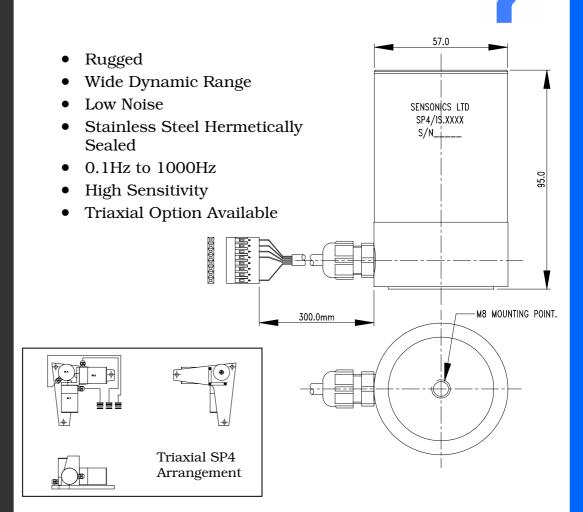
TECHNICAL INFORMATION

PREDICTIVE MAINTENANCE SYSTEMS

SP4 SEISMIC ACCELEROMETER



The SP-4 is a robust, portable, sealed instrument suitable for operation in any attitude without modification. Its inertial system is designed for minimum noise and cross-axis sensitivity. A unique system of matched piezo electric elements arranged in a 'reciprocal' configuration generates high output sensitivity combined with an input calibration facility.

Internal filters provide optimum shaping of the response. Output proportional to ground acceleration or ground velocity is available with high sensitivity of up to 50V/g. The casing is made of hermetically sealed stainless steel which makes the instrument suitable for field operation or, with an optional underwater connector, for immersion in water.

The SP4 is also available in a tri-axial configuration, consisting of three SP4s mounted in a 3-D boomerang arrangement. The tri-axial unit is also available mounted within an enclosure, providing calibration signal generation as well as alarm and switching functionality. See datasheet DS1149 for further details.

The instrument can also be used in strong motion application with variable maximum g levels.

SP4 SEISMIC ACCELEROMETER

SPECIFICATION

Frequency Response : Acceleration 0.1Hz to 1000Hz (3dB) : Velocity 1.0Hz to 1000Hz (3dB) : Acceleration 2 - 50V/g Sensitivity : Velocity up to 2000V/m/s Dynamic Range :>120dB Accuracy : ±1% at 25°C : ±2% over operating temperature range Noise Floor : 2ug rms (0.1Hz to 1000Hz) @ 2V/g Linearity : 0.1% Maximum Output : ± 10V pk-pk Cross-axis Sensitivity : Less than 1% Output Impedance : Less than 10Ω Signal Transmission : Two Wire Current Loop Power Supply : ±12V to ±15V : 6mA typ at ±15V Calibration Sensitivity : 30V/g : Maximum Drive 3Vrms : ±2% accuracy at 25°C **Shock Limits** : 20g peak any direction **Humidity** rating : Hermetically sealed unit **Operating Temperature** : -30°C to +70°C SP4 Mass : 0.6Kg Tri-axial Arrangement Mass : 5.0Kg Standard Connection Details : 8-way MINILATCH : 7/0.2mm screened, PVC Insulated Standard Cable Type : 300mm Length Yellow : CAL 15V Blue : Negative Supply : Positive Supply Red : Signal Hi Green Black : 0V White : Not Used : M8 x 14.0mm Female Mounting Arrangement **ORDERING INFORMATION** SP4 -A Connection Method **D** Sensitivity Integral Economy Arm'ed Cable/Waterproof Gland 2V/g Integral Economy Unarm'ed Cable/Waterproof Gland 0 4 4V/g **B** Cable length (Specify in whole metres) 0 20V/g 2 50V/g E Output Format 0 2 e.g. = 2m Total length, from TxD to free end

DS1199

0

Max 30m.

C Cable Connector



8-Way Minilatch (For connection with Seismic Switch

Acceleration Velocity

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