

Minimac[®] 50

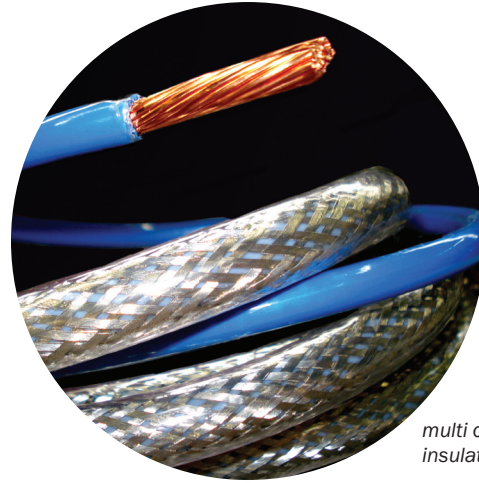
Economic, Single Channel Eddy Current Tester for
Simple Inspection of Continuous Product



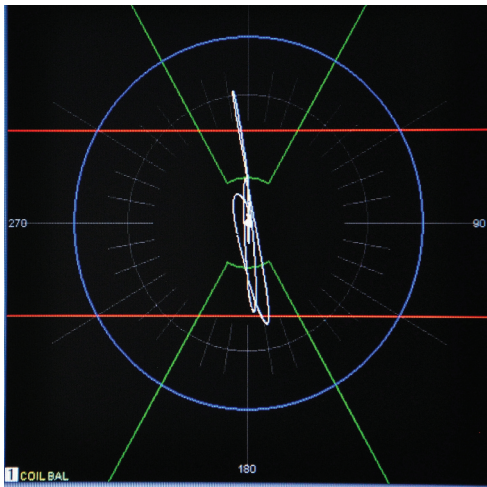
Minimac® Features

Performance

- ☐ MAC's proprietary Multimac® software.
- ☐ High performance, low cost.
- ☐ Broad frequency range - 1 KHz to 5 MHz.
- ☐ Configure for Flaw or Absolute mode for use with encircling or sector coils.
- ☐ Sensitivity, phase & filter easily set on screen while viewing full color polar & linear display of real time, true wave form signals.
- ☐ Relay output from active threshold signal.
- ☐ Use with MAC test coils & platforms, including DC saturation CP's for testing magnetic material.
- ☐ CE Compliant



multi conductor insulated cable



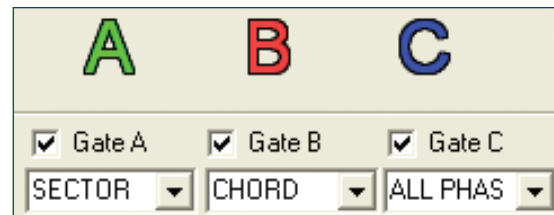
Minimac EC screen polar view of thresholds with a test signal for a drilled hole in a copper tube.

Simple Operation

- ☐ Setup and monitor on site, or via computer network.
- ☐ Store, annotate, and recall from internal library or network, an unlimited number of settings.
- ☐ Lockout mode to prevent unauthorized setting changes.
- ☐ Defect signal report (on screen), including time, amplitude, phase, user and product data.

Applications

- ☐ Inspect wire, tube and parts
- ☐ Detect laps, slivers, cracks
- ☐ Detect weld line faults, including short ID or OD defects.
- ☐ Test magnetic and non magnetic grades.
- ☐ Operate at speeds up to 4000 f.p.m. (with standard coils). Higher speeds achievable with wide-spaced coils.
- ☐ Check continuity & locate welds in single & multi-conductor insulated wire and cable.
- ☐ Detect Magnetic Inclusions with optional MID version of Minimac.



Three gates may be set, based on All Phase, Sector, Chord, or Half Chord Thresholds.



Minimac® Model 50 Instrument Technical Data

TEST PARAMETERS

CHANNELS	One test channel. Software configurable as Flaw (Differential), or Absolute for use with Encircling or Sector Coils.
TEST FREQUENCY	1KHz to 5 MHz. 20 pre-selected frequencies, or user selection of any specific frequency.
FILTERS	High Pass, Low Pass, Band Pass and Out. Fixed filter positions adjustable from 0.1 Hz to 5000 Hz flaw frequency. The bandwidth of the BP filter can be selected through a "Q" factor dictating the ratio of high to low pass filters.
PHASE	0 - 359°, calibrated in 1° steps.
SENSITIVITY	0 - 99 dB, calibrated in 1dB steps.
THRESHOLD SELECTION	Selections include All 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 and each active gate. Only active thresholds display on the screen. The threshold selection feature allows complex gating for challenging test conditions.
ENHANCEMENT CIRCUITS	These circuits may be selected to improve the apparent linear signal-to-noise ratio of signals in any phase. Circuits include A+, V+H- and V++H-. The H- has an adjustable H- factor.
AUTO TRACKING BALANCE	Minimac 50 automatically rebalances if the test system is out of balance, to assure reliable test function, even under adverse conditions. The System Ready Indicator will indicate if the power, coil condition and balance are not adequate.
CALIBRATION	Internally generated signal provides a system check for repeatability of all parameters.
LOCKOUT MODE	Prevents unauthorized changes to instrument settings.
SOFTWARE CONTROL	Control of all functions is set through keyboard entry and/or mouse.

OUTPUTS

FOUR OUTPUTS	Four 24 VDC @ 250mA output modules are provided.
OUTPUT THRESHOLDS	Outputs can be routed to accept any threshold. Combined current draw for all outputs cannot exceed 2 amps. A choice of 3 thresholds, based on All Phase, Sector, Chord or Half Chord, can be mapped to any of 4 outputs. Independently configurable for time or distance delay and normal, reject or latched mode.

continued next page

SCREEN DISPLAY

EC SCREEN	All parameters for testing are set up through this screen. In the polar display the amplitude and phase are represented by the length and angle of the signal. The linear display is a strip chart, with real-time scrolling portrayal of the vertical channel.
SYSTEM SCREEN	Manage hardware device and license. Set channel and system ready monitoring items.
SYSTEM STATUS	System Status section of display includes indicators for Coil, Threshold, System Ready and Balance conditions.

DATA STORAGE, REPORTING & NETWORKING

SETTINGS STORE & RECALL	Unlimited settings can be named, annotated, stored and recalled from a library on the internal storage device, or network. When networked, multiple instruments can share the same library for assurance of correct settings in multiple test lines.
--	--

TEST COILS & SENSORS

COILS & COIL DRIVE	All Standard MAC coil types & sensors. Adjustable/Primary Bridge Drive up to 20 V pp.
COIL CONNECTORS	9 Pin industrial D-SUB connection cable extender to accept all standard MAC solid coils.

STANDARD CABINET SPECIFICATIONS

CABINET DIMENSIONS	7.68" W x 10.55" D x 3.93" H (195mm x 268mm x 100mm)
WEIGHT	4.2 kg (9.26 lb)
OPERATING TEMPERATURE	Ambient temperature of 0° - 50° celsius (32° - 122° fahrenheit)
POWER REQUIREMENT	110/240 VAC, 50/60 Hz, single phase, 1 amp.