Portable 3-channel IEPE signal conditioner

PA-3000

Illuminated POWER diode indicates proper operation of the instrument, and, if the batteries are being charged, the diode CHARGE is shining.

IT IS IMPOSSIBLE TO OVERCHARGE THE BATTERIES  the battery charging is controlled by the built in charger.

**WARNING!** The POWER ON/OFF button is inactive during the operation with the external power supply.

The conditioner is turned off automatically once the external power supply is disconnected.

**Self-diagnostics**

The conditioner is capable of performing the self-diagnostics of the measurement channels. The self-diagnostic circuitry will indicate whether the measurement channel is short-circuited or open (for example, if the connection cable or the transducer are broken).

- Short-circuit in the sensor line is indicated by a flashing SHORT diode in the defective channel.
- Open sensor line is indicated by a flashing OPEN diode in the broken channel.

**Setting up the gain**

In PA-3000 it is possible to set up the gain of the conditioned signal. The gain is set up with the button GAIN, independently for each channel. The following settings are available:

- x1 (0dB)
- x10 (20dB)
- x100 (40dB)

The selected gain is indicated by the illumination of the corresponding diode.

**EXCEEDING THE ALLOWED LEVEL OVERLOAD**

The OVERLOAD diode indicates that for a given gain value the allowed level is exceeded.

One should set up such a gain value that the signal level does not exceed the measurement range.

**Filtering the signal**

The FILTER buttons include into the measurement channel the high-pass or low-pass filters. The corresponding diode is illuminated when a given filter is turned on.

The cut-off frequencies are the following:

- low-pass filter: 1 kHz
- high-pass filter: 10 Hz

Filters can be switched on independently for each channel.

**Specifications**

- Input/output channels: 3/3
- Input type: IEPE 4 mA/20V
- With improved settling characteristics
- Indicators for input: open and short and overload per channel
- Input impedance: 100 KOhm AC-coupled
- Input impedance: 100 Ohm
- Input gain: 1, 10, 100 (0 dB, 20 dB, 40 dB)
- SNR: > 90 dB (10 Hz – 22 KHz)
- Distortion: < 0,1%
- Gain error: < 0,5%
- Gain drift: < 50 ppm/°C
- Output range: 15 Vpp
- Offset error: < 10 mV on output (DC-coupled)
- Filters: 12 dB/dec, individually selectable on/off
- High pass filter: 10 Hz or custom
- Low pass filter: 1 KHz or custom
- Battery: NiMh with internal charging, duration approx.10 h
- Control interface: RS232 using 3,5 mm jack to sub-D housing
- Power supply: 12V / 200 mA DC
- Housing: extruded aluminium with dirt and moisture repellent membrane keypad
- Dimensions: 196mmx110mmx45mm(lwxh)
- Weight approx. 850 g
- Operating temperature: 0 °C – 50 °C
- Storage temp: -10 °C – 60 °C
- AC/DC adapter and RS232 cable are supplied with the unit

**Contact**

www.roga-instruments.com