

SV 150 Hand-arm Vibration Accelerometer

SV 150 is a low cost tri-axial accelerometer based on MEMS transducer technology. It is designed to be used with the SV 106 human vibration analyser to provide a dedicated instrument for making measurements according to the requirements of ISO 8041:2005. The accelerometer can easily be attached to the handle of the vibrating tool being measured.

Calibration of the measurement setup (including the SV 150) can be done either using the accelerometer sensitivity written into the transducer's TEDS memory or by using a vibration calibrator, such as the SV 111, and a SA 40 adapter (option).

The accelerometer is supplied with three different diameter fixing clamps to conveniently match the grip of the vibrating tool being measured. This solution is an excellent, more robust and lower cost alternative to a traditional piezo-electric accelerometer.



Technical Specification

Performance:

Number of axis.....	3
Sensitivity ($\pm 5\%$)	0.662 mV/(m/s ²) at 79.58 Hz
Measurement range	2000 ms ⁻² PEAK
Frequency response (by design guideline, ± 3 dB).....	1 Hz \div 1200 Hz
Resonant frequency	16.5 kHz (MEMS transducer)
Electrical noise	< 0,14 ms ⁻² RMS, Wh weighting
Cross axis sensitivity.....	5%

Electrical:

Supply current.....	< 5,0 mA
Supply voltage.....	3.3 V \div 5.5V
Bias voltage.....	1,5 V \pm 0.1 V
Output impedance.....	51 Ohms
Charge / discharge time constant (start-up time).....	30 sec. typ.
TEDS memory.....	installed (power supply pin)

Environmental Conditions:

Maximum vibration.....	10000 m/s ² shock survival for MEMS sensor
Temperature coefficient.....	< \pm 0.01 %/ C
Temperature.....	from -10 C to +50 C
Humidity.....	up to 90 % RH, non-condensed

Physical:

Sensing element	MEMS
Cable integrated	1.4 meters long
Connector.....	LEMO 5-pin plug (SV 106 compatible)
Dimensions	15.5mm x 15.5 mm x 15.5mm
Weight.....	20 grams (without cable)

Accessories:

SA 40 (option).....	Calibration adapter
SA 53.....	Mounting base

Continuous product development and innovation are the policy of our company. Therefore, we reserve the right to change the specifications without prior notice.



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INSTRUMENTATION FOR SOUND & VIBRATION
MEASUREMENTS