

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)

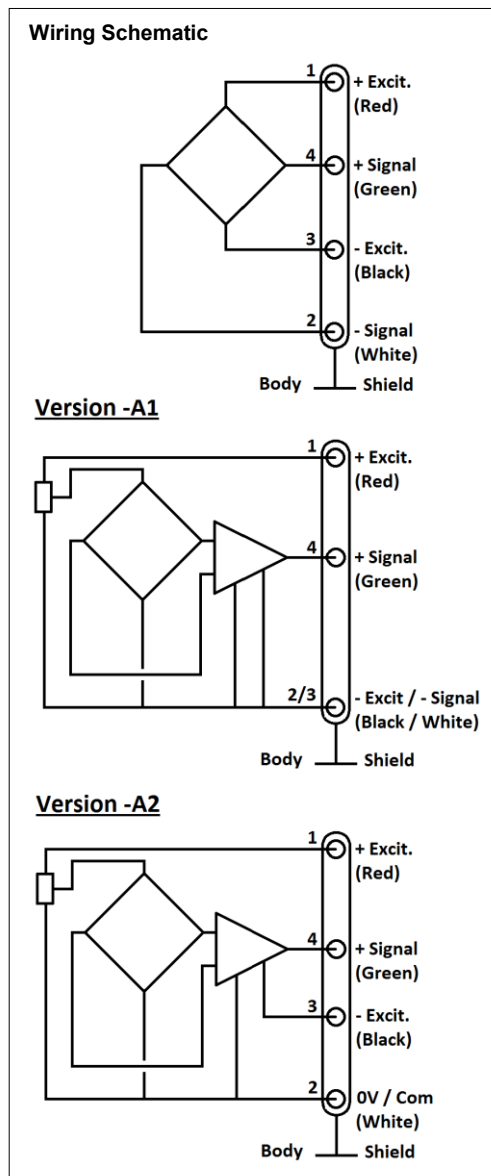
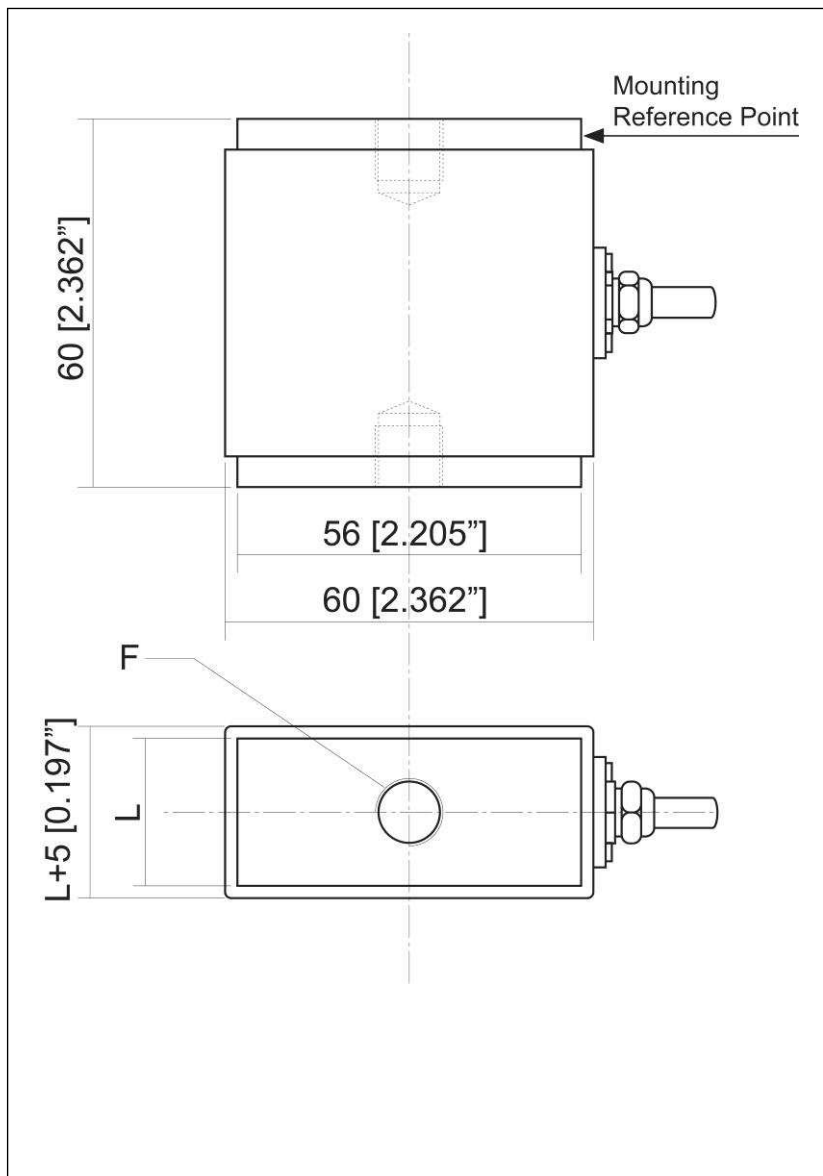
| | | | | | | | |
|---|-----------|---------|---------|---------|---------|---------|---------|
| Ranges (FS) (N) | 10 | 50 | 100 | 200 | 500 | 1k | 2k |
| Ranges (lbf) | 2.248 | 11.24 | 22.48 | 44.96 | 112.4 | 224.8 | 449.6 |
| Overrange Without Damage (Tension) | 1kN | | | 2kN | 5kN | 10kN | |
| Overrange 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

DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



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"] | | | | | |

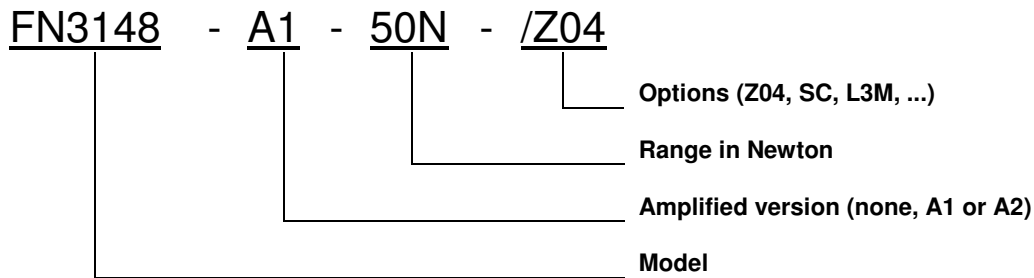
FN3148

Load Cell with mechanical stops

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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