

PA 3000

Triple channel ICP® signal conditioner



DESCRIPTION

PA 3000 is a triple channel, portable conditioner for ICP® signal with built-in battery pack. Each channel has an independent control of gain level and frequency response. Settings can be adjusted by buttons on the front panel. The module has built in sensor circuit diagnostics and detects short and open circuits in the measurement chain. The device status is indicated by LEDs on the front panel, which show as follows:

- device On/Off
- Charging
- Open/Short circuit in the measurement chain
- Overload
- Gain level (x1, x10, x100)
- High pass and low pass filters status

PA 3000 features innovative ICP® input conditioning circuit, which has a very short response time of the impulse excitations (e.g. force signal from sensor built in a modal hammer used for modal analysis) and high output signal stability in time (lack of voltage signal fluctuation at zero excitation, which is typical for standard ICP® signal conditioners). Configurable gain level (0dB, 20dB, 40dB) allows the module to be used with sensors having various sensitivity, as well as perform measurements in a wide range of excitation range.

The low pass and high pass filters (typically 10Hz and 1kHz) allow machine vibration measurements according to diagnostic norms. The high grade aluminum housing and the keypad made from durable foil make the device very suitable for work in harsh industrial environment. The battery power supply allow the measurements without access to the electrical socket.

SET INCLUDES

- PA 3000 conditioner
- AC/DC power supply
- 3 BNC-BNC cables
- user manual
- casing

PARAMETERS

Number of channels (in/out)	3/3
Input type	ICP® 2.4 mA/ 24 V
Signaling	On/Off, Charging, Open/Short Overload, Gain, LP& HP Filters
Input impedance	100 k Ω
Out impedance	100 Ω
Gain	x 1 (0 dB) x 10 (20 dB) x 100 (40 dB)
Gain error	< 0.5%
Gain drift	< 50 ppm/°C
SNR	> 90 dB (10 Hz do 22 kHz)
Frequency response	0.5 Hz do 100 kHz (optionally - 0.5 Hz do 300 kHz)
Distortions	< 0.1 %
Output voltage range	20 V _{pp}
Offset error	< 10mV at the output (DC -short)
Low pass filter	1 000 Hz (other on request)
High pass filter	10 Hz (other on request)
Battery	NiMH with built-in charger, work time on batteries approx. 8 hours
Power supply	DC, 12V/400mA
Dimensions	146 x 110 x 45 mm
Weight	850 g
Operational temperature	0-50°C
Storage temperature	-10°C ... +60°C (excluding batteries)