



## FEATURES

- Male/female M5 and M10 threaded
- Optional IP rating improvement
- Extended temperature use as option

## APPLICATIONS

- Strain measurement on finger-like command
- Small size actuators
- Miniature press-fit device
- Robotics control measurement
- Laboratory

## XFTC311

### Miniature Load Cell

#### SPECIFICATIONS

- Range from 0-500N to 0-10kN  
[0-112.4lbf to 2.248klbf]
- Tension and Compression
- Linearity  $\leq \pm 0.5\%$  FS

The **XFTC311** series has been specifically developed to measure tension and compression in static and dynamic applications. The miniature size facilitates testing where space is at a premium.

The sensing element is fitted with a fully temperature compensated Wheatstone bridge equipped with high stability micro-machined silicon strain gages. The use of silicon strain gages optimizes the load cell's performance at low ranges and frequencies. A strain relief spring strengthens the cable output.

With male/female threads, the **XFTC311** is easily installed in industrial or OEM applications.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

**PERFORMANCE SPECIFICATIONS (typical values at temperature 23°C)**

Ranges (FS) (N)	500 N	1 kN	2 kN	5 kN	10 kN
Ranges (lbf)	112.4	224.8	449.6	1124	2248
Material	Aluminium		Stainless steel		
Stiffness (N/m)	1.5E+08	1.5E+08	3.7E+08	4.6E+08	7.6E+08
Stiffness (lbf/ft)	1.0E+07	1.0E+07	2.5E+07	3.2E+07	5.2E+07
Sensitivity (FSO)	70 mV	150 mV	100 mV	150 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

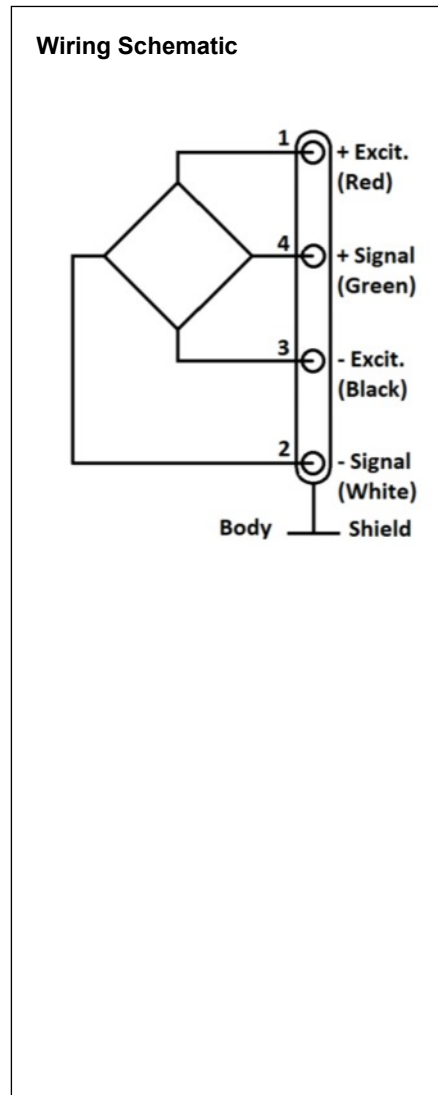
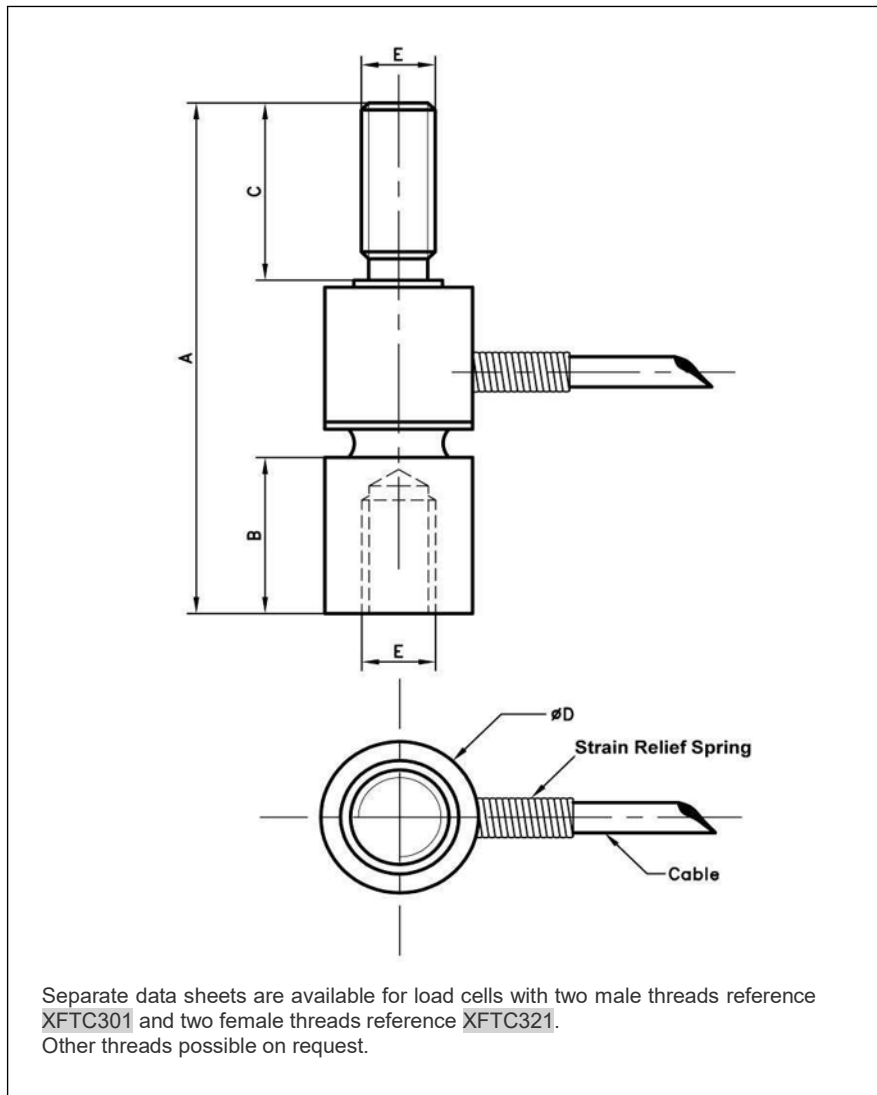
**Notes**

1. Signal goes positive in tension with standard wiring configuration.
2. Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
3. Material: Body in stainless steel or aluminum alloy depending on F.S.
4. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

# XFTC311

Miniature Load Cell

## DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)

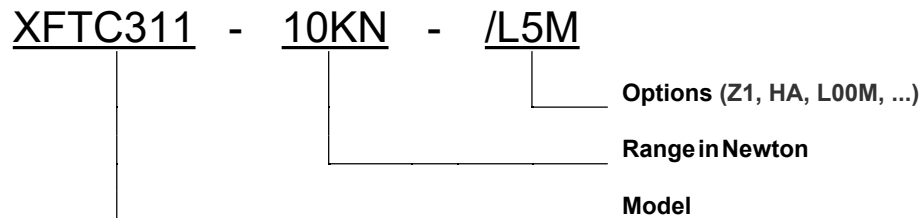


Dimensions in mm [inch]

Range in N	500 – 1000	2000	5000 – 10000
A	36 [1.42]		46 [1.81]
B	11 [0.43]		13 [0.51]
C	12.5 [0.49]		14 [0.55]
Ø D	10 [0.39]		16 [0.63]
E Thread	M5		M10
Internal depth	8 [0.31]		10 [0.39]

**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)
Z36	CTR +20°C à +150°C (68°F to 302°F)
HA	Accuracy (CNL&H) $\leq \pm 0.5\%$ F.S.
L5M, L10M, L15M	Special cable length (ex : L5M = 5m length) (Standard cable length 2m )

**ORDERING INFO**

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