

FEATURES

- ♦ Wide range of temperature compensated
- ♦ Optional IP rating improvement
- ♦ Heavy duty
- ♦ High stiffness

APPLICATIONS

- ♦ Dynamic strain cylinder regulation
- ♦ Miniature press-fit device
- ♦ Fatigue test benches
- ♦ Robotics regulation
- ♦ Heat room environment

XFTC322

Miniature Load Cell

SPECIFICATIONS

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

The **XFTC322** 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 **XFTC322** has the capacity of measuring heavy loads of up to 10 kN [2 klbf], while providing excellent temperature stability.

With two threaded M10 studs, the **XFTC322** is easily installed in industrial or OEM applications. A strain relief spring strengthens the cable output.

With a long standing experience as a designer and manufacturer of sensors TE CONNECTIVITY often works with customers to design or customize sensors for specific uses and testing environments.

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 20±1°C)

PARAMETERS		
Operating Temperature Range (OTR)	Without electronic	-55 to 175° C [-67 to 347° F]
	With A1 option	-55 to 125° C [-67 to 257° F]
Compensated Temperature Range (CTR)	Without electronic	0 to 150° C [32 to 302° F]
	With A1 option	0 to 100° C [32 to 212° 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]	
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.

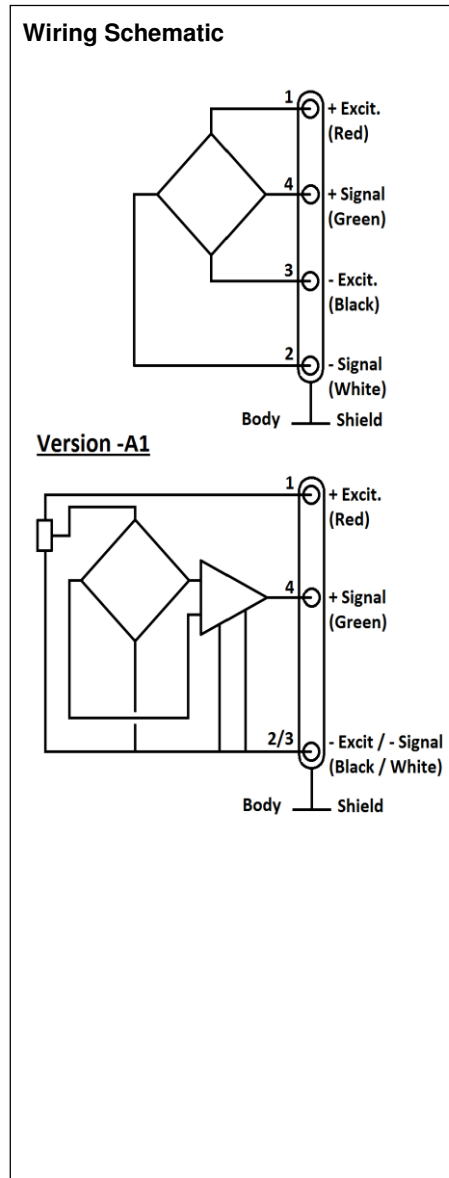
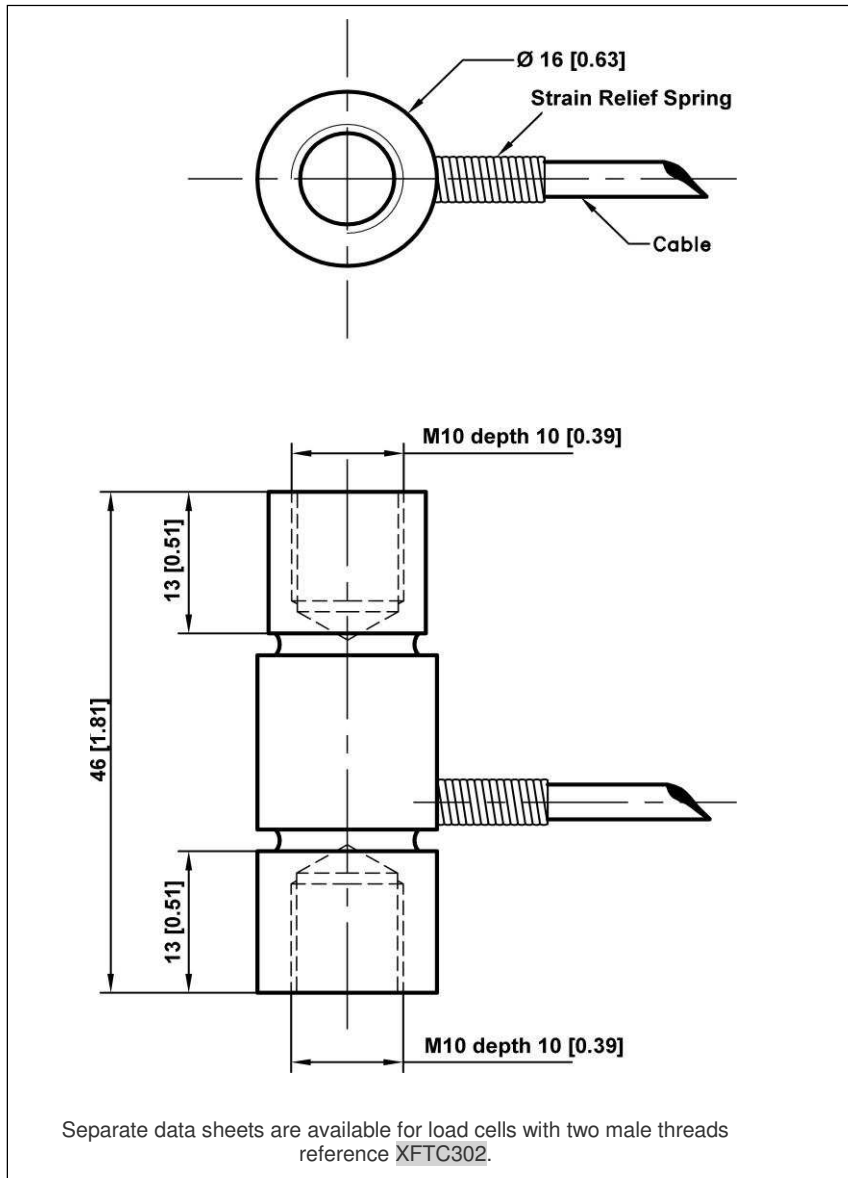
Electrical Characteristics

Model	XFTC322¹	XFTC322-A1
Supply Voltage	1 to 10 Vdc regulated	10 to 30Vdc
Sensitivity "FSO" ²	±1mV/V	±2V ±0.2V
Zero Offset ²	<±1mV	2.5V ±0.2V
Input Impedance/Consumption	700Ω	<30mA
Output Impedance	350Ω	<1 kΩ ⁶
Insulation under 50Vdc	≥1000MΩ	≥100MΩ

Notes

1. Sensors are calibrated with 10Vdc power supply as standard.
2. Signal goes positive in tension with standard wiring configuration. Other signal output on request
3. Shielded cable with 4 wires (AWG28), standard length 2 m [6.5 ft] with strain relief spring
4. Material: Body in stainless steel ; Two female threaded studs M10 or [3/8-24 UNF] (metric thread is standard)
5. Protection Index: IP50 (other levels available on request)
6. Output impedance standard, available <100Ω on request.
7. CE compliance according to EN 61010-1, EN 50081-1, EN 50082-1s

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)

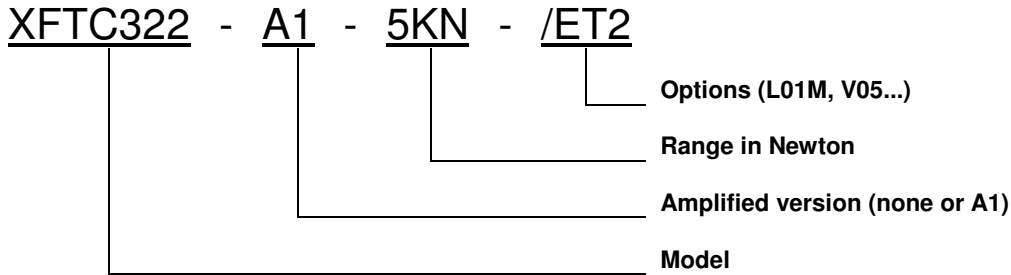


Dimensions in mm [inch]

Range in N [in lbf]	5k [1k]	10k [2k]
Material	Stainless Steel	Stainless Steel
Stiffness in N/m	2x10 ⁹	4x10 ⁹
Stiffness in lbf/ft	1.4x10 ⁸	2.7x10 ⁸

OPTIONS

A1 : Tension output with unipolar power supply
ET2 : CTR -40 to 120° C [-40 to 248° F] (not compatible with A1 option)
ET4 : CTR -40 to 175° C [-40 to 347° F] (not compatible with A1 option)
HA : Accuracy (CNL&H) $\leq \pm 0.5\%$ F.S.
TS : Tolerance on F.S. output $\uparrow \pm 2\%$ F.S. (only for A1 option)
V00 : Non-standard power supply calibration, replace "00" with value in Volt (standard 10Vdc, unamplified sensor only)
L00M : special cable length, replace "00" with total length in meters

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