SPECTRUM INSTRUMENTS LTD.

NID-2000
SENSOR SIMULATOR

for IEPE (ICP) accelerometers, tachometers, milliamp, millivolt signals and optical speed outputs

FEATURES

- **Simulates accelerometer signals**
- **Menu selectable RMS, pk or pk-pk**
- **Loop powered current source output**
- **Tachometer TTL and OSO outputs**
- **BOV accelerometer testing**
- **Menu-driven operation**
- **Multi-language menu**
- **Metric and Imperial units**
- **Battery operated**
- **PC connection (menu control)**

NID-2000

DESCRIPTION

Meet North Instruments' line of battery operated instruments that can be used to electronically simulate a variety of sensor outputs.

The **NID-2000 Series** instruments use a menu-driven 4 x 16 character LCD display to establish the appropriate settings. An easy to use five sealed button control panel are marked with simple arrows and "E" for enter. An on/off button is conveniently located on the faceplate of the instrument.

Power is supplied by four(4) internally mounted AA Ni-MH batteries which can be recharged with a regulated 9VDC power supply (included).

Output signals of the **NID-2000** include a single-ended voltage (mv) to simulate moving coil sensors, a pC single-ended and pC differential signal simulates charge amp sensors, current-limiting IEPE(ICP type accelerometers), tachometer (TTL), OSO (Optical Speed Output) and BOV measurement for determining the health of field mounted IEPE type accelerometers without removing the sensor from the machine. Adjustable frequency range can be varied from 1 Hz to 10k Hz; output voltage is RMS from 1mv to 10V or 1pC to 10,000pC. Outputs can be provided in acceleration, velocity, displacement, voltage or charge formats.

APPLICATIONS

The **NID-2000** is suitable for inspecting measurement loops according to ISO 10816 standards. The instrument is designed to support Condition Monitoring System (CMS) and/or Vibration Monitoring Systems (VMS) that connect to SCADA and Data Acquisition Systems.

NID-2000 SPECIFICATION

(all technical data can be changed without notice)

Outputs

Type	single-ended voltage (mv) IEPE (ICP) – current limiting Loop powered current source (ma) Single-ended charge (pC) Differential charge (pC) Tachometer (TTL) OSO – Optical Speed Output Accelerometer BOV Test Output
Frequency Range	1Hz to 10kHz
Amplitude	Adjust up to 10,000 mV RMS
Distortion	<1%, 2Hz to 1kHz, 10mv-10,000mv

Transfer Characteristics

Amplitude accuracy	+/-0.5% of setting on any range
Amplitude stability	0.03%/Deg F of max change 14 - 149 Deg F
Frequency accuracy	+/-0.02% of setting on any range
Frequency stability	+/-0.5% of max change 14 - 149 Deg F
Harmonic distortion	0.1% maximum, from 1.0Hz to 2kHz

Environmental Characteristics

Temperature	
Operating	14 – 149 Degree F
Storage	-0.4 – 149 Degree F
Humidity	95% RH maximum

Power

Battery	4 AA rechargeable Ni-MH (incl.)
Operating Time	> 5 hrs. when fully charged

Physical Characteristics

Dimensions	8.19 x 3.94 x 1.57"
Weight	1.126 lbs (including batteries)
Case	Molded plastic case
Connection	mv, IEPE, BOV and Tachs – BNC, Charge (single/differential) – Microdot, & USB 2.0
Front panel controls buttons	5 sealed (arrows, E & power)
Front panel display	4 line LCD panel, 64 character

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