

FEATURES

- Wide temperature compensation range
- Optional IP rating improvement
- Heavy duty
- Integrated Amplifier optional
- Easy to customized signal and design

APPLICATIONS

- Dynamic strain cylinder regulation
- Miniature force & temperature tests
- Motor sport clutch monitoring
- Robotics regulation
- Heat room environment

XFTC302

Miniature Load Cell High Temperature

SPECIFICATIONS

- Range from 0-5kN to 0-10kN
[0-1klbf to 2klbf]
- Tension and Compression
- High Temperature Range : -55 to +175° C
[-67 to +347° F]

The **XFTC302** series has been specifically developed to measure tension and/or compression in static and dynamic applications.

Fitted with metallic strain gages in a Wheatstone bridge circuit, the **XFTC302** has the capacity of measuring heavy loads of up to 10,000 N, 2000 lbf while providing excellent temperature stability. With two threaded M10 studs, the **XFTC302** is easily installed in industrial or OEM applications. A strain relief spring strengthens the cable output.

For lower force and temperature ranges, TE CONNECTIVITY developed another product **XFTC301**. This other models covers the ranges from 2N to 2000N.

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)	5k	10k
Ranges in Lbf	1k	2k
Stiffness in N/m	2x10 ⁹	4x10 ⁹
Stiffness in Lbf/ft	1.4x10 ⁸	2.7x10 ⁸
Material	Stainless Steel	Stainless Steel

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

PARAMETERS		
Operating Temperature Range (OTR)	Without electronic	-55 to 175° C [-67 to 347° F]
	With A1 option	-40 to 85° C [-40 to 185° F]
Compensated Temperature Range (CTR)	Without electronic	0 to 150° C [32 to 302° F]
	With A1 option	0 to 85° C [32 to 185° F]
Thermal Zero Shift in CTR	<1% F.S. / 50° C [/100° F]	
Thermal Sensitivity Shift in CTR	<1% of reading / 50° C [/100° F]	
Range (F.S.)	0-5kN to 0-10kN [0-1klbf to 0-2klbf]	
Over-Range		
Without Damage	1.5 x F.S.	
Without Destruction	3 x F.S.	
Accuracy		
Linearity	≤±0.5% F.S.	
Hysteresis	≤±0.5% F.S.	

Temperature restriction notes

Sensors integrating an **A1** amplifier have their OTR limited from -40°C to 85°C [-40°F to 185°F] max. due to internal components.

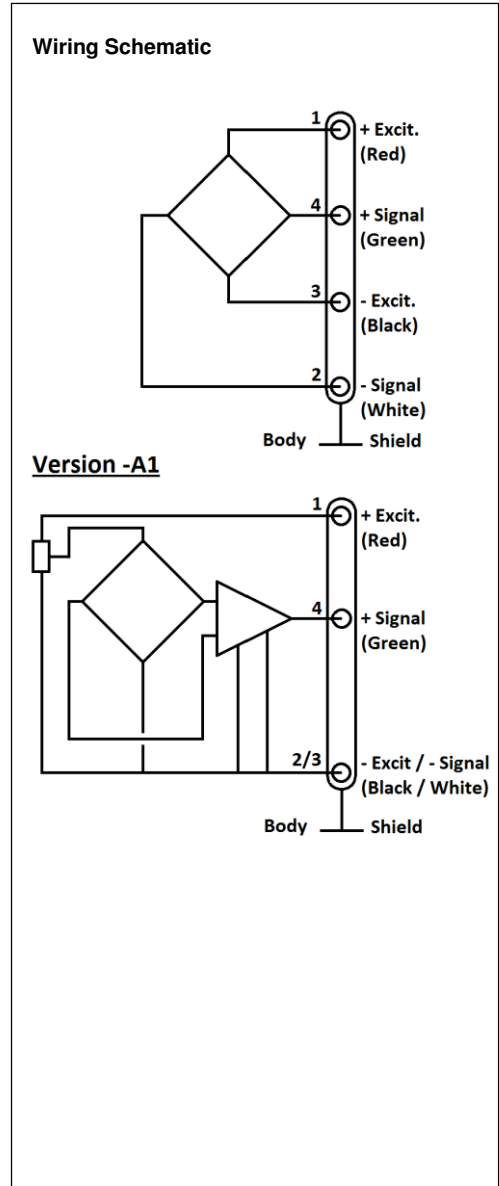
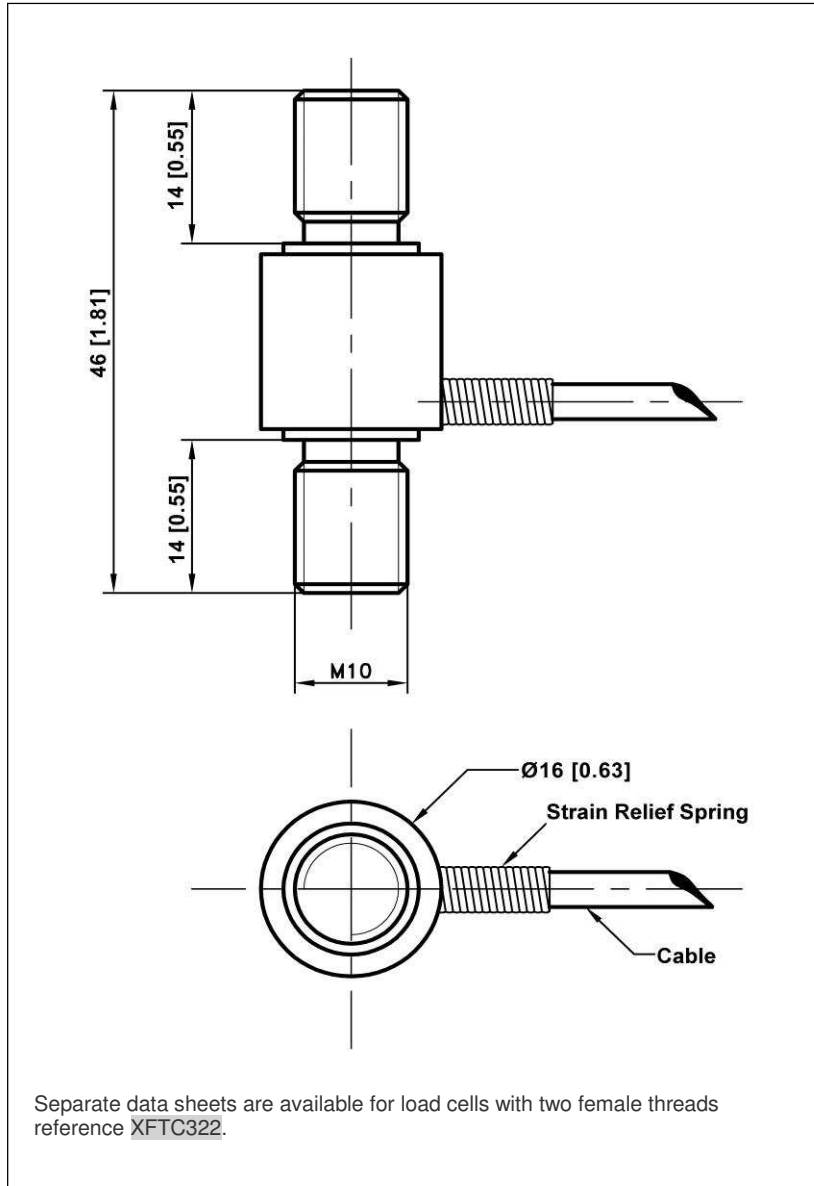
Electrical Characteristics

Model	XFTC302	XFTC302-A1
Supply Voltage	10Vdc	10 – 30Vdc
Sensitivity "FSO" ⁴	±1mV/V	±2V ±0.2V
Zero Offset ⁴	<±5% F.S	2.5V ±0.2V
Input Impedance/Consumption	700Ω	<30mA
Output Impedance	350Ω	<1 kΩ ⁵
Insulation under 50Vdc	≥1000MΩ	≥100MΩ

Notes

1. Shielded cable with 4 wires (AWG28), standard length 2 m [6.5 ft] with strain relief spring
2. Material: Body in stainless steel ; Two male threaded studs M10 or [3/8-24 UNF] (metric thread is standard)
3. Protection Index: IP50 (other levels available on request)
4. Standard output signal, custom outputs available on request
5. Output impedance standard, available <100Ω on request.
6. CE compliance according to EN 61010-1, EN 50081-1, EN 50082-1

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



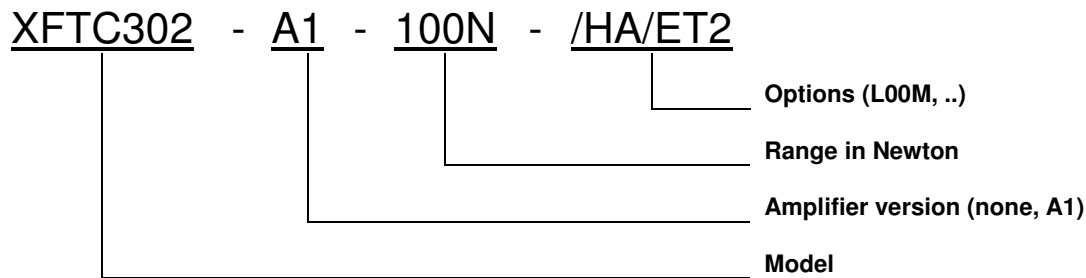
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Miniature Load Cell High Temperature

OPTIONS

A1	: Tension output with unipolar power supply
ET2	: CTR -40 to 120° C [-40 to 248° F] (not compatible with A1 versions)
ET4	: CTR -40 to 175° C [-40 to 347° F] (not compatible with A1 versions)
HA	: Accuracy (CNL&H) $\leq \pm 0.5\%$ F.S.
TS	: Tolerance on F.S. output $\pm 2\%$ F.S.
L00M	: special cable length, replace "00" with total length in meters

ORDERING INFO



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