

# EV<sup>i</sup> Imaging Eddy Current Test Instrument



**The EV**<sup>i</sup> **Imaging Eddy Current Test Instrument** is a state-ofthe-art eddy current test instrument that performs nondestructive detection of cracks and indications in conductive materials. The EV<sup>i</sup> Imaging Instrument is capable of storing instrument setups, reports, screen shots, and data files for later recall.

The EV<sup>i</sup> Imaging Eddy Current Test Instrument provides numerous inputs and outputs, such as, multiple encoder connections, Ethernet connection etc.

- A variety of features for this instrument includes:
- Multi/single frequency and channel view modes
- C-Scans, Impedance Planes, Oscilloscopes, Strip Charts, and many combinations of plots available
- Microprocessor control and versatility
- Easy to use menu driven control
- USB Flash Drive
- Optional External Keyboard



## GENERAL

#### **Dimensions**

- (WxHxD): 13.8" x 8.75" x 2.58"
- Weight: 7 lb 0 oz without batteries, 9 lb 2 oz with 2 batteries

### **Display Size and Resolution**

• 10.1" WXGA 1280x800 pixels

### **Operating temperature**

• 0 – 45°C minimum when the battery is charging. 50°C when operating with a battery or AC but not both.

### **MEASUREMENTS**

- Frequency Range: 120 Hz to 15 MHz
- Gain: 0 dB to 114 dB in 0.1 dB steps
- Rotation: 0 degrees to 359.9 degrees in 0.1 degree steps
- Sweep: 0.001 second to 10 second per division
- Low Pass Filter: 0 to 10 kHz adjustable to 3 digits of precision
- High Pass Filter: 0 to 10 kHz adjustable to 3 digits of precision
- Probe Drive: 2 Vp-p, 4 Vp-p, 7 Vp-p (Also variable from 0 to 7 Vp-p in 1 percent steps)
- Probe Coupling: Monitors the probe to part coupling of a differential probe.

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## INPUTS/OUTPUTS

- Power connector: 2.5mm IP68 Locking Connector
- Scanner/Probe Connector: 27 Pin IP68 Connector
- Probe types: Absolute and differential in either bridge or reflection configuration
- X and Y Analog Outputs: 2 SMA connectors for differential, absolute, or combination
- DB25 connector: 8 configurable encoder, sync or other inputs, 8 configurable alarm, multiplexer, or other outputs, 2 dedicated alarm outputs – TTL and open collector
- Alarm outputs: TTL & Open Collector (multi I/O), Audio or Headphone (USB to 3.5mm adaptor)
- Video output: USB will support external monitors (VGA, DisplayPort, or HDMI with adaptors)
- Ethernet: Remotely control the instrument and retrieve data in real time.
- USB port A: Interface to storage devices, keyboard
- USB OTG: Interface to OTG storage devices
- Exportable Files: Report files, data files, settings files

## POWER

- Power adaptor requirements: 100-240VAC, 1.4A max
- Power connector: 10VDC-24VDC
- Available batteries: 1 or 2 Lithium DR202i or compatible
- Battery operating time: 5 hours minimum with most scanners, 4 hour recharge rate.
- Battery protection: SMBus V1.1 safety features. Monitor battery thermistors, disconnects, and circuit protection. Batteries are hot swappable.
- Battery Charging: Instrument will charge batteries using external power

## **BUTTONS/USER INPUT**

- Keyboard: A standard USB keyboard can be connected. *Front Panel Mechanical Buttons*
- 1. NULL nulls instrument
- 2. CLEAR clears data buffer and error messages
- 3. CANCEL cancels current operation in menus or closes secondary menus
- 4. DISPLAY changes where on screen various items are found depending on mode and turns instrument off and on
- 5. ENTER used to accept changes
- 6. POWER Turn instrument ON/OFF
- 7. VERTICAL SLIDER used to change values in menu, navigate screen
- 8. HORIZONTAL SLIDER navigate screen
- 9. FUNCTION 4 user programmable keys labeled F1 through F4

## SMART SCANNER SUPPORT (SURFACE AND BOLT HOLE)

- Scanner Recognition: Scanner is recognized once connected and key operating parameters such as motor voltage and encoder resolution are setup in the instrument.
- Surface Scanner Imaging: Colors depict shape, size, and depth of discontinuities
- Bolt Hole Scanner Imaging: Aluminum, Titanium, and Steel layers are identified by color (Green, Brown, Blue)
- Interfaces are identified by color (Yellow)
- Lift-off conditions are identified by color (Purple)
- Flaws are identified by color (Red)
- Data Storage: Up to 300 data files can be saved on the instrument and reviewed later for verification of defects or used for reports





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