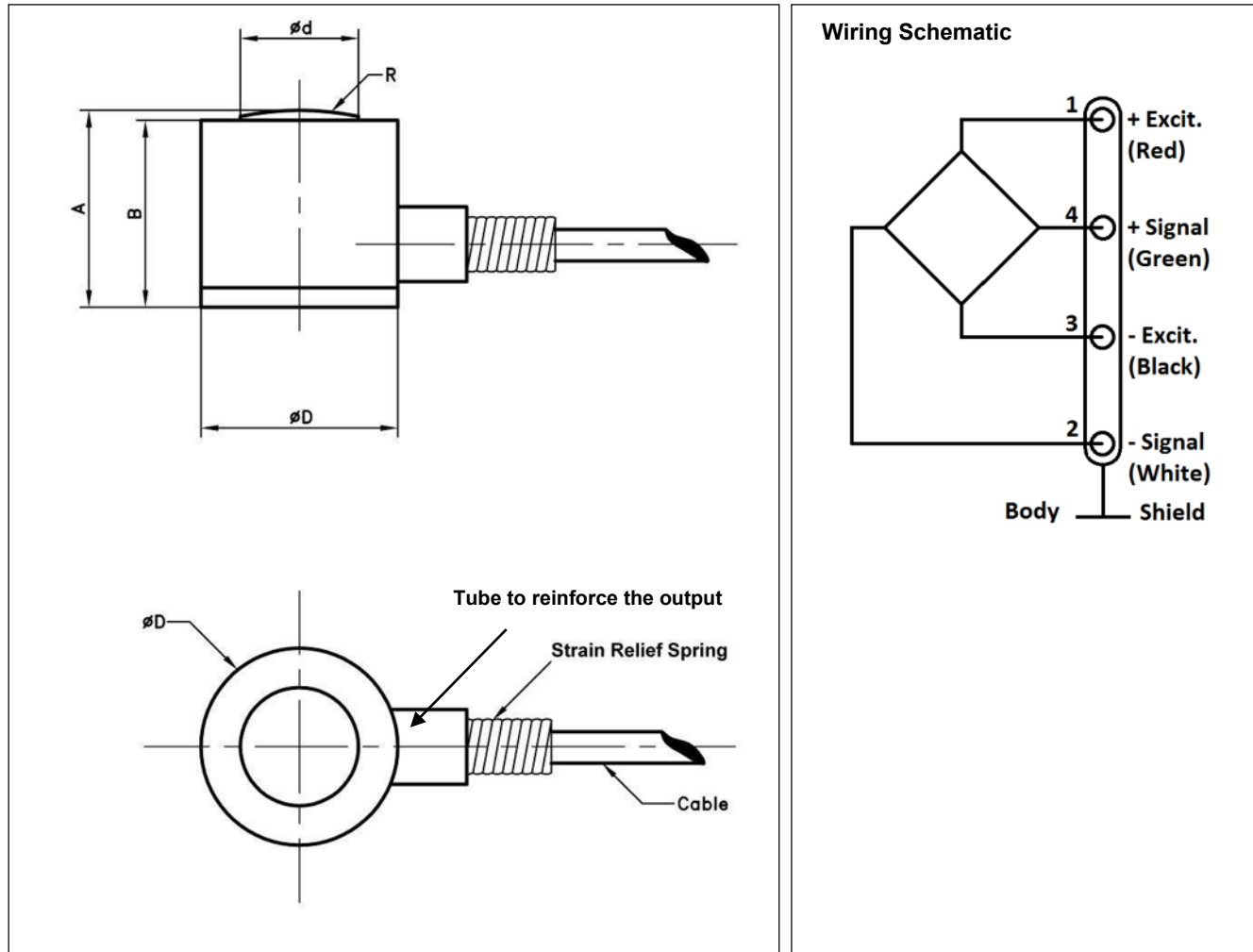
Ranges (FS)	2 N	5 N	10 N	20 N	50 N	100 N	200 N	500 N	1 kN	2 kN	5 kN	10 kN
Ranges (lbf)	0.450	1.12	2.25	4.50	11.2	22.5	45.0	112	225	450	1124	2248
Material	Aluminium					Stainless Steel		Aluminium		Stainless Steel		
Stiffness (N/m)	3.0E+05	7.8E+05	2.3E+06	4.1E+06	9.2E+06	2.0E+07	3.5E+07	1.9E+08	1.9E+08	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)



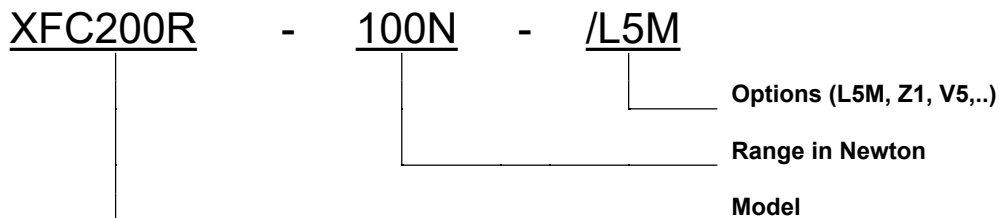
**Dimensions in mm [inch]**

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		

**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**

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