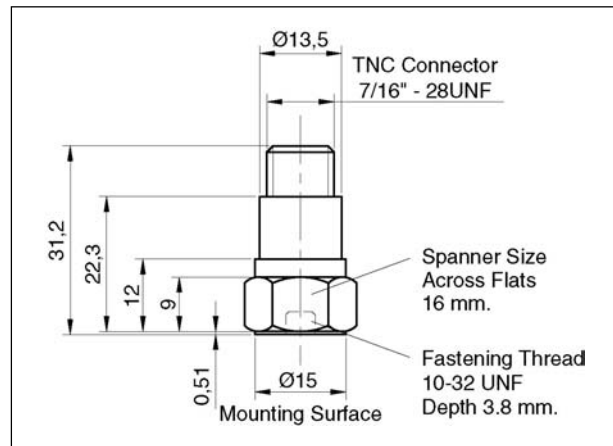


Accelerometer type 4391 data sheet

1. Application

Charge type accelerometers.



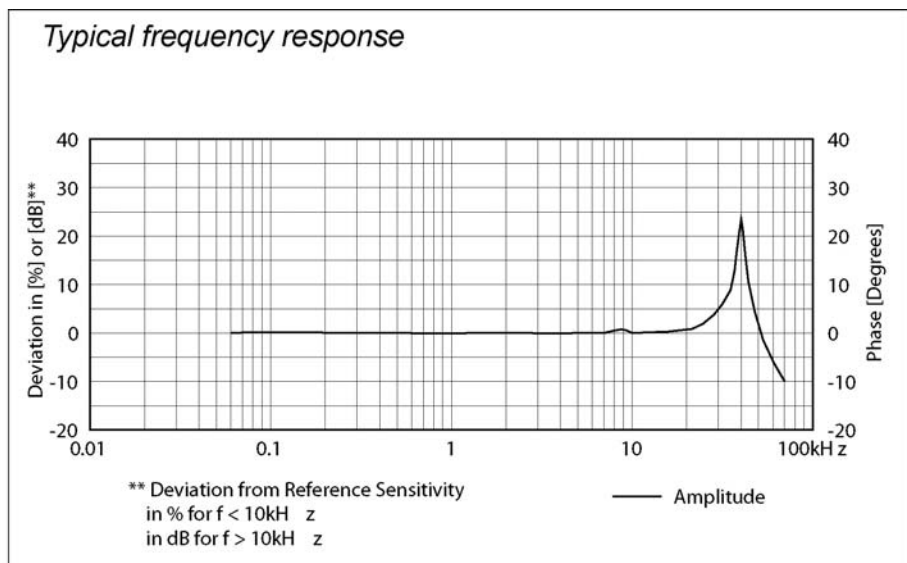
2. Usage

4391 is for off-line monitoring or for use in permanent vibration monitoring. The base is isolated to prevent ground loops.

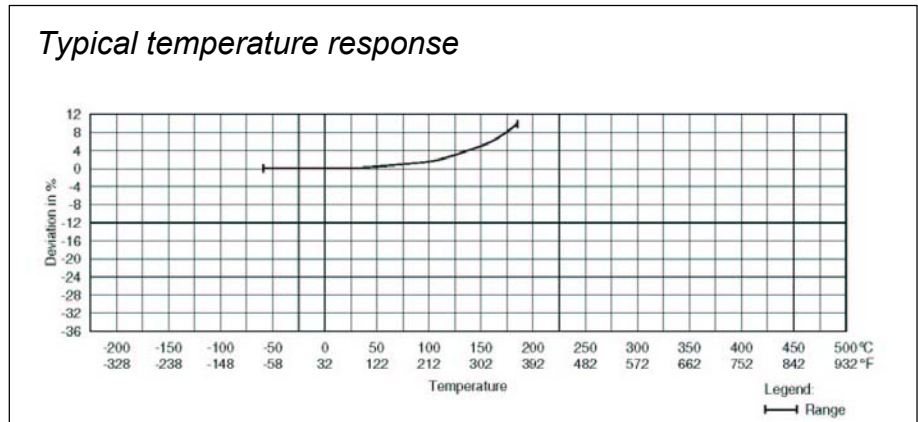
3. Technical Data

Dynamic:

Sensitivity (Axial): 1.0 pC/ms⁻², ±2% – Uni-Gain®
 Measuring range (peak): ±20,000 ms⁻²
 Resonant frequency, typical: 40 kHz
 Frequency response: ±10%: 0.1Hz to 12 kHz/0.2 Hz to 7.8 kHz



Temperature response, typical:.....±10% from -60°C to +180°C



Transverse response:

Resonance frequency, typical: 12 kHz

Maximum sensitivity:..... <4%

Amplitude linearity: 1% increase per 5,000 ms⁻²

Electrical:

Resistance, typical

Between signal pins (+25°C):..... >1 GΩ

Between signal pins (max. temp.):..... >100 MΩ

Each signal pin to case (+25°C):..... >1 GΩ

Each signal pin to case (max. temp.):..... >10 MΩ

Capacitance, typical

Between signal pins excl cable: 1200 pF

Either signal lead to case: <30 pF

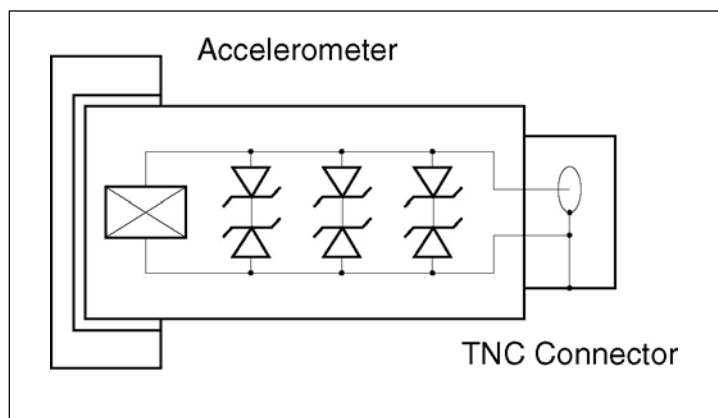
Base strain sensitivity, typical

In base plane at 250µε: 0.005 ms⁻²/µε

Temperature transient sensitivity, typical

with high pass filter:..... 0.2 ms⁻²/°C (3Hz)

Isolation (500 VDC at -50°C to 125°C): >100 MΩ



Electrical layout

Environmental:

Maximum acceleration limits (peak)
 Shock limit: 20,000 ms⁻²
 Sinusoidal vibration limit: 20,000 ms⁻²
 Accelerometer's temperature range: -60°C to +180°C

Electromagnetic sensitivity, typical
 50Hz, 38 mT: 40 ms⁻²/-0.03T

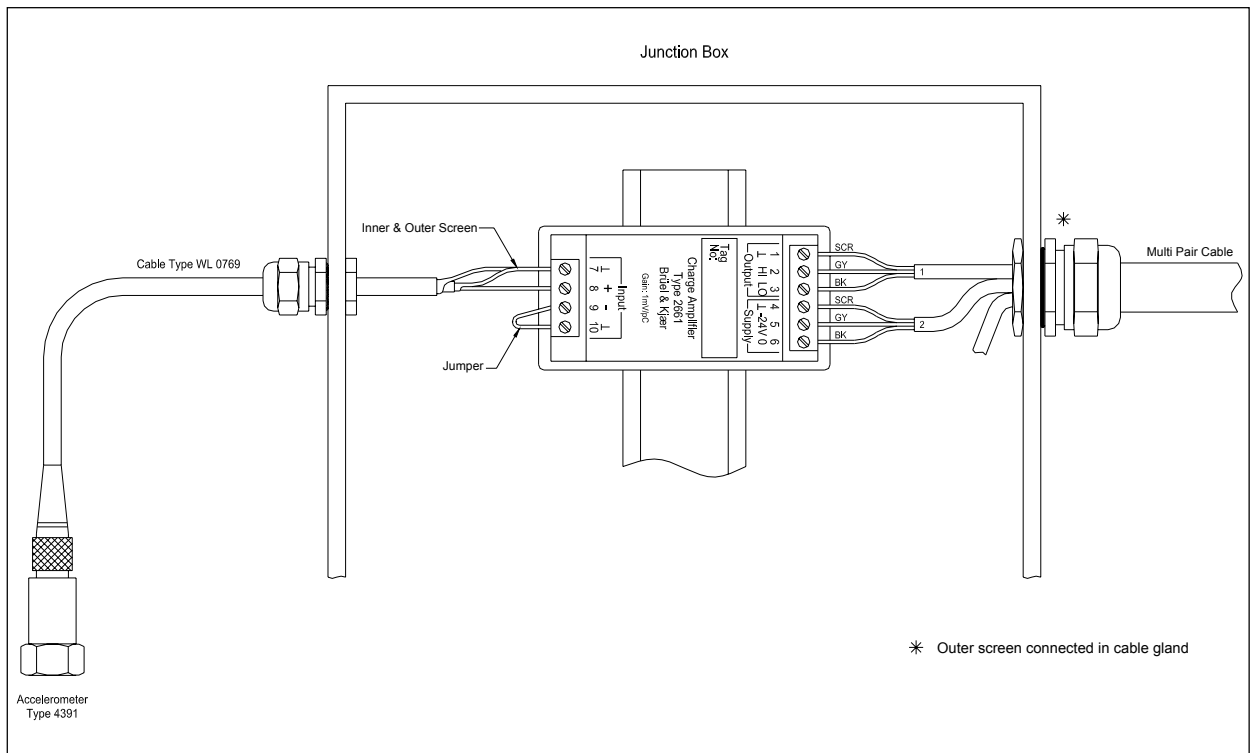
Radiation hardening
 Integrated gamma dose: Up to 100 x 10⁶ rad
 Integrated neutron flux: Up to 3 x 10¹⁸ Neutron/cm²
 Enclosure protection with cable integrated: ... IP 60 – sealed against humidity

Physical:

Weight (cable not included): 16 g
 Case material: Titanium ASTM Gr.2
 Polarity: Positive on left pin or grey signal wire
 Acceleration directed from base into body
 Design configuration: Shear
 Mounting: 10-32 UNF tapped centre hole
 Torque: 1.6 Nm

4. Connection

Instructions for connecting Cable WL0769 and Charge Amplifier type 2661:



Further information can be found in the Accelerometer Catalogue, BPD0040.

Brüel & Kjær Vibro A/S reserves the right to change specifications without notice