Innerspec

HIGH-PERFORMANCE NDT SOLUTIONS

BRIO

Advanced surface inspection system

Equipment Highlights

- Multi-channel, multi-frequency Eddy Current (EC) and Eddy Current Array (ECA) system with conductivity, thickness, and flaw detection capabilities.
- Compact, wearable Remote Data Acquisition Unit (RDAU) communicates wirelessly with any Windows device running BRIO software.
- Ruggedized MIL-spec 10" touch screen tablet.
- Simple, intuitive system setup and User Interface.
- Supports Pencil, Rotary, Array, and 3rd party probes.
- Automatic probe recognition.
- Wi-Fi, Bluetooth, USB.
- Up to 8 hours of battery life.

BRIO is an advanced surface inspection system combining the latest EC capabilities with a wearable data acquisition unit, wireless device connectivity, superior battery life, and intuitive and semi-autonomous software. To meet each inspection need and budget, BRIO is compatible with most probes and scanners in the market and is available in two versions; BRIO and BRIO+ with advanced ECA capabilities. Both versions also incorporate digital inputs and outputs for in-line integration in industrial and manufacturing environments.

The user-friendly interface streamlines your inspection process by allowing data to be screened and analyzed using the Impedance Plane display, requiring minimal interpretation by the user with greatly reduced risk of error. ECA probes available on BRIO+ increase scanning speed and efficiency and display results in a color-coded C-scan map of the scanned surface for easy identification of defects. Customizable reports deliver archivable NDE intelligence to your Quality and Reliability program.

Specific software tools and an extensive catalog of probes are available for the most common applications in aerospace, oil & gas, automotive, transportation, and power generation industries, including:

- Detection and sizing of fatigue cracks on rivets and fastener holes.
- Detection of corrosion under pillowing of multi-layer lap joints.
- Conductivity measurement.
- Non-conductive coating thickness measurement.
- Non-ferrous and ferrous weld inspection.

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Everything you need for Aerospace

- Surface Defect Measurement
- Sub-surface Corrosion Detection
- Multi-layer, Bolt Hole Inspection
- Conductivity Testing
- Thickness Measurement

Application	Non-Ferrous	Ferrous
Surface-breaking indications	•	•
Near-surface indications	•	
Far-surface indications	•	
Welds	•	•

General Specifications	
Instrument Dimensions	4.4" x 5.2" x 2.3" (11.2 x 13.2 x 5.8 cm)
Weight (w/ battery)	1.54 lbs (700 g)
Power	Li-Ion, Rechargeable Battery or 100-240 VAC, 50-60 Hz
Battery Life	Up to 8 hrs. per charge
Cooling	Sealed, fanless
Connectivity	Wi-Fi 802.11ac, Bluetooth 4.0, USB 3.0, Gigabit Ethernet
Storage	Internal: 64 GB SSD Expansion: micro SDXC
Encoders	2 axes, quadrature or pulse
I/O	2 digital inputs 4 digital outputs + 2 analog outputs
Alarms	Rectangular, Circular, Polar, Level, Conductivity, Thickness
Probe Recognition	Automatic (Innerspec probes)
Scanner Compatibility	Innerspec, Tecnatom, Olympus, Other
Languages	English, Spanish
EC Specifications	
Data Channels	BRIO: 4; BRIO+: 16 (>16 with external MUX)
Coil Inputs	1
No. of Frequencies	4
Frequency Range	10 Hz - 10 MHz
Generator Output	16 Vpp
No. of Timeslots	4
Injection Modes	Simultaneous Injection, Multiplexed
Receiver Gain	0-90 dB; 0.1 increment
Sample Rate	10,000 Hz
Filters	Low Pass, High Pass, Rotary Speed Synchronization, Encoder Noise
Conductivity Frequency	60 kHz, 120 kHz, 240 kHz, 480 kHz, 960 kHz
Conductivity Range	1-110%IACS
Conductivity Accuracy	±0.5% for 1-50%IACS ±1% for >50%IACS
Thickness Range	0-0.040" (0-1 mm)
Thickness Accuracy	±9.84e-5" (±2.5 µm)
Probe Modes	Absolute or Differential in either Bridge or Reflection (Transmit-Receive) Modes; Conductivity or Thickness or Both
Environmental Specifications	
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-4°F to 122°F (-20°C to 50°C)
Relative Humidity	80% non-condensing
Shock	MIL-STD-810F
Ingress	IP65, MIL-STD-810G
Compliance	CE, EN 61010-1:2010, EN 61326-1 (2013), IEC 60068-2-1 and 2:2007, IEC 60068-2-6:2007