SV 38
Whole-Body Vibration Accelerometer

The SV 38 is a MEMS based triaxial accelerometer designed for whole-body seat vibration measurements with the SVAN 958A four-channel analyser.
The seat-pad meets ISO 8041:2005 and ISO 2631-1 requirements so it can be used for seat and seat-back vibration measurements.
For the periodic verification, the accelerometer can be easily removed from the seat pad and installed on a shaker with a dedicated SA 38 adapter (optional).

Technical Specifications

Performance:

Number of Axes	3
Sensitivity (± 5 %)	100 mV/(ms^{-2}) at 15.915 Hz
Measurement Range	0.01 ms^{-2} RMS ÷ 50 ms^{-2} PEAK
Frequency Response (by design guideline, ± 3 dB)	0.1 Hz ÷ 100 Hz
Resonant Frequency	5 kHz (MEMS transducer)
Electrical Noise	< 316 µV RMS, HP1 weighting

Electrical:

Supply Current (IEPE)	1 mA ÷ 10 mA (2.5 mA typ.) per channel
Supply Voltage (IEPE)	22 V ÷ 30 V (28 V typ.)
Bias Voltage (IEPE)	15.3 V ± 0.5 V
Output Impedance	51 Ohms
Charge / Discharge Time Constant (start-up time)	30 sec. typ.
TEDS Memory	Installed (Channel 1)

Environmental Conditions:

Maximum Vibration	100 000 ms^{-2} shock survival for MEMS sensor
Temperature Coefficient	<+0.012 dB/°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 4-pin plug (SVAN 958A compatible)
Dimensions	236 mm diameter; thickness from 3.6 mm to 12 mm
Weight	550 grams (including cable and rubber cushion)

Accessories:

SA 38 (optional)	Calibration adapter
SC 39S (optional)	Cable LEMO 4-pin socket to three BNC plugs, 0.7 meter

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