Magnetic Analysis Corp.

Minimac® II

Economic, Single or Two Channel Full Feature Digital Eddy Current Tester for Tube, Bar, Wire

Minimac® II

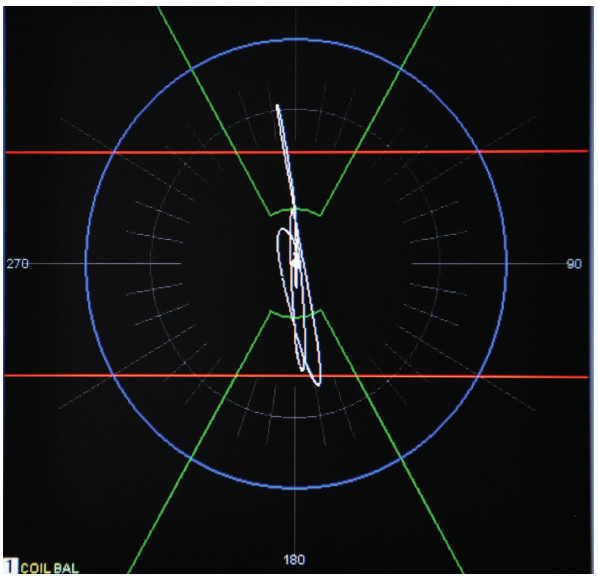
Take advantage of eddy current technology's flexible, versatile capabilities to deliver reliable, high performance testing on a broad range of metal products.

Performance

- Fully digital operation.
- Embedded processor.
- High reliability and performance with low cost.
- Operate any combination of one or two Flaw or Absolute test channels and MID (Magnetic Inclusion Detector).
- MAC's proprietary MultiMac® software.
- Broad frequency range - 1 KHz to 6 MHz.
- Use one or two channels for encircling coil test applications.
- Optional connector and second channel for rotary probe test applications.
- Rugged fanless design.
- CE compliant.

Simple Operation

- Sensitivity, phase & filter are easily set on screen while viewing full color polar & linear display of real time, true waveform signal.
- Store, annotate & recall unlimited number of settings from local or networked drive.
- Recordable linear strip charts and complete test data.
- Complete networking capability with remote command set.
- Easy upgrade from one to two channels.
- Lockout mode to prevent unauthorized changes in settings.
- Defect signal report includes data on location, time, amplitude & phase.
- Control of all functions is set through mouse or keyboard entry.



Minimac® EC screen polar view of thresholds with a test signal for a drilled hole in a copper tube.

Applications

- Detect short surface and some subsurface defects, including laps, slivers and cracks in tube, bar, wire and parts.
- Detect long surface defects with optional rotary spinning probe systems.
- Test magnetic and non magnetic grades
- Find weld line faults including short ID or OD defects.
- Operate at speeds up to 4000 f.p.m. with standard test coils. Operate at higher speedwith wide-spaced coils.
- Check continuity & locate welds in single & multi-conductor insulated wire and cables.
- Test cut length or continuous product, online or offline.
- Detect magnetic inclusions with MID mode of operation. Optional second channel can operate an eddy current/MID combination test.

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Minimac® II Instrument Technical Data

HOST OS	Windows IoT.
PLATFORM	Embedded electronics with Gbit Ethernet.
FUNCTION	Up to 2 channels of any combination Flaw/Absolute/Rotary.
STORED SETUPS	Unlimited.
TEST FREQUENCY	1KHz to 6 MHz. 20 pre-selected frequencies.
FLAW BANDWIDTH	Variable up to 5 KHz.
SENSITIVITY	0 - 99 dB, calibrated in 1dB steps.
PHASE	0 - 359º, calibrated in 1º steps.
FILTERS	High Pass, Low Pass, Band Pass, BP Auto and Out. Fixed filter positions adjustable from 0.1 Hz to 5000 Hz flaw frequency. The auto filter is operated from Line speed for non rotary and from RPM meter and material diameter for rotary applications. The bandwidth of the BP filter can be selected through a “Q” factor dictating the ratio of high to low pass filters.
MODE	A lockout menu will be provided to prevent unauthorized changes in equipment settings.
THRESHOLD SELECTION	Chord, Allphase and Sector thresholds are available for flaw testing, any of which can be assigned up to three levels. Phase, Sector, Chord, and Half Chord, all assignable with up to three levels. The sector threshold can be rotated to any phase angle. There are counters for active thresholds. Only active thresholds display on the screen.
SYSTEM STATUS INDICATOR	Software disiplayed in system status section of display, including Coil Indicator, Balance Indicator, Threshold Indicator and System Ready Indicator.
OUTPUTS	4 output modules are provided, each with a 24 VDC relay and an opto-isolated output. The outputs are driven from embedded processors with or without host computer running.
CONTROLS	Software controls for all functions.
REPORT	Defect report is managed in the BATCH screen. The report contains user and product information, as well as defect location, time of the occurrence, amplitude, and phase.
DATA STORAGE	Recordable linear strip charts.
COIL CONNECTOR	Standard 7-pin for coil or 11-pin for rotary.
COIL DRIVE	Adjustable/Primary Bridge Drive up to 20 V pp.
CALIBRATION	Internal electronic calibration signal.
OPERATOR INTERFACE	Control of all functions is set through keyboard entry and/or mouse.
END SUPPRESSION	External switch end sensor and encoder to suppress end signals and outputs.
OPERATING TEMP	113º F (45º C)
CABINET DIMENSIONS	10.5” Wide x 5.5” High x 10.5” Deep (267mm x 139mm x 267mm)
WEIGHT	13.2 LBS (6KG) approx.
POWER INPUT	120/240 VAC, 50/60 Hz, single phase, 2 amps.

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