

FEATURES

- High accuracy
- Integrated Amplifier optional
- Cable or connector output

APPLICATIONS

- Process control equipment
- Medical Instruments
- Weighing
- Laboratory and Research
- Calibration test benches

FN3148

Load Cell with mechanical stops

SPECIFICATIONS

- Ranges from 10 N to 2 000 N [2.25 lbf to 450 lbf]
- S-Beam sensor in tension and compression
- Combined linearity & hysteresis < 0.05% F.S.

The **FN3148** high precision load cell is protected against accidental overloads in tension and compression.

High-level outputs are available with amplifier A1 or A2 integration.

For lower ranges, another sensor, model **FN3280**, can measure 0-1 N to 0-5 N [0.2 lbf to 1 lbf].

To meet your needs we also offer extensive turnkey systems. The matched components (sensor, power, amplifier and digital display) are formatted, calibrated and ready for immediate use.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

CHARACTERISTICS (typical values at temperature 23°C)

Ranges (FS) (N)	10	50	100	200	500	1k	2k
Ranges (lbf)	2.248	11.24	22.48	44.96	112.4	224.8	449.6
Overrange Without Damage (Tension)	1kN			2kN	5kN	10kN	
Overrange Without Damage (Compression)	20kN						
Material (Body)	Aluminium						
Stiffness (N/m)	1.1E+05	3.4E+05	6.4E+05	1.4E+06	3.2E+06	5.8E+06	1.1E+07
Stiffness (lbf/ft)	7.7E+03	2.3E+04	4.4E+04	9.5E+04	2.2E+05	4.0E+05	7.5E+05

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	2.5Vdc ±0.2V	0Vdc ±0.25V
Input Impedance / Consumption	390 ohms	<30mA	
Output Impedance	350 ohms	1 kohms max	
Linearity & hysteresis	< ±0.05% FS		
Operating Temperature Range (OTR)	-20°C to +80°C (-4 to 176°F)		
Compensated Temperature Range (CTR)	0°C to +60°C (32 to 140°F)		
Thermal Zero Shift in CTR	< 0.5% FS/50°C		
Thermal Sensitivity Shift in CTR	< 0.5%/50°C		
Insulation	> 1000 Mohms		
Protection Index	IP50		

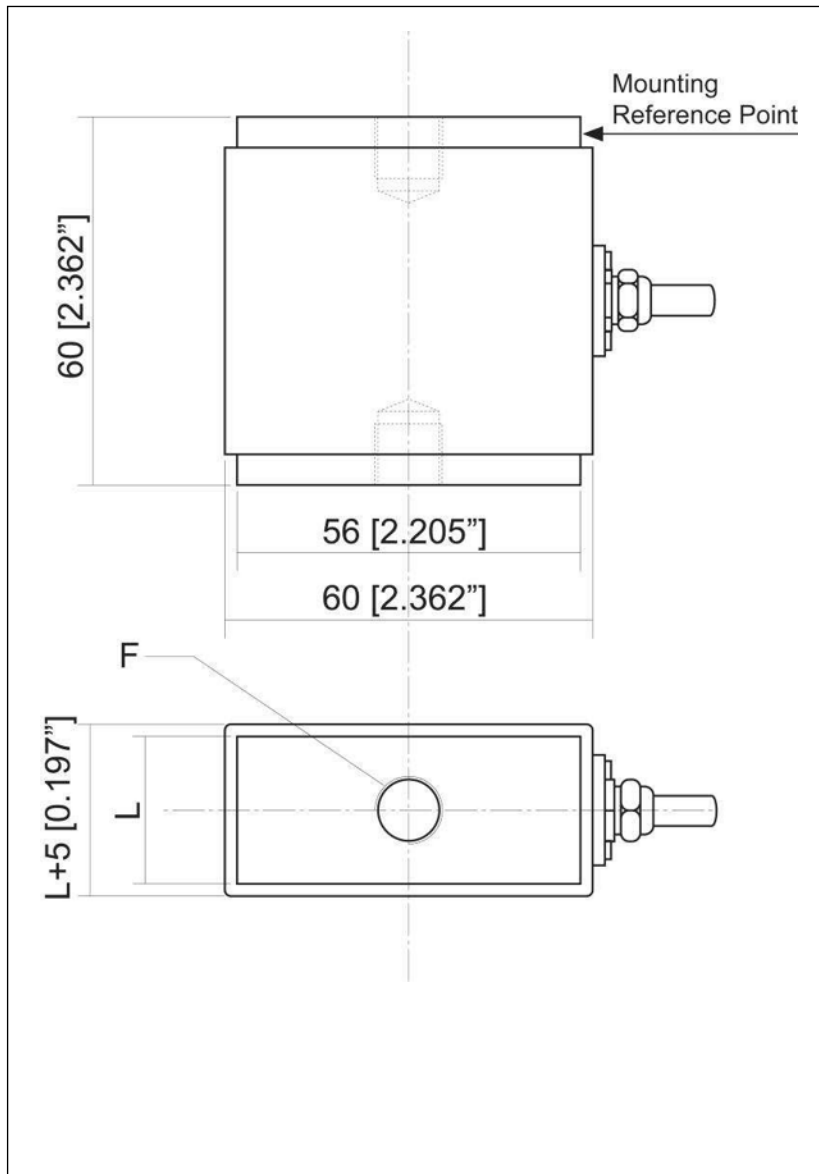
Notes

1. Signal goes positive in tension with standard wiring configuration. Other signal output on request
2. Electrical Termination: Cable gland termination, 2m cable length standard
3. Materials: Body in aluminium alloy and cover in stainless steel
4. Output impedance < 100Ω on request
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

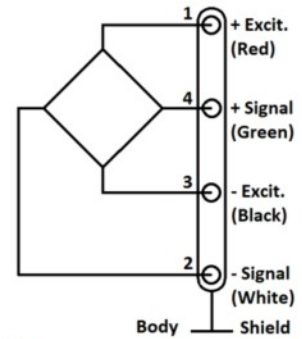
FN3148

Load Cell with mechanical stops

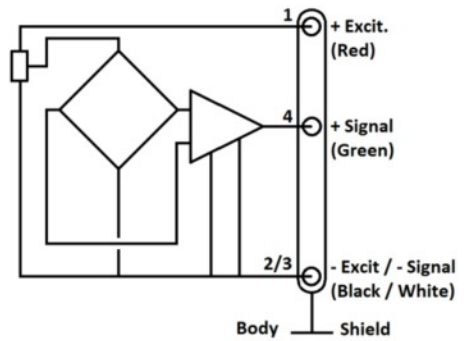
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



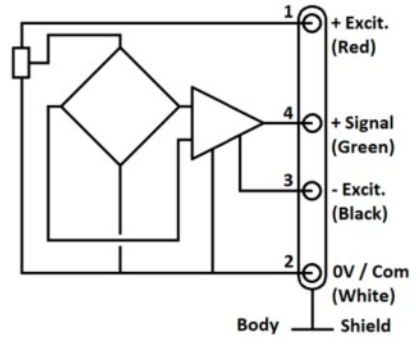
Wiring Schematic



Version -A1



Version -A2



Dimensions in mm [inch]

Range in N	10	50	100	200	500	1K	2K
F (Thread)	M6			M10			
L	20 [0.79"]	25 [0.98"]					

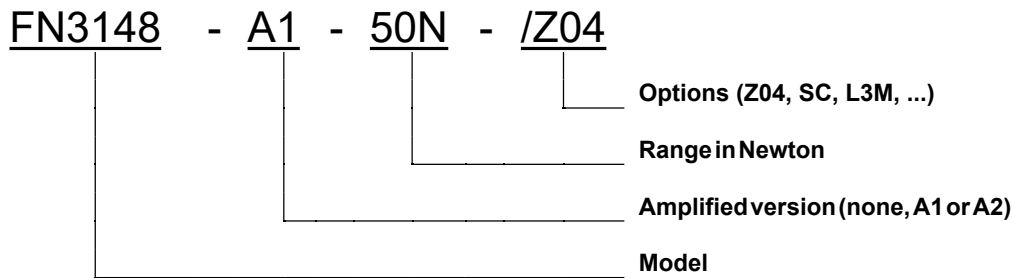
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OPTIONS

Z04	CTR -40°C to +90°C (-40°F to 194°F) (OTR = CTR)
Z35	CTR +20°C to +120°C (68°F to 248°F) (OTR = CTR)
SC	Electrical output by JAEGER connector (Plug + cable clamp supplied)
L00M	Special cable length, replace "00" with total length in meter

ORDERING INFO



SUPPLIED ACCESSOIRES (ONLY WITH SC OPTION)

EFMX-4M: mating plug Jaeger 530-801-006 with clamp 530-841-006 for option /SC; /Z04/SC

EFMX-4H: mating plug Jaeger 530-804-006 with clamp 530-844-006 for option /SC; /Z35/SC

RECOMMENDED ACCESSORIES

OPTERxxx: Rod Ends

OPTEHxxx: Hemispherical Load Button

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