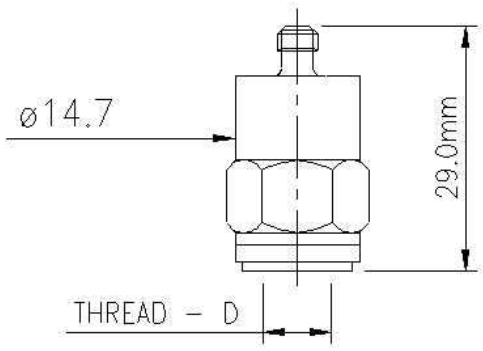
TECHNICAL INFORMATION

PREDICTIVE MAINTENANCE SYSTEMS

SENSONICS LTD

PZP1 ACCELEROMETER



- GENERAL PURPOSE
- 20pC/g OUTPUT
- 40pC/g OPTION
- 200°C OPERATION
- STAINLESS STEEL HERMETICALLY SEALED CASE
- RADIATION RESISTANT OPTION

The PZP1 transducer is of conventional piezo-electrical principal and has a high signal output and high temperature capability. It is intended for use as a vibration detector in conjunction with an external impedance matching or charge amplifier.

The piezo-electric sensor is contained within a robust, sealed, stainless steel case having a solid base with single hole fixing. The top of the accelerometer is fitted with a stainless steel Microdot connector for the single output. The sensitive axis of the transducer is coincident with the longitudinal axis of the cylindrical body form.

The robust construction of the accelerometer makes it particularly useful as a general purpose or light industrial transducer for use in applications requiring a high signal output and/or a high temperature operating ability.

The Radiation resistant option has been developed for use in nuclear environments and avoids the use of materials that are unsuitable for high radiation environments. There are also 40pC/g output and side exit connector variants available.

PZP1 ACCELEROMETER

SPECIFICATION

Charge Sensitivity (Q)	20pC/g 40pC/g also available
Voltage Sensitivity	40mV/g @ 20pC/g
Transducer capacitance (Ct)	500pF
Cable capacitance (Cc)	30pF/ft (typ.)

NB. Voltage Sensitivity = $\frac{Q}{Ct + Cc}$

Resonant frequency (Rf)	58KHz
Cross axis Sensitivity	Less than 4%
Amplitude linearity (at constant temperature)	+/- 1% or better
Acceleration Range	Up to 600g
Insulation Resistance (at 20°C)	50,000 Mohms
Operating temperature	-40°C to +200°C
Survival temperature	-40°C to +300°C
Temperature coefficient of charge sensitivity	0.08% per °C @ 200°C
Temperature coefficient of voltage sensitivity	0.07% per °C @ 200°C
Dimensions, Height (side exit connector)	19mm
Height (Top exit connector)	29mm
Width (across flats of hexagon)	15mm
Weight	26.6 gms (nominal)
Mounting	Single tapped hole ¼"UNF, 10-32UNF or M5

Environmental

Protection (BS.EN60529)	Sealed to IP.66/IP.67

ORDERING INFORMATION

PZP1 - [A: 1] [B:] [C:] [D:] [E:]

A Electrical Configuration

[1] - 2 wire, non-isolated direct charge o/p

B Connection Method

[8] [G] [1] Top exit, Microdot co-axial connector, 10-32UNF

[8] [G] [2] Side exit, Microdot co-axial connector, 10-32UNF

C Output & Frequency band (3dB point)

[1] 20pC/g ±10% @ 80Hz

[2] 40pC/g ±10% @ 80Hz

[3] 40pC/g ±5% @ 80Hz

D Mounting Thread (Female)

[1] - ¼ UNF

[2] - M5

[3] - 10-32UNF

E Hazardous Area Approval

[0] - Std, non-radiation resistant

[1] - Radiation resistant

DS1101

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