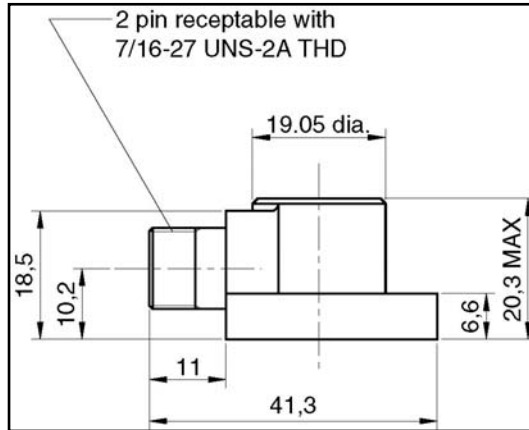


Accelerometer type 8315 data sheet

1. Application



Charge type accelerometer.

2. Usage

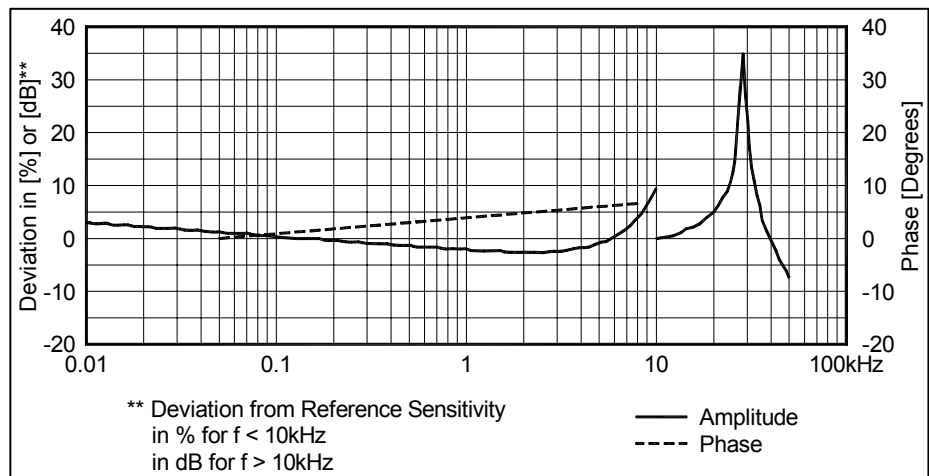
The 8315 Accelerometer is designed for permanent vibration monitoring installations in a wide variety of applications. It is intended as a general-purpose monitoring transducer. It may be used in areas where there is radiation.

The accelerometer utilises a "shear" construction that significantly reduces transient temperature and base strain outputs, while maintaining a high resonance when mounted and a high operating temperature.

3. Technical Data

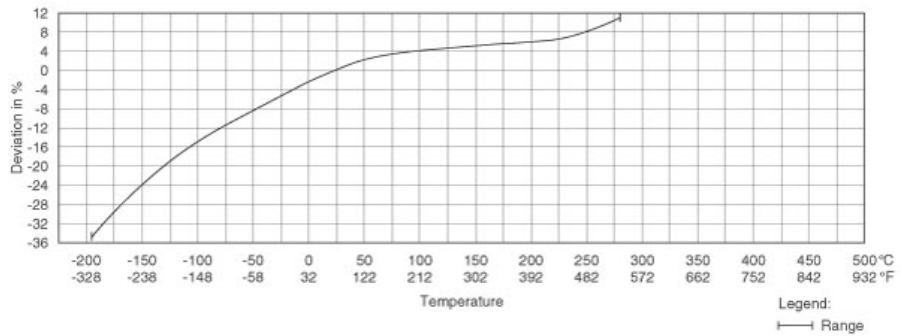
Dynamic:

Sensitivity (Axial): 10 pC/ms⁻², ±5%
 Measuring range (peak): ±20,000 ms⁻²
 Resonant frequency, typical: 28 kHz
 Frequency response: ±10%: 1 Hz to 10 kHz



Transverse response:
 Resonance frequency, typical: 9.4 kHz

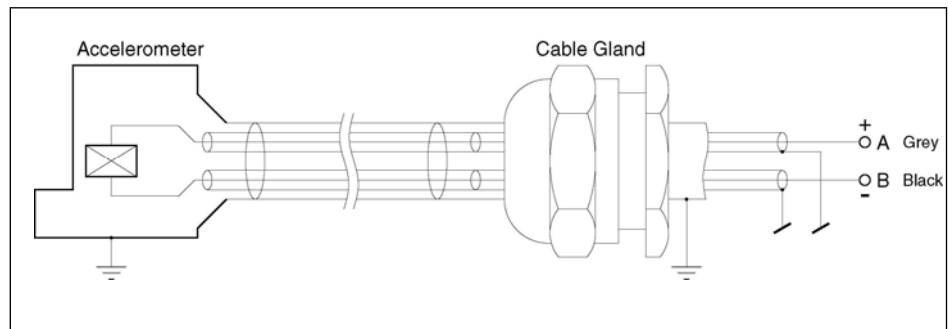
Maximum sensitivity:..... <4%
 Amplitude linearity:..... >1% increase per 2,000 ms⁻²
 Temperature response, typical:..... ±10% from -53°C to +125°C



Typical temperature response

Electrical:

Resistance, typical
 Between signal pins (+25°C): >10 GΩ
 Between signal pins (max temp.):..... >50 MΩ
 Each signal pin to case (+25°C): >10 GΩ
 Each signal pin to case (max temp.): >50 MΩ
 Capacitance, typical
 Between signal pins, excl cable: 12,2 nF
 Either signal lead to case: <30 pF
 Unbalance between pins:..... <2 pF
 Base strain sensitivity, typical in base plain at 250µε: 0.008 ms⁻²/µε
 Temperature transient sensitivity, typical:
 with 3 Hz high pass filter: 0.05 ms⁻²/°C
 Isolation (500 VDC at -50°C to 125°C): >100 MΩ
 Grounding: Signal wires isolated from case



Electrical layout

Environmental:

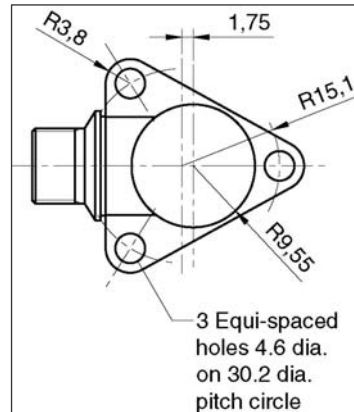
Maximum acceleration limits (peak)
 Shock limit: 10,000 ms⁻²
 Sinusoidal vibration limit: 5,000 ms⁻²
 Temperature range :..... -53°C to +260°C
 Electromagnetic sensitivity, 50 Hz, 38 mT: typical: 25 ms⁻²/T
 Enclosure protection with cable integrated: IP 67
 Accelerometer hermetically sealed.

Physical:

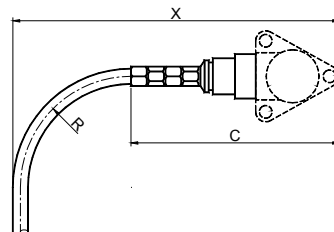
Weight (cable not included):.....62 g

Case material: Stainless steel, 316L
 Polarity:.....Positive on left pin or gray signal wire
 Acceleration directed from base into body
 Piezoelectric element construction:.....Shear, Piezite P-8®
 Footprint: ARINC
 Mounting:.....3 x M4
 Torque: 2.9 Nm

ARINC Footprint:



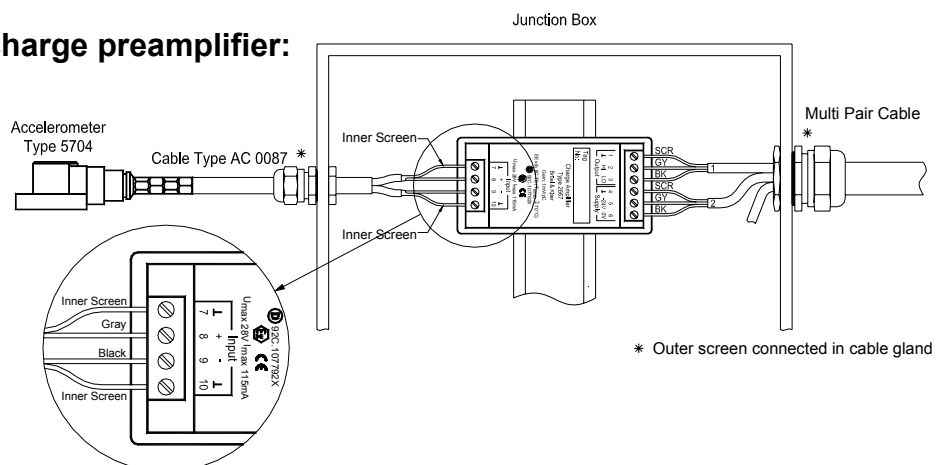
Mounting space:



Minimum bending radius (R): 39 mm
 Accelerometer height w. integrated cable(C): 70 mm
 The mounting space can be calculated as $X_{min} = C + R$

The figure shows the dimension for the Type 8315 with connected cable.

Connection to charge preamplifier:



* Outer screen connected in cable gland

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