

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

XFC205R

Miniature Load Cell in Compression

SPECIFICATIONS

- **Ranges from 0-2 to 0-200N**
[0-0.4 to 0-40 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 needs we also offer complete 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.

STANDARD RANGES

Ranges in N (FS)	2 - 5	10 - 20 - 50	100 - 200
Ranges in lbf	0.4 - 1	2 - 4 - 10	20 - 40
Stiffness in N/m	3.7x10 ⁵ to 1.4x10 ⁶	6.1x10 ⁶ to 6.6x10 ⁷	1.1x10 ⁸ to 3.2x10 ⁸
Stiffness in lbf/ft	2.5x10 ⁴ to 9.6x10 ⁴	4.2x10 ⁵ to 4.5x10 ⁵	7.5x10 ⁶ to 2.2x10 ⁷
Material	Aluminum		Stainless Steel

PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

PARAMETERS	
Operating Temperature Range (OTR)	-40 to 120° C [-40 to 248° F]
Compensated Temperature Range (CTR)	0 to 60° C [32 to 140° F]
Thermal Zero Shift in CTR	<2% F.S. / 50° C [/100° F]
Thermal Sensitivity Shift in CTR	<2% of reading / 50° C [/100° F]
Range (F.S.)	0-2 N to 0-200 N [0-0.4 lbf to 0-40 lbf]
Over-Range	
Without Damage	3 to 4 x F.S.
Without Destruction	5 to 6 x F.S.
Accuracy	
Linearity	≤±0.5% F.S.
Hysteresis	≤±0.5% F.S.

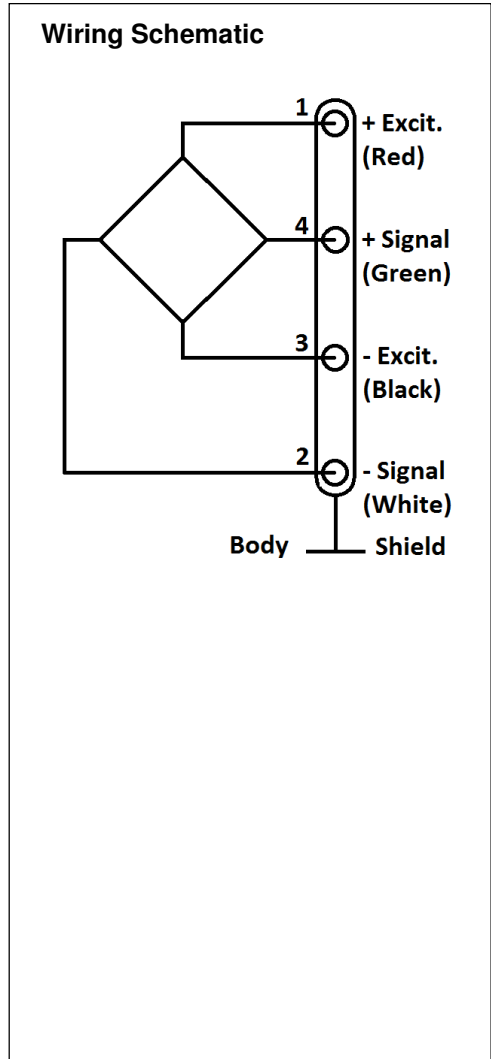
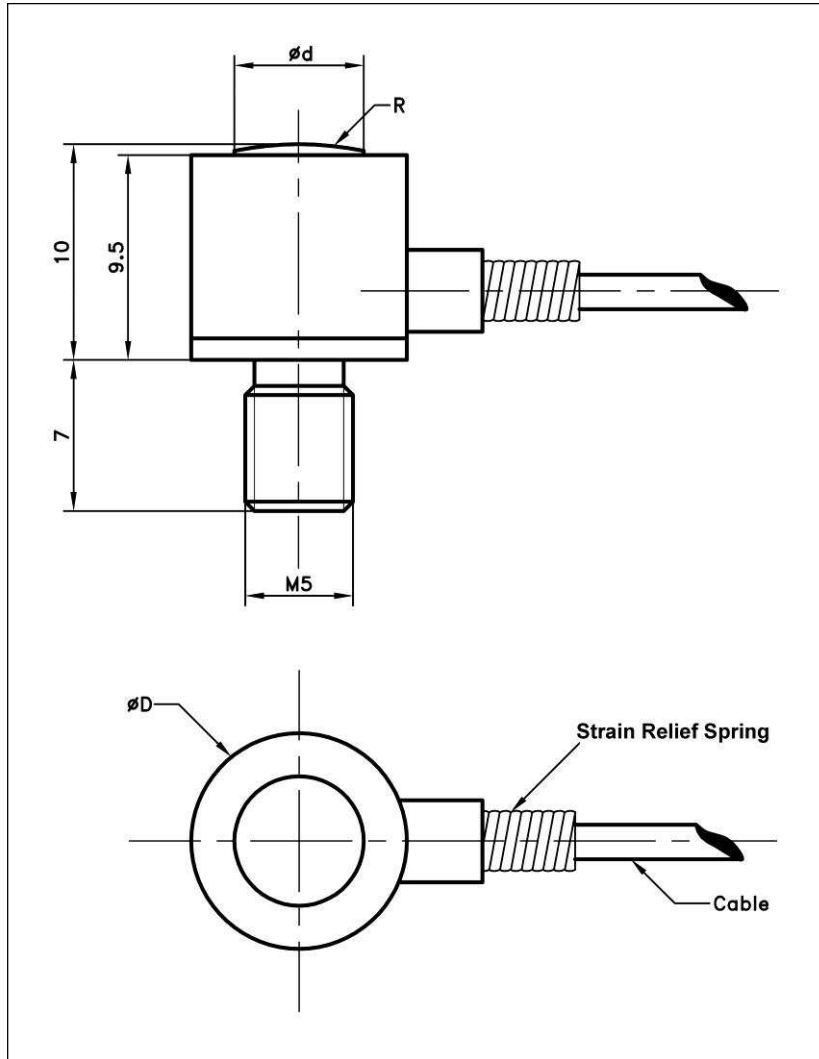
Electrical Characteristics

Model	XFC205R
Supply Voltage	10Vdc
Sensitivity "FSO"	10 mV/V
Zero Offset	<±1 mV/V
Input Impedance/Consumption	1000 to 3000Ω
Output Impedance	500 to 1000Ω
Insulation under 50Vdc	≥100MΩ

Notes

1. Electrical Termination: Cable: Shielded cable with 4 wires (AWG36), standard length 2 m [6.5 ft] with strain relief spring
2. Material: Body in stainless steel or aluminum alloy
3. Protection Index: IP50
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 [in lbf]	2 - 5 [0.4 - 1]	10 - 20 - 50 [2 - 4 - 10]	100 - 200 [20 - 40]
Diameter D	10 [0.39]		
Diameter d	3 [0.12]	5 [0.20]	
Material	Aluminum	Aluminum	Stainless steel
Stiffness in lbf/ft	2.5×10^4 to 9.6×10^4	4.2×10^5 to 4.5×10^6	7.5×10^6 to 2.2×10^7
Over-range w/o damage	x4	x4	x3
Over-range w/o destruction	x6	x6	x6

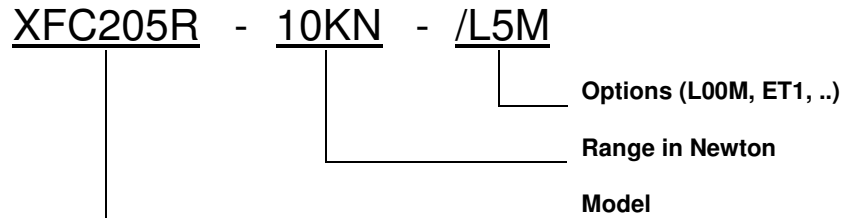
XFC205R

Miniature Load Cell

OPTIONS

ET1	: CTR -20 to 100° C [-4 to 212° F]
ET2	: CTR -40 to 120° C [-40 to 248° F]
ET3	: CTR -40 to 150° C [-40 to 302° F] OTR=CTR
HA	: Accuracy (CNL&H) ≤ ±0.5% F.S.
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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