

## XFC205R

### Miniature Load Cell in Compression

#### SPECIFICATIONS

- ✦ Ranges from 0-2 to 0-200N  
[0-0.45 to 0-45 lbf]
- ✦ Important Overload Capacity
- ✦ Linearity < 0.5% FS

The miniature size and lightweight of the **XFC205R** facilitates testing where these conditions are necessary. Unlike sensors with flat force application surfaces, the **XFC205R** 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. With a threaded M5 male base, the **XFC205R** is easily installed in industrial or OEM applications.

To meet your need 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

#### FEATURES

- ✦ Easy Installation with Threaded M5 Male Base
- ✦ Integrated Spherical Load Button
- ✦ High IP rating on request
- ✦ Other thread and design on request

#### APPLICATIONS

- ✦ Process control equipment
- ✦ Press-fit machinery
- ✦ Robotics and effectors
- ✦ Laboratory
- ✦ Fibre Optical component assembly

**CHARACTERISTICS** (typical values at temperature 23°C)

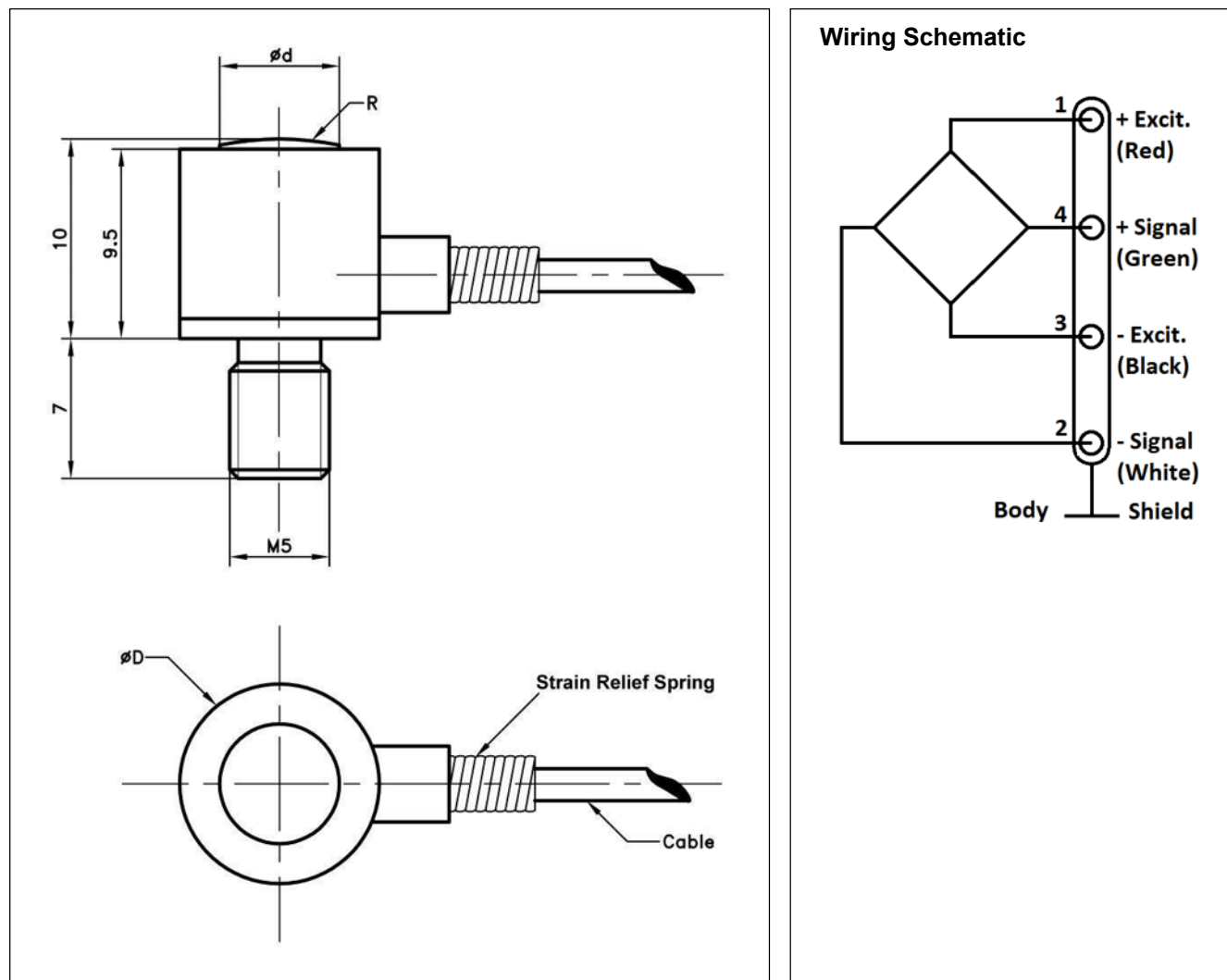
Ranges (FS) (N)	2	5	10	20	50	100	200
Ranges (lbf)	0.4496	1.124	2.248	4.496	11.24	22.48	44.96
Material	Aluminium					Stainless Steel	
Stiffness (N/m)	3.0E+05	7.8E+05	2.3E+06	4.1E+06	9.2E+06	2.0E+07	3.5E+07
Stiffness (lbf/ft)	2.1E+04	5.3E+04	1.6E+05	2.8E+05	6.3E+05	1.4E+06	2.4E+06
Sensitivity (FSO)	150 mV				120 mV		

Specifications	
Power supply	10Vdc
Overrange Without Damage	2x FS
Overrange Without Destruction	3x FS
Offset	<±10 mV
Input Impedance	1500 ohms
Output Impédance	500 ohms
Linearity	< ±0.5% FS
Hysteresis	< ±0.5% FS
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)
Thermal Zero Shift in CTR	< 2% FS/50°C
Thermal 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: Cable: Shielded cable with 4 wires (AWG36), 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)



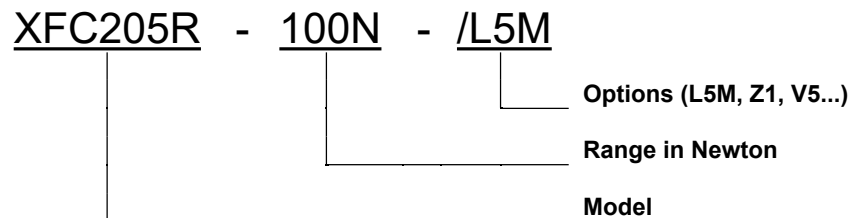
Dimensions in mm [inch]

F.S. Ranges in N	2 - 5	10 - 20 - 50	100 - 200
Diameter D	10 [0.39]		
Diameter d	3 [0.12]	5 [0.20]	
R	15 [0.59]		

**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 **XFC205**.

**ORDERING INFO**

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