

Intrinsically Safe Data Loggers for Condition Monitoring

Machine condition monitoring can be done in hazardous areas, common in petrochemical industries, mines, medical and agricultural processing lines.

SPM supplies intrinsically safe versions of Analyzer A30 and Tester T30, Ex certificated by Nemko. All features of the original instruments are included, and all necessary accessories are approved for use in explosive environment.

Analyzer A30Ex and **Tester T30Ex** are front line tools for comprehensive condition monitoring of rotating machinery. Together, shock pulse and vibration readings can detect the most common mechanical faults in time for maintenance and planned replacements. The instruments instantly evaluate shock pulse and vibration measurements and indicate machine condition on a green, yellow and red scale.

A30Ex and T30Ex are available in three versions. With "Basic", measuring results are recorded manually. "Logger" is a data logger and works together with SPM software Condmaster®Pro. "Expert" has all the logger features. In addition, it uses the EVAM® method for evaluated vibration analysis. A "Basic" version can be easily upgraded to "Logger" and "Expert".

Measuring techniques and other features	A30Ex / T30Ex		
	Basic	Logger	Expert
Shock pulse, HR/LR (A30Ex), dBm/dBc (T30Ex)	●	●	●
Vibration severity, ISO 10816	●	●	●
Temperature measurement	●	●	●
Speed measurement, contact and optical	●	●	●
Continuous reading	●	●	●
Data logging with Condmaster®Pro		●	●
Free value recording		●	●
Comment recording		●	●
Check point record		●	●
Continuous recording		●	●
Vibration spectrum			●
Evaluated vibration analysis			●

Instrument specifications

Certificate of conformity: NEMKO 03 ATEX 185
 Ex certification: I M2/II 2G EEx ib I/II B T4/T3
 CE Number: **CE** 0470
 Enclosure: IP43
 Temperature range: 0 to +50 °C (32 to 120 °F)
 Power supply: 6 x 1.5 V LR6 alkaline cells, approved
 Size: 255 x105 x 60 mm (10 x 4.2 x 2.4 in)
 Weight: 0.85 kg (1.9 lb)
 Casing / protective cover: polyurethane, conductive
 Keypad: sealed membrane
 Display: LCD, 4x16 characters LED, backlight adjustable, automatic on/off
 Memory: typical 500, max. 999 meas. points



Shock pulse (SPM®)

Measuring range: -19 to 99 dBsv (A30Ex)
 -9 to 99 dBsv (T30Ex)
 Resolution: 1 dBsv
 Accuracy: ± 1 dBsv

Vibration severity (ISO 10816)

Measuring range: 0.5 to 49.9 mm/s RMS
 (0.02 to 2.0 in/s RMS)
 Resolution: 0.1 mm/s (0.01 in/s)
 Accuracy: ± (0.2 mm/s + 2% of reading)
 Frequency range: 3 to 1000 Hz

Vibration analysis (EVAM®)

Window: Hanning
 Number of samples: 1024 / 2048
 FFT result: 400 / 800 spectrum lines
 Frequency range: 3 to 5000 Hz
 Lines displayed: 15 highest, toggle Hz / cpm
 Lines saved: 1 to 200 highest

Speed measurement

Measuring range: 10 to 19 999 rpm optical
 Measuring distance: max. 0.6 m (2 ft.)
 Resolution: 1 rpm
 Accuracy: ± (1 rev. + 0.1% of reading)

Temperature measurement

Measuring range: 0 to +300 °C (+32 to +572 °F)
 Resolution: 1 °C (1 °F)

Long time recording

Measuring parameters: SPM, VIB, temperature/speed
 Measuring interval: adjustable 0 - 60 minutes



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