

SVAN 912AE

Handheld Sound & Vibration Analyser

The SVAN 912AE is all digital, Type 1 sound & vibration meter and analyser. It is intended to acoustic measurements, environmental noise monitoring, occupational health and safety monitoring, human vibration measurements and machine health monitoring. It can be used by acoustic consultants and safety engineers, in Public Services, in acoustic laboratories, in industry R&D departments etc.

Now, using power of the new digital signal processors the SVAN 912AE can perform real time, narrow band (FFT) up to 90 kHz and 1/1 octave or 1/3 octave analysis (including statistical analysis) up to 45 kHz. The SVAN 912AE has built-in all necessary weighting filters. Measurements results are displayed as RMS and Peak values, statistical diagram and level versus time or spectrum. Measurement results can now be stored in 64 MB Flash Disk and easy downloaded to any PC with the RS 232 interface and SVAN_PC software. New USB 1.1 interface brings the totally new possibilities of the very fast link to the PC environment. It creates unique combination of the extremely powerful autonomic instrument and real time PC system. Additional interface with AES / EBU protocol ensures data exchange with other digital audio signal processing systems. Using this interface and SV 06A or SV 08A modules, the SVAN 912AE can be also expanded up to four-channel measurement system.

FUNCTIONS

Sound Level Meter & Vibration Meter

- noise measurements (SPL, Leq, SEL, statistics)
- infra and ultrasound measurements (from 1 Hz to 90 kHz)
- acceleration, velocity and displacement measurements
- human vibration measurements (meets ISO 2631-1)

- four channel sound and vibration measurements (option with SV 06A or SV 08A)
- digital ZOOM (resolution down to 0.016 Hz)
- time domain signal recording and analysis (buffer for 400 K samples)
- four channel frequency analysis (option with SV 06A or SV 08A)

Real Time Analyser

- real time 1/1 octave and 1/3 octave analysis up to 45 kHz
- 1/3 octave analysis concurrent to the Leq
- narrow band frequency analysis up to 90 kHz

FEATURES

- Type 1 instrument conforming to: IEC 651, IEC 804, IEC 61672 and ISO 8041
- multi-function instrument
- easy operation
- built-in Flash disk 64 MB
- built-in rechargeable battery (operational time > 8 h)
- USB 1.1 interface
- RS 232 interface
- AES / EBU interface
- large LCD with backlight
- handheld, robust case
- light weight



**INSTRUMENTATION FOR SOUND & VIBRATION
MEASUREMENTS**

TECHNICAL SPECIFICATIONS

| | |
|---------------------------------------|---|
| Sound Level Meter | Type 1: IEC 651, IEC 804 and IEC 61672-1 L_{eq} , L_{max} , L_{min} , L_{Peak} , (A, C, Lin and G filters in parallel), Spl, SEL, Statistics, Time History |
| Vibration Meter | (Type 1: ISO 8041:2001) RMS, RMS_{max} , RMS_{min} , Peak, Crest Factor for: acceleration, velocity and displacement, MTVV, VDV (RMQ detector) |
| Voltage Meter Analyser | RMS, RMS_{max} , RMS_{min} , Peak, Crest Factor Real time 1/1 & 1/3 octave analysis with statistics and multi-spectrum recording up to 128 spectra/sec Real time, narrow band analysis (120, 240, 480, 960 and 1920 FFT lines) Digital ZOOM, resolution down to 0.016 Hz. Time Windows: rectangular, Hanning, Kaiser-Bessel, Flat Top; Averaging: linear, fast linear, exponential, hold max Display cursor: single, double, harmonic; Transient analysis |
| Input | (7 pin LEMO compatible) with the choice of: Microphone preamplifier Piezoelectric vibration transducer (charge amplifier) IEPE accelerometer Direct (voltage) |
| Measurement Range | Sound: 22 dB_A - 140 dB_A (with 50 mV/Pa microphone) Acceleration: 1 mm/s^2 - 1000 m/s^2 (with 10 pC/ms^2 or 10 mV/ms^2 accelerometer) Voltage: 5 μV_{RMS} - 10 V_{RMS} |
| Dynamic Range | > 80 dB, A/D conversion: 16 bits, Sampling rate: 48 kHz, 96 kHz or 192 kHz |
| Frequency Range | (-3 dB) 0,1 Hz - 45,2 kHz |
| Weighting Filters | A, C, G, Lin, HP, W-Bxy, W-Bz, W-Bc, H-A, W_k , W_c , W_d , W_j (Type 1: IEC 651, IEC 8041) |
| 1/1 Octave Filters | 16 filters with centre frequencies from 1 Hz to 32 000 Hz Type 1 - IEC 1260 |
| 1/3 Octave Filters | 47 filters with centre frequencies from 1 Hz to 40 000 Hz Type 1 - IEC 1260 |
| RMS Detector | Digital True RMS with Peak detection; Resolution 0.1 dB; Integration time programmable up to 16 h, Time constants: Exponential: Slow, Fast, Impulse or Linear from 0.01 s to 1 s |
| Trigger capabilities | Free run, internal, external |
| Microphone polarisation | 0 V or 200 V |
| Display | LCD 128x128 pixels with backlighting |
| Memory | Flash disk 64 MB can store up to (per 1 MB): 400 000 time samples or 120 000 1/1 octave spectra or 40 000 1/3 octave spectra or 4 000 FFT spectra of 480 lines each |
| Signal Source | Built-in Signal Source (random "white" and "pink" noise, bandpass noise, sine, sine sweep etc.) 1 V / 600 Ohm (optional) |
| Analogue Output Interfaces | AC 1 V_{RMS} USB 1.1, RS 232, AES/EBU External interrupt input |
| Power Supply | Built-in rechargeable battery 6 V / 3 Ah External power supply 8 - 27 V_{DC} / 800 mA Internal battery operating time > 8 h |
| Environmental Conditions | Temperature -10°C to 50°C Humidity up to 90 % RH, non condensed |
| Dimensions & Weight | 250 x 112 x 68 mm Approx. 1.8 kg (4 lb.) with battery |



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