



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)

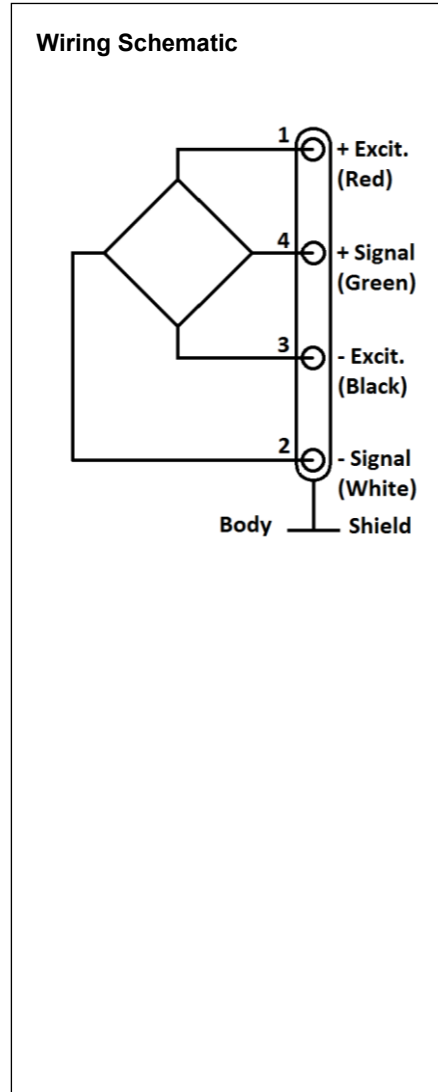
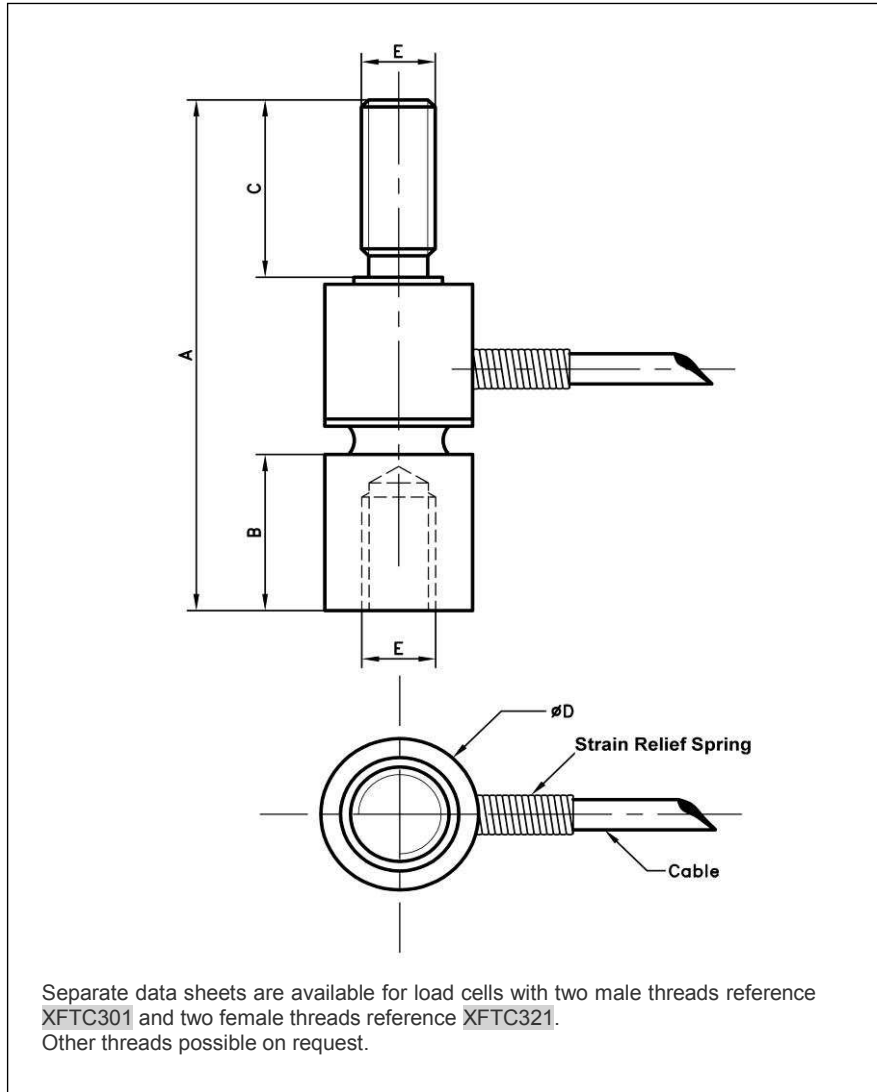
Ranges (FS) (N)	500 N	1 kN	2 kN	5 kN	10 kN
Ranges (lbf)	112.4	224.8	449.6	1124	2248
Material	Aluminium		Stainless steel		
Stiffness (N/m)	1.5E+08	1.5E+08	3.7E+08	4.6E+08	7.6E+08
Stiffness (lbf/ft)	1.0E+07	1.0E+07	2.5E+07	3.2E+07	5.2E+07
Sensitivity (FSO)	70 mV	150 mV	100 mV	150 mV	

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

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]

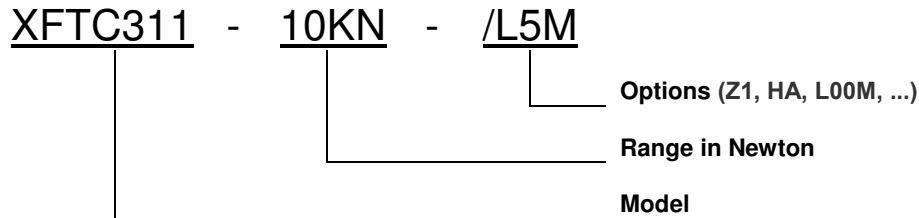
XFTC311

Miniature Load Cell

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) - Only available for range 2kN / 5kN / 10kN
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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