

# SV 105A

## Hand-Arm Vibration Accelerometer

The SV105A accelerometer is dedicated for hand-arm vibration measurements with the SV 106 human vibration analyser. The accelerometer have a built-in memory (TEDS) containing information about the sensitivity that is automatically transferred to the SV 106 instrument. The SV 105A should be worn directly on the operator's hand. The accelerometer has a high shock resistance, no DC-shift effect and consume much less energy than IEPE / ICP sensors.



### Technical Specifications

#### Performance:

|  |   |
|--|---|
| Number of Axes                                       | 3   |
| Sensitivity ( $\pm 5\%$ )                            | 0.661 mV/ms <sup>-2</sup> at 79.58 Hz     |
| Measurement Range                                    | 2000 ms <sup>-2</sup> PEAK                |
| Frequency Response (by design guideline, $\pm 3$ dB) | 0 Hz $\div$ 1500 Hz                       |
| Resonant Frequency                                   | 16.5 kHz (MEMS transducer)                |
| Electrical Noise                                     | < 0,14 ms <sup>-2</sup> RMS, Wh weighting |

#### Electrical:

|  |                              |
|--|------------------------------|
| Supply Current                                   | < 5.0 mA                     |
| Supply Voltage                                   | 3.3 V $\div$ 5.5 V           |
| Bias Voltage                                     | 1.5 V $\pm$ 0.05 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       | 100 000 ms <sup>-2</sup> shock survival for MEMS sensor |
| Temperature Coefficient | < +/-0.02 %/°C  |
| Temperature             | from -10 °C to +50 °C                                   |
| Humidity                | up to 90 % RH, non-condensed                            |

#### Physical:

|                 |   |
|-----------------|---|
| Sensing Element | MEMS  |
| Cable           | integrated 1.4 meters   |
| Connector       | LEMO 5-pin plug (SV 106 compatible)                                     |
| Dimensions      | 69.6 mm x 31.4 mm, thickness from 8.3 mm to 15 mm                       |
| Weight          | 50-60 grams (including cable and one of the vibration contact adapters) |

#### Accessories:

|                    |                     |
|--------------------|---------------------|
| SA 105A (optional) | calibration adapter |
|--------------------|---------------------|

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.