

1. INTRODUCTION

The SVAN 94A6 is all digital, Type 1 vibration meter and analyser. It is intended to general vibration measurements, machinery condition monitoring, occupational health and safety monitoring. It can be used by consultants, maintenance services, in industry R&D departments etc.

Three vibration profiles can be measured in parallel with independently defined filters and RMS detectors time constant (concurrent acceleration, velocity and displacement measurement is possible).

Machine rotation speed could be optionally measured in parallel to the vibration measurements.

Time history for all profiles is recorded in the large memory buffer.

The SVAN 946A, using computational power of its built-in digital signal processor, can optionally perform real time FFT analysis with 1600 frequency lines, 1/1 or 1/3 octave (in parallel to the acceleration, velocity and displacement measurements). Human Vibration measurements according to the ISO 2631-1 standard are also possible with this instrument (optional with dedicated accelerometers).

The balancing of the rotating mass is another option for the SVAN 946A instrument.

Fast USB 1.1 interface (with 12 MHz clock) creates real time link for the application of the SVAN 946A as a PC "front-end".

Measurement results can be stored in large (8 MB, 16 MB or 32 MB), non-volatile memory and easy downloaded to any PC using USB 1.1 or RS 232 interface and SvanPC software.

The SVAN 946A can be used in hard environmental conditions over the whole work day thanks to built-in rechargeable battery and robust, lightweight construction.

The main features of the SVAN 946A instrument are as follows:

- vibration measurements according to ISO 2631-1 with Type 1 accuracy (ISO 8041) in the frequency range 1 Hz ÷ 20 kHz with the sampling rate equal to 51.2 kHz
- parallel **PEAK**, **P-P**, **RMS** (incl. **MTVV**) and **RMQ** (incl. **VDV** in the case when Human Vibration option is available) measurements
- **W-Bxy**, **W-Bz**, **W-Bc**, **KB**, **H-A**, **W_k**, **W_c**, **W_d**, **W_j** (ISO 8041 and ISO 2631-1) weighting filters in Human Vibration option
- **HP1**, **HP3** and **HP10** filters for acceleration measurements; **Vel1**, **Vel3**, **Vel10** and **VelMF** filters for velocity measurements; **Dil1**, **Dil3** and **Dil10** filters for displacement measurements
- 1/1 octave and 1/3 octave real time analysis (optional) - 15 filters with centre frequencies 1 Hz ÷ 16 kHz, Type 1 - IEC 1260 and 45 filters with centre frequencies 0.8 Hz ÷ 20 kHz, Type 1 - IEC 1260
- FFT calculation (1600 lines in real time up to 20.0 kHz with Hanning window and linear averaging) spectra parallel to the vibration meter operations (optional)

General features of the SVAN 946A

- internal buffer for logging more then two weeks of 1 sec **RMS / MAX / PEAK / P-P** results (8 MB, 16 MB or 32 MB of non-volatile memory)
- USB 1.1 and RS 232 interfaces
- built-in rechargeable battery (operational time > 8 h)
- handheld, robust case
- light weight (only ca 500 grams)

Accessories included

- SC 16 - USB 1.1 cable,
- SC 17 - RS232 cable,
- SA 16 - power supply unit.
- SC61 - TNC to BNC integrated connector
- DYTRAN 3185D transducer with the nominal sensitivity equal to 10 mV / ms⁻²

- SC27 - TNC to TNC coil cable (2m)

Accessories available

- SA 17 - external battery pack
- Other IEPE transducers from DYTRAN
- SA 18 - leather carrying case for instrument and its accessories
- SA 45 - waterproof carrying case for instrument and its accessories
- SA 47 - carrying case for instrument and its accessories made from fabric material



The view of the SVAN 946A instrument with a transducer