



## FEATURES

- Tension and/or Compression
- Small design easy to mount
- Wide temperature range in option
- Very small size

## APPLICATIONS

- Micro mechanic equipment
- Miniature press-fit device
- Robotics regulation
- Small size actuators

## XFTC301

### Miniature Load Cell

#### SPECIFICATIONS

- 0-500N to 0-10kN [112.4 lbf to 2.248k lbf]
- High Stiffness
- Threaded Male Mechanical Fitting
- Linearity < 0,5% FS

The **XFTC301** series has been specifically developed to measure tension and compression in static and dynamic applications. The miniature size facilitates testing where space is at 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 two threaded male studs, the **XFTC301** 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	7.8E+08
Stiffness (lbf/ft)	1.0E+07	1.0E+07	2.5E+07	3.2E+07	5.3E+07
Sensitivity (FSO)	70 mV	150 mV	100 mV	150 mV	

Specifications	
Power supply	10Vdc
Ovrange Without Damage	2x FS
Ovrange 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 2m [6.5 ft] with strain relief spring
3. Material: Body in stainless steel or aluminum alloy depending on F.S.; Two male threads M5 or [10-32 UNF], M10 or [3/8-24 UNF] depending on F.S. (metric thread is standard)
4. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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

Separate data sheets are available for load cells with two male/female threads reference [XFTC311](#) and two female threads reference [XFTC321](#). Other threads possible on request.

**Dimensions in mm [inch]**

Full Scale Range in N	500 – 1000	2000	5000 – 10000
A	36 [1.42]		46 [1.81]
B	12.5 [0.49]		14 [0.55]
C (Thread)	M5		M10
$\varnothing D$	10 [0.39]		16 [0.63]

## XFTC301

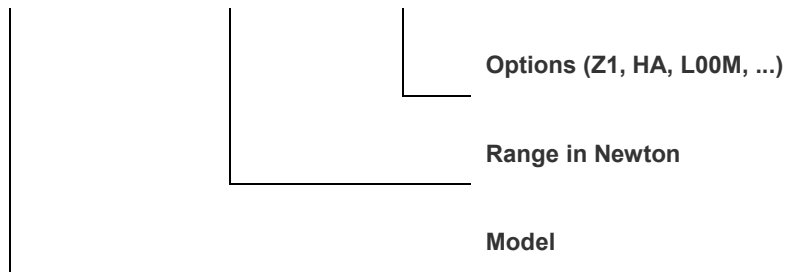
Miniature Load Cell

### 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)
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

XFTC301 - 10KN - /L5M



#### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Phone: +1 800 522 6752  
Email: [customercare.frm@te.com](mailto:customercare.frm@te.com)

#### EUROPE

Measurement Specialties (Europe), Ltd.  
a TE Connectivity Company  
Phone: +31 73 624 6999  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

#### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Phone +86 400 820 6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

#### TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.