Nortec 2000S+
Flaw Detector

FEATURES

- 50 Hz - 12 MHz frequency range
- Single Li-Ion battery
- Lightweight, less than 4lbs. (1.8 Kg)
- Digital conductivity in International Annealed Copper Standard (%IACS) or Mega Siemens per meter (MS/m)
- Non-conductive coating readings in inches or millimeters
- Multiple scanner support
- Internal balance loads for single coil probe support
- Customer interchangeable displays:
  - Hi-Brite Electroluminescent
  - Monochrome Liquid Crystal
  - Color Liquid Crystal
- Single Frequency
- VGA Output
- Display Freeze to hold flaw signals
- PowerLink™ Technology - automatic probe recognition and instrument set-up
- Split screen presentation with color coded soft keys
- On screen reference memory for go/no go applications
- On board storage of 120 programs
- Waterfall display
- Windows-based EddyMaster™ Software

EDDY CURRENT FLAW DETECTOR

The Nortec 2000S+ offers a frequency range of 50 Hz to 12 MHz for applications ranging from detection of cracks in tubes or structures to the discovery of minute flaws in aircraft materials. Single frequency operation, easy to use digital conductivity, and rotating scanner support make the flaw detector ideal for numerous aerospace NDT applications.

The Nortec 2000S+ is a rugged and lightweight instrument weighing less than 4 lbs. (1.8 kg) with a single Li-Ion battery. An adjustable tilt bail and anti-slip bumper allow it to be placed on just about any surface. In a production environment, in the hangar, in the laboratory or in the field, the rugged case design withstands the harshest environments.

Customer-interchangeable displays offer excellent visibility in any lighting condition. A VGA output drives a heads up display for inspection where conditions may

be cramped, a large desktop monitor, or projector for classroom training environments. When using the color LCD with a rotary scanner, the split screen display feature allows triggered and impedance plane display simultaneously, for easy inspection of ferrous and non-ferrous materials on a standard 10 x 10 grid pattern.

The Nortec 2000S+ incorporates our unique PowerLink™ software, which provides automatic probe recognition and documentation. The instrument can be set-up by recalling the program stored in the PowerLink™ chip, providing integrity and repeatability of inspection results.

As many as 120 programs can be stored and recalled later. Date and time are recorded with each set-up and are easily identified with alphanumeric values up to 29 characters long. 20 memory locations are available to store eddy current displays.

Envirocoustics
Non **D**estructive **T**esting

NORTEC™

NORTEC 2000S+ SPECIFICATIONS*

BASIC PERFORMANCE

Frequency Range: 50 Hz - 12 MHz

Gain: 0 - 90 dB in 0.1 dB steps. The horizontal and vertical gains may be adjusted separately or together.

Rotation: Variable 0º - 359º

Sweep: Variable from 0.005 - 4 seconds per division

Low Pass Filter: 10 - 500 Hz and wide band

High Pass Filter: Off, 2 to 500 Hz. 2 pole response

Probe Drive: 2, 6, 12 volts

Variable Persistence: Screen persistence can be varied from 0.1 - 5 seconds.

Probe Types: Absolute and differential in either bridge or reflection configuration. The instrument is fully compatible with NORTEC PowerLink™ probes.

Alarms: Can be set to trigger on positive or negative

Alarm Modes: 1-3 box gates, polar, sweep, conductivity, and coating thickness

Trace Storage: 20 traces can be stored for recall. The traces can be static or frozen. They can contain up to 60 seconds of movement. The traces are stored with the date and time of capture.

Program Storage: 120 instrument set-ups may be stored and recalled. The date and time of storage is recorded with each set-up

Print Out: Provides a custom configurable report header containing the display screen data and probe parameters including serial number (PowerLink™ probes only)

Printers: Any serial printer

INPUTS / OUTPUTS

Power: 7-pin connector to charge the internal battery and operate the instrument from AC power

RS-232: DB-9P connector, bi-directional serial data via RS-232

Probe Connector: 16-pin LEMO

Analog Outputs: Horizontal and vertical outputs of both F1 and F2. +/- 5 volts, 1 volt per division

Alarm Outputs: 9-pin analog and alarm output connector

VGA Output

GENERAL

Dimensions:
9.5" L x 5.5" H x 3.6" D
215 mm x 165 mm x 92 mm

Weight: 3.8 lbs. (1.7 kg) with battery

Display: Customer-interchangeable QVGA displays (320 x 240 pixels), color or monochrome LCD, Hi-Brite electroluminescent

Operating Temperature:
14º to 131º F (-10º to 55º C), depending on configuration

Storage Temperature:
-60º to 160º F (-51º to 71º C), depending on configuration

Humidity: 5 to 95%

Classification: Based on Class 2 specifications from the MIL-PRF-28800F handbook

Altitude: Maximum operating and non-operating altitude - 15,000 ft. (4600 m)

Hazardous Area Operation: Safe operation as defined by Class I, Division 2, Group D, as found in the National Fire Association Code (NFPA 70), Section 500, and tested using MIL-STD-810F, Method 511.4, Procedure 1

POWER

Power Requirements: 85 to 240 volts, 50-60 Hz. External holder charges batteries outside the instrument. Charging time is typically 4 hours.

Low Battery Protection: Display bar graph "gas gauge" indicates approximate operating time.

Battery Operating Time: 8 hours (nominal depending on configuration)

CONDUCTIVITY

Frequency: 60 kHz or 480 kHz

Probe Type: NORTEC conductivity probe

Digital Conductivity Specification: Digital conductivity display from 0.9% to 110% IACS or 0.5 to 64 MS/m. Accuracy within +/- 0.5% IACS from 0.9% to 65% IACS and within +/- 1.0% of values over 62%. Meets or exceeds BAC 5651 specifications.

Non-Conductive Coating Thickness: Can measure non-conductive coating thickness from 0" to 0.015" (0 to 0.38 mm). Accuracy of +/- 0.001" (0.025 mm) over 0.00 to 0.015" (0 to 0.38 mm) range

SCANNERS

Scanner Compatibility: Will operate all NORTEC and other commercially available scanners

Waterfall Display: Stores up to 60 sweeps per hole and includes an on screen readout of the distance to the defect from the start of the scan (PS-5 only)

CE

OLYMPUS

Envirocoustics
Non Destructive Testing

El. Venizelou 7 & Delfon, Metamorfosi
14452 Athens, Greece
tel: +30 210 2846 801-4, fax: +30 210 2846 805
sales@envirocoustics.gr, www.envirocoustics.gr