

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 klbf]
- ◆ 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 klbf].

With a long standing 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 (FS)	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 [1/100 ° F]
Thermal Sensitivity Shift in CTR	<2% of reading / 50° C [1/100° F]
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

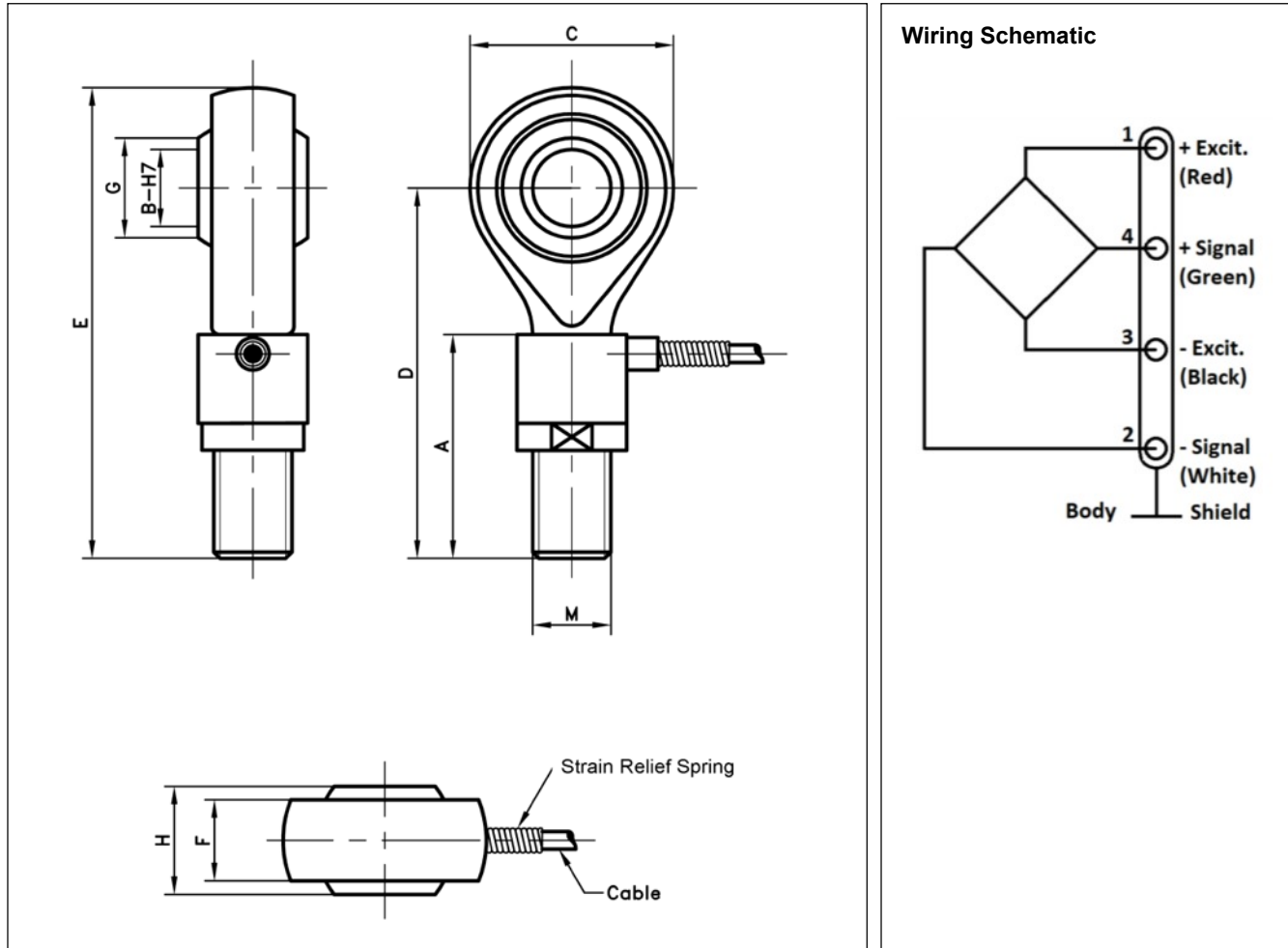
Electrical Characteristics

Model	XFU400
Supply Voltage	1 to 10 Vdc regulated
Sensitivity "FSO" ¹²	±10 mV/V
Zero Offset	<±10 mV
Input Impedance/Consumption	1000 to 3000Ω
Output Impedance	500 to 1000Ω
Insulation under 50Vdc	≥100MΩ

Notes

1. Sensors are calibrated with 10Vdc power supply as standard.
2. Signal goes positive in tension with standard wiring configuration.
3. Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
4. Material: Body in zinc coated and passivated steel
5. Protection Index: IP50 (other levels available 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]

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

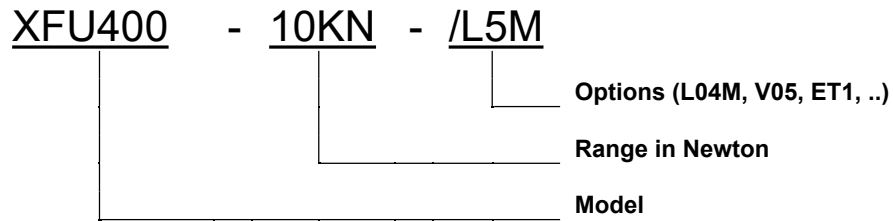
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Miniature Load Cell

OPTIONS

ET1 : CTR -20 to 100° C [-4 to 212° F]
V00 : Non-standard power supply calibration, replace "00" with value in Volt
L00M : special cable length, replace "00" with total length in meters

ORDERING INFO



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