

Features

- Static and dynamic applications
- Rod end available in option
- Integrated Amplifier optional
- IP65 optional

Applications

- Process control equipment
- Cable stress tests benches
- Shock absorbers tests benches
- Structure fatigue tests
- Laboratory and Research

FN3002

Load Cell Tension and Compression

SPECIFICATIONS

- Standard ranges 10kN to 2000kN or [2 klbf to 400 klbf]
- Harsh industrial environment
- Very high stability
- Stainless steel or aluminum
- IP protection available
- High level output with integrated amplifier

The **FN3002** is suitable for measuring cable tension and for use in test benches and in many industrial applications. The **FN3002** with its compact dimensions measures tension and compression in standard ranges from 10 kN to 2 000 kN [2 klbf to 400 klbf].

Numerous options are available for adaptation to severe environments, for example, **IP65** protection. A model with integrated amplifier for high-level output is also available.

With a long standing 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.

FN3002

Load Cell Tension and Compression

PERFORMANCE SPECIFICATIONS (typical values at temperature 23°C)

Ranges (FS) (N)	10k	20k	50k	100k	200k	500k	1000k	2000k
Ranges (lbf)	2.2k	4.5k	11.2k	22.5k	45.0k	112.40k	224.81k	449.6k
Material	Aluminium			Stainless steel				
Stiffness (N/m)	2.3E+08	3.4E+08	1.0E+09	1.5E+09	2.3E+09	3.7E+09	5.6E+09	8.9E+09
Stiffness (lbf/ft)	1.5E+07	2.3E+07	6.9E+07	1.0E+08	1.6E+08	2.5E+08	3.8E+08	6.1E+08
Standard electrical output	JAEGER 4B					JAEGER 7B		

Version	Standard	A1	A2
Power supply	10Vdc	10Vdc to 30Vdc	±12Vdc to ±18Vdc
Sensitivity (FSO)	±20mV	±2Vdc ±0.2V	±5Vdc ±0.25V
Offset	<±1 mV	2.5Vcc ±0.2V	0V ±0.25V
Input Impedance / Consumption	350 to 700 ohms	<30mA	
Output Impedance	350 to 700 ohms	1 kohms max	
Ovrange Without Damage	1.5x FS		
Ovrange Without Destruction	3x FS		
Combined Non-Linearity & Hysteresis	< ±0.25% FS		
Operating Temperature Range (OTR)	-20°C à +80°C (-4 to 176°F)		
Compensated Temperature Range (CTR)	0°C à +60°C (32 to 140°F)		
Thermal Zero Shift in CTR	< 0.5% FS/50°C		
Thermal Sensitivity Shift in CTR	< 1%/50°C		
Insulation	> 1000 Mohms		
Protection Index	IP50		

Notes

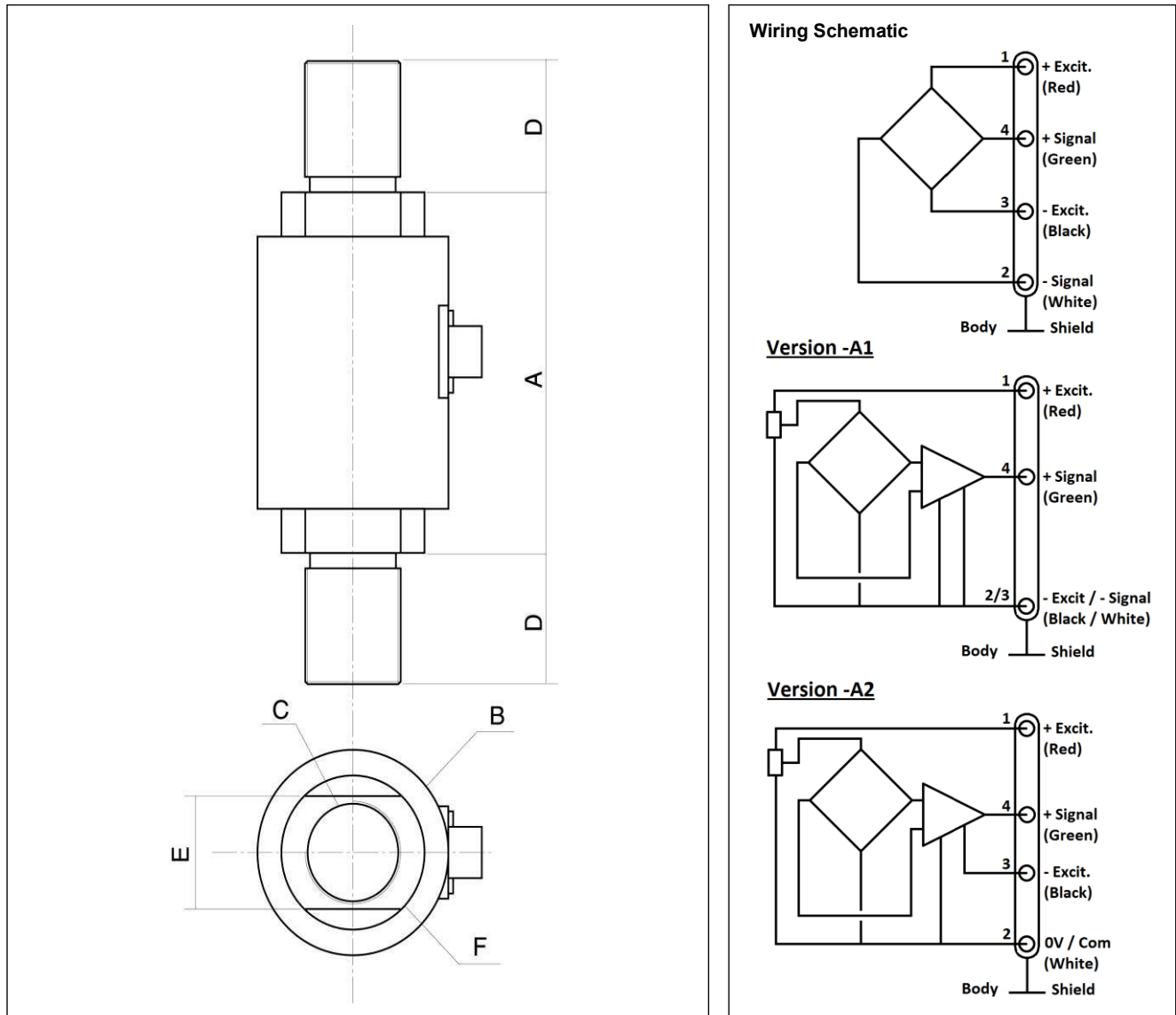
1. Signal goes positive in tension with standard wiring configuration. Other signal output on request
2. Electrical Termination: Connector output including mate
3. Materials: Body in stainless steel or aluminium alloy depending on F.S. ; aluminum cover
4. Output impedance < 100Ω on request
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1



FN3002

Load Cell Tension and Compression

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

Ranges in N	10k	20k	50k	100k	200k	500k	1000k	2000k
A	70 [2.76]	75 [2.95]	80 [3.15]	85 [3.35]	105 [4.13]	140 [5.51]	160 [6.30]	
B	40 [1.57]	50 [1.97]	55 [2.17]	65 [2.56]	85 [3.35]	115 [4.53]	150 [5.91]	
C (Thread)	M20x1.5	M22x1.5	M35x1.5	M45x1.5	M64x4	M80x2	M110x2	
D	25 [0.98]	25 [0.98]	32 [1.26]	40 [1.57]	70 [2.76]	100 [3.94]	115 [4.53]	
E	22 [0.87]	30 [1.18]	36 [1.42]	48 [1.89]	66 [2.60]	85 [3.35]	120 [4.72]	
F	30 [1.18]	40 [1.57]	45 [1.77]	55 [2.17]	75 [2.95]	95 [3.74]	130 [5.12]	

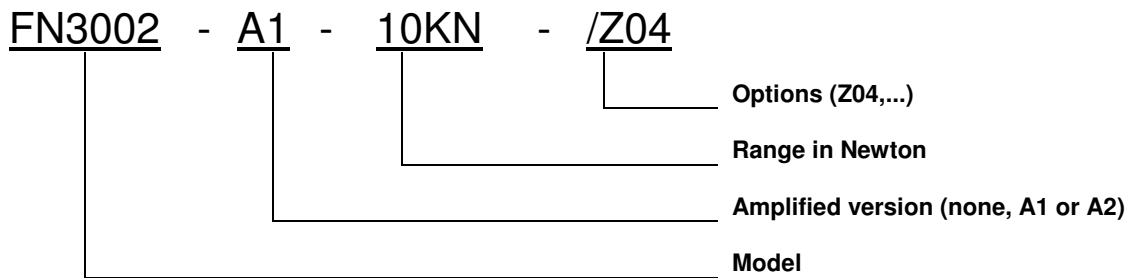
FN3002

Load Cell Tension and Compression

OPTIONS

Z04	CTR -40°C to +90°C (OTR -40°C to +90°C)
Z35	CTR +20°C to +120°C (OTR -20°C to +120°C)
Z36	CTR +20 to +150°C (OTR -20°C to +150°C) - Not available on A1 / A2 versions
P5	Cable Gland Termination with IP65 Protection index - 2 m cable [6.5 ft]
P5/LXXM	Custom cable length with P5 option, replace "XX" with total length in multiple of 5 meters (L5M ; L10M ; ...)

ORDERING INFO



SUPPLIED ACCESSOIRES

EFMX-4M : mating plug Jaeger 530-801-006 with clamp 530-841-006 for standard or Z04 (ranges 10kN to 200kN)
EFMX-4H : mating plug Jaeger 530-804-006 with clamp 530-844-006 for Z35 or Z36 option (ranges 10kN to 200kN)
EFMX-7M : mating plug Jaeger 530-272-006 with clamp 530-371-006 for standard and Z04 (ranges 500kN to 2MN)
EFMX-7H : mating plug Jaeger 530-604-006 with clamp 530-693-006 for Z35 or Z36 option (ranges 500kN to 2MN)

RECOMMENDED ACCESSORIES

OPTERxxx : Rod Ends (Contact us)

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