

FEATURES

- Based on standard rod end bearings
- Easy to integrate
- Fast response time

APPLICATIONS

- Linkage forces
- Machine tool
- Automotive systems test
- Robotics and effectors

XFU400

Miniature Load Cell

SPECIFICATIONS

- Range from 0-500 N to 0-5 kN or [100 lbf to 1 klb]
- Tension and Compression
- Low deflection

Available in a range of measurements and a variety of mounting threads, the **XFU400** is easily installed. Its 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 **XFU400** is used in applications that require a spherical plain rod-end bearing and has the capacity of accepting a full scale range of up to 5 kN [1 klb].

With many years of 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)	500	1k	3k	4k	5k
Ranges in lbf	100	200	600	800	1k
Stiffness in N/m	3.4x10 ⁸	5.5x10 ⁸	1.2x10 ⁹	1.4x10 ⁹	1.9x10 ⁹
Stiffness in lbf/ft	2.3x10 ⁷	3.8x10 ⁷	8.2x10 ⁷	9.6x10 ⁷	1.3x10 ⁸

PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

PARAMETERS	
Operating Temperature Range (OTR)	-40 to 120 ° C [-40 to 248 ° F]
Compensated Temperature Range (CTR)	0 to 60 ° C [32 to 140 ° F]
Thermal Zero Shift in CTR	<2% F.S. / 50 ° C [/100 ° F]
Thermal Sensitivity Shift in CTR	<2% of reading / 50° C [/100° F]
Range (F.S.)	0-500N to 0-5kN [0-100lbf to 0-1klbf]
Over-Range	
Without Damage	1.5 x F.S.
Without Destruction	2 x F.S.
Accuracy	
Linearity	≤±0.3% F.S
Hysteresis	≤±0.2% F.S

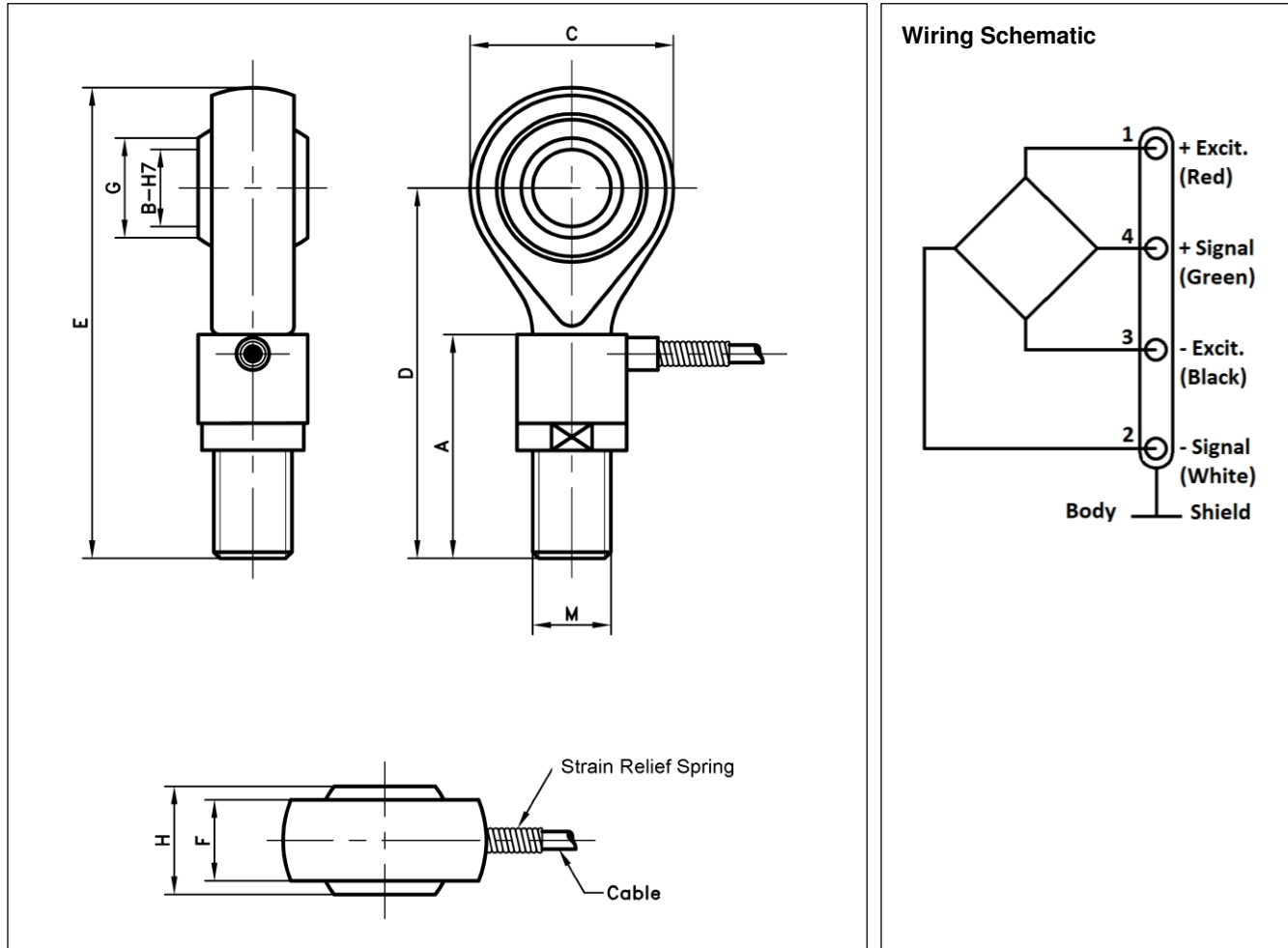
Electrical Characteristics

Model	XFU400
Supply Voltage	10Vdc
Sensitivity "FSO"	±10 mV/V
Zero Offset	<±1 mV/V
Input Impedance/Consumption	1000 to 3000Ω
Output Impedance	500 to 1000Ω
Insulation under 50Vdc	≥100MΩ

Notes

1. Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
2. Material: Body in zinc coated and passivated steel
3. Protection Index: IP50 (other levels available on request)
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 [in lbf]	500 [100]	1k [200]	3k [600]	4k [800]	5k [1k]
Threading	M4	M5	M8	M10	M12
A	18 [0.71]	20 [0.79]	25 [0.98]	29 [1.14]	33 [1.3]
B	4 [0.16]	5 [0.2]	8 [0.31]	10 [0.39]	12 [0.47]
C	14 [0.55]	16 [0.63]	22 [0.87]	26 [1.02]	30 [1.18]
D	30 [1.18]	33 [1.3]	42 [1.65]	48 [1.89]	54 [2.13]
E	37 [1.46]	41 [1.61]	53 [2.09]	61 [2.4]	69 [2.72]
F	5.25 [0.207]	6 [0.24]	9 [0.35]	10.5 [0.41]	12 [0.47]
G	6.46 [0.25]	7.71 [0.3]	10.4 [0.41]	12.92 [0.51]	15.43 [0.61]
H	7 [0.28]	8 [0.31]	12 [0.47]	14 [0.55]	16 [0.63]
Stiffness in N/m	3.4x10 ⁸	5.5x10 ⁸	1.2x10 ⁹	1.4x10 ⁹	1.9x10 ⁹
Stiffness in lbf/ft	2.3x10 ⁷	3.8x10 ⁷	8.2x10 ⁷	9.6x10 ⁷	1.3x10 ⁸

XFU400

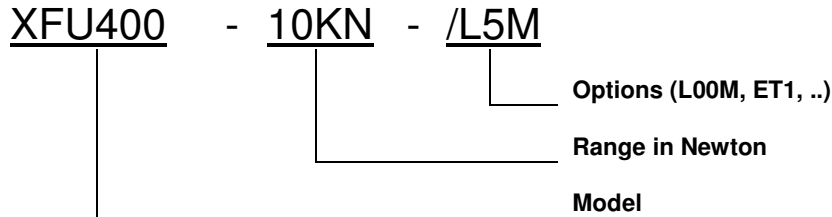
Miniature Load Cell

OPTIONS

ET1 : CTR -20 to 100° C [-4 to 212° F]

L00M : special cable length, replace "00" with total length in meters

ORDERING INFO



NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Vibration Design Center
32 Journey - Suite 150
Aliso Viejo, CA 92656
United States USA
Tel: 1-949-716-0877
Fax: 1-949-916-5677
t&m@meas-spec.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
26 Rue des Dames
78340 Les Clayes-Sous-Bois, France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
cs.lcsb@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Phone: +86-755-33305088
Fax: +86-755-33305099
pfg.cs.asia@meas-spec.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.