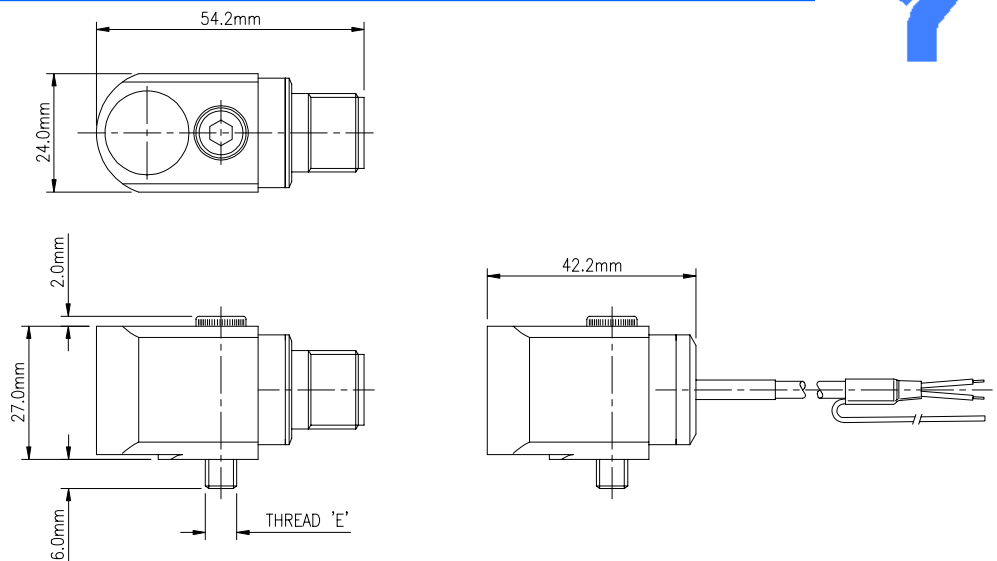


## PZS4 SERIES ACCELEROMETER



- SINGLE POINT MOUNT, SIDE ENTRY, EASY INSTALLATION
- LOW COST HEAVY DUTY PROTECTION
- EXTREMELY LOW PROFILE
- DUAL CASE, LOW NOISE
- STAINLESS STEEL HERMETICALLY SEALED OUTER CASE
- FREQUENCY RANGE 0.4Hz TO 11KHz
- INTERNALLY SHIELDED
- ELECTRICAL AND THERMAL ISOLATION
- SHEAR MODE OPERATION

The PZS4 accelerometer is intended to satisfy the general specification requirements for a low cost vibration transducer for use especially in multi-point harsh environment industrial vibration monitoring applications.

The two-wire current-loop operating principal permits very long interconnecting cables to be used where necessary and at minimum expense since standard screened pair (or multi-pair) cables may be used.

The piezo-electric shear mode sensor and amplifier are contained within an inner metal enclosure, which is electrically and thermally insulated from the outer stainless steel body. The arrangement prevents earth loops and eliminates electrical interference, and minimises thermal shocks and base strain. The inner enclosure is connected to the 0V of the two wire system and is therefore an effective electrical screen. External connections are made via a side exit integral cable or electrical connectors.

# PZS4 ACCELEROMETER

## SPECIFICATION

|                                 |   |
|---------------------------------|---|
| Operating Voltage/current.....  | 18 to 28 volts D. C. constant current source of 2 to 10mA   |
| Output signal.....              | 100mV/g   |
| Bias Voltage.....               | 12Vdc +/- 20%   |
| Dynamic Range.....              | Up to 70g peak (at 24Vdc input)   |
| Frequency Range .....           | 0.4Hz to 11KHz (better than 3dB) (standard)   |
| Transverse sensitivity .....    | Less than 5%  |
| Amplitude linearity .....       | +/- 1% or better  |
| Temperature sensitivity .....   | Less than 8% up to 140°C  |
| Residual electrical noise ..... | Less than 0.2mg (2.5Hz to 11KHz)  |
| Signal transmission .....       | Two-wire system, 500Vac electrical isolation from body<br>Connector variants, contact Sensonics for details |
| Weight .....                    | 150 gms (nominal)   |

### **Environmental**

|                               |                |  |
|-------------------------------|----------------|--|
| Acceleration limit:           | Vibration..... | 200g pk at 120Hz for 10 mins   |
|                               | Shock .....    | 500g half sine without connector   |
| Temperature:                  | Operation..... | -30°C to +140°C  |
|                               | Survival ..... | -55°C to +160°C  |
|                               |                | NB. Certain types of connector or cables may limit the temperature performance of the transducer, see IS. Sheet for details. |
| Protection (BS.EN60529) ..... |                | Sealed to IP.66 / IP.67  |

## ORDERING INFORMATION

PZS4 - 

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> | <b>E</b> | <b>F</b> |
| 2        |          |          |          |          |          |

### A Electrical Configuration

|   |
|---|
| 2 |
|---|

 - 2 wire ICP device

### C Cable length (Specify in whole metres)

|   |   |
|---|---|
| 0 | 2 |
|---|---|

 e.g. = 2 metres (max 25 metres)

|   |   |
|---|---|
| 0 | 0 |
|---|---|

 - for no cable length, i.e. connector versions of instrument

### B Connection Method

|   |   |
|---|---|
| 6 | A |
|---|---|

 Integral Cable (80°C) Unarmoured

|   |   |
|---|---|
| 6 | B |
|---|---|

 Integral Cable (80°C) Armoured

|   |   |
|---|---|
| 6 | C |
|---|---|

 Integral Cable (140°C) Unarmoured

|   |   |
|---|---|
| 6 | D |
|---|---|

 Integral Cable (140°C) Armoured

|   |   |
|---|---|
| 8 | E |
|---|---|

 Integral Connector, 2 pin, circular, threaded

|   |   |
|---|---|
| 8 | F |
|---|---|

 Integral connector, BNC (80°C)

|   |   |
|---|---|
| 7 | A |
|---|---|

 Integral Cable/Waterproof Gland (80°C)  
Unarmoured (IP68 Option)

### D Output & Frequency band (3dB point)

|   |
|---|
| 1 |
|---|

 100mV/g ± 10% (0.4Hz - 11KHz)

|   |
|---|
| 2 |
|---|

 100mV/g ± 5% (0.4Hz - 11KHz)

### E Captive Mounting Bolt

|   |
|---|
| 1 |
|---|

 - ¼ UNF

|   |
|---|
| 2 |
|---|

 - M6

|   |
|---|
| 3 |
|---|

 - M8

### F Hazardous Area Approval

|   |
|---|
| 0 |
|---|

 - Non Intrinsic

DS.1135 issue4