

FEATURES

- Heavy duty
- Sealed version available as option
- Integrated Amplifier optional

APPLICATIONS

- Strain measurement on finger-like command
- Underwater robots control command
- Miniature press-fit device
- Fatigue tests benches
- Small size actuators

XFTC320

Miniature Load Cell

SPECIFICATIONS

- Ranges from 0-2N to 0-2kN
[0.45 lbf to 450 lbf]
- Tension and Compression
- High Overload Capacity

The **XFTC320** series has been specifically developed to measure tension and/or compression in static and dynamic applications. The miniature size and light-weight facilitate testing where these conditions are necessary.

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 optimises the load cell's performance at low ranges and frequencies. For sensors with a range of between 500 N and 2 kN [100 and 400lbf], a high-level output model is available.

With two female threads, the **XFTC320** is easily installed in industrial or OEM applications. A strain relief spring strengthens the cable output.

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)

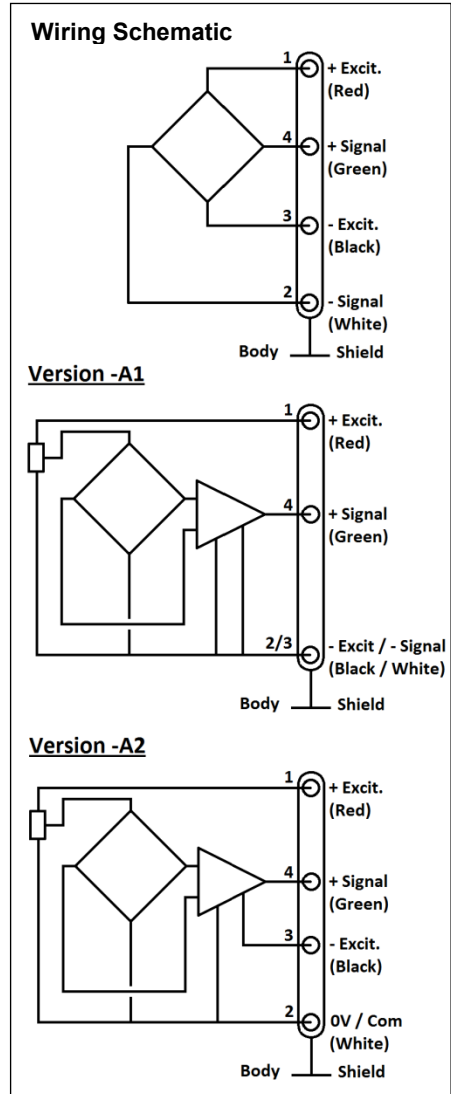
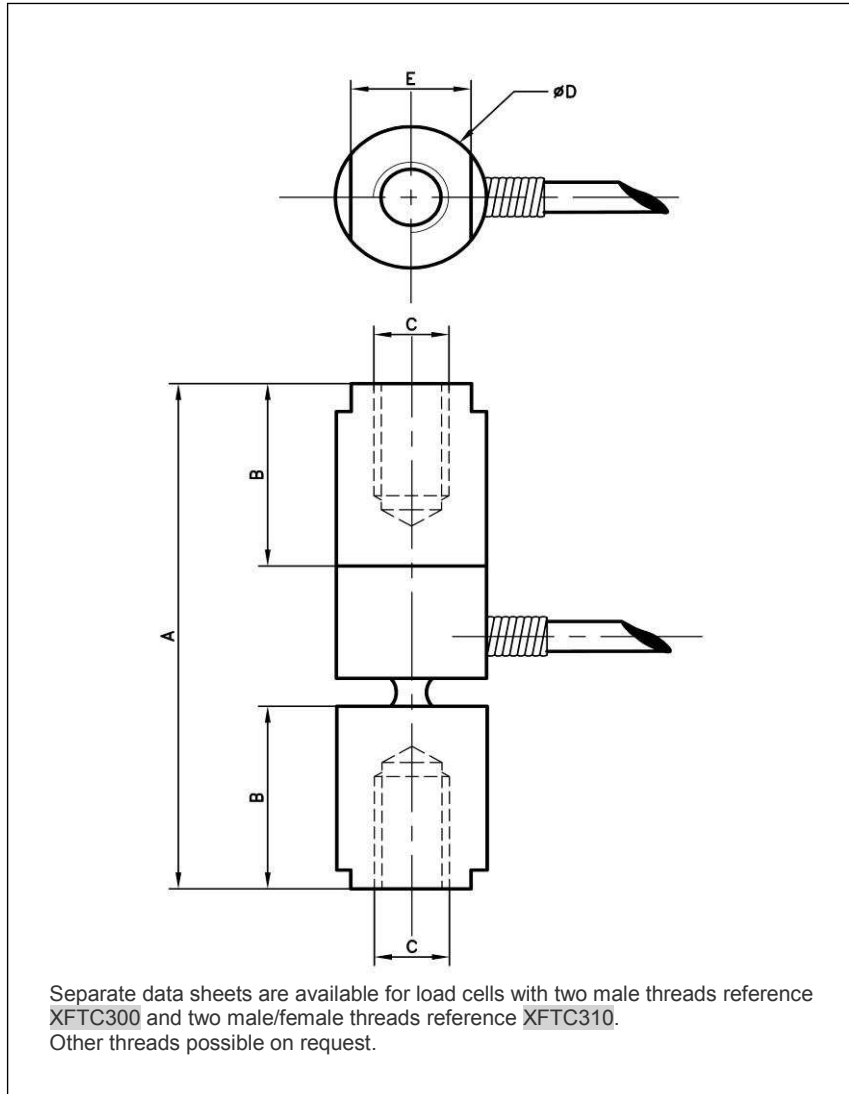
Ranges (FS) (N)	2	5	10	20	50	100	200	500	1k	2k
Ranges (lbf)	0.45	1.12	2.25	4.50	11.24	22.48	44.96	112.40	224.8	449.6
Material	Aluminium					Stainless Steel				
Stiffness (N/m)	5.9E+05	1.1E+06	2.4E+06	4.7E+06	1.1E+07	2.3E+07	4.0E+07	8.6E+07	1.2E+08	2.1E+08
Stiffness (lbf/ft)	4.0E+04	7.5E+04	1.6E+05	3.2E+05	7.5E+05	1.6E+06	2.7E+06	5.9E+06	8.2E+06	1.4E+07
Sensitivity (FSO) (version Standard)	±100 mV									
Sensitivity (FSO) (version A1)	Range not available							±2Vdc ±0.2V		
Sensitivity (FSO) (version A2)	Range not available							±5Vdc ±0.25V		

Version	Standard	A1	A2
Power supply	10Vcc	10Vdc to 30Vdc	±12Vdc to ±18Vdc
Offset	<±10 mV	2.5Vdc ±0.2V	0Vdc ±0.25V
Input Impedance / Consumption	1500 ohms	< 30 mA	
Output Impedance	500 ohms	1000 ohms	
Overrange Without Damage	2x FS		
Overrange Without Destruction	3x FS		
Linearity	< ±0.5% FS		
Hysteresis	< ±0.5% FS		
Operating Temperature Range (OTR)	-40°C to +120°C (-40°F to 250°F)		
Compensated Temperature Range (CTR)	0°C to +60°C (32°F 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. Other signal output on request
2. A1 and A2 options are only available for ranges 500N, 1kN and 2 kN
3. Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
4. Material: Body in stainless steel or aluminum alloy depending on F.S.
5. Output impedance standard, available <100Ω on request.
6. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

Full Scale Range in N [in lbf]	2 - 5 - 10 - 20 - 50 [0.4 - 1 - 2 - 4 - 10]	100 - 200 [20 - 40]	500 - 1000 [100 - 200]	2000 [400]
A	36 [1.42]		46 [1.81]	47 [1.85]
B	13 [0.51]		14 [0.55]	
C Thread	M5		M10	
Internal depth	8 [0.31]		10 [0.39]	
Ø D	10 [0.39]		16 [0.63]	20 [0.79]
E	8 [0.31]		12 [0.47]	16 [0.63]

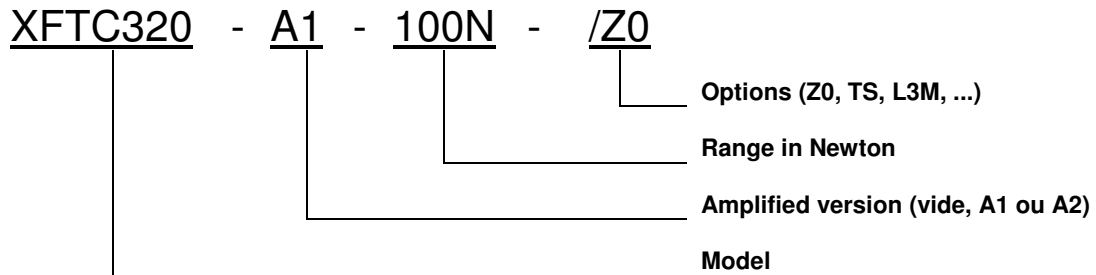
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Miniature Load Cell

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 to +150°C (68°F to 302°F) (OTR -40°C à +150°C (-40°F to 302°F)) - Only available on version standard - 100N-200N-500N-1kN-2kN
TS	Tolerance on signal $\leq \pm 2\%$ FS - Only available on version A1 / A2
L00M	Special cable length, replace "00" with total length in meter

ORDERING INFO



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