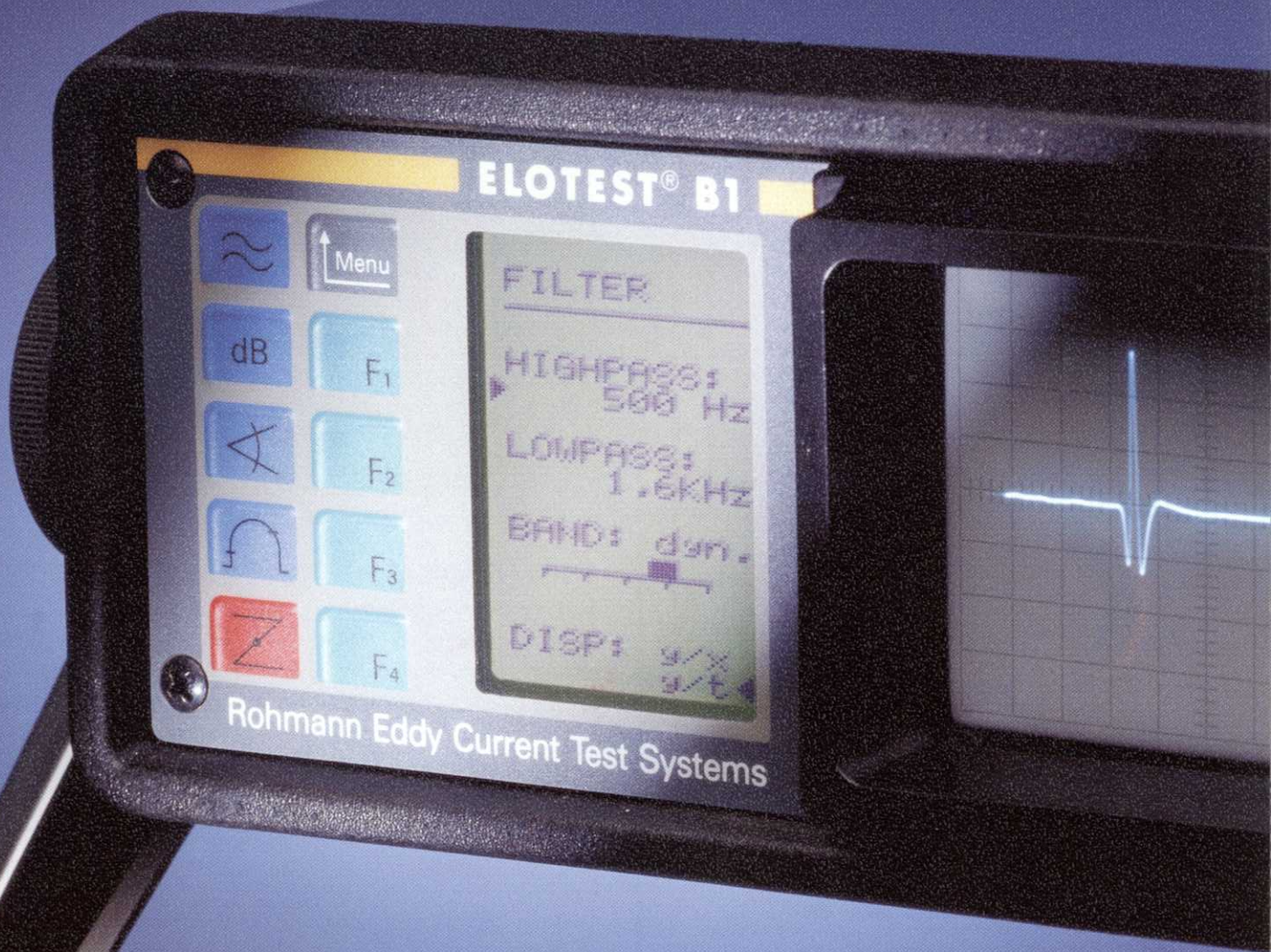


ELOTEST B1

V E R S I O N 4



Eddy Current Testing - The new Standard



***Performance and Precision of a Laboratory Test Instrument
Static and Dynamic Testing without Compromise
Unique in Performance, Weight and Size***

ELOTEST B1 - VERSION 4

Direct-access keys for the principal instrument settings

FREQUENCY

- Test frequency crystal-stabilized selectable from 10 Hz to 10 MHz
- Bandwidth switching depending on frequency (auto/manual)

GAIN

- Reduced-noise amplifier technology, adjustment range -20 to +110 dB
- Automated preamplifier adjustment
- Spreading of X and Y axis

PHASE

- Rotary knob for quick adjustment
- Absolute indication in 1-degree steps
- Relative phase angle measurement
- Automatic lift-off phase adjustment

FILTER

- Highly stable low-pass filter
- Selectable high-pass filter
- Variable bandwidth band-pass filter with graphic display
- 40 steps from 0.5 Hz up to 10 kHz

COMPENSATION

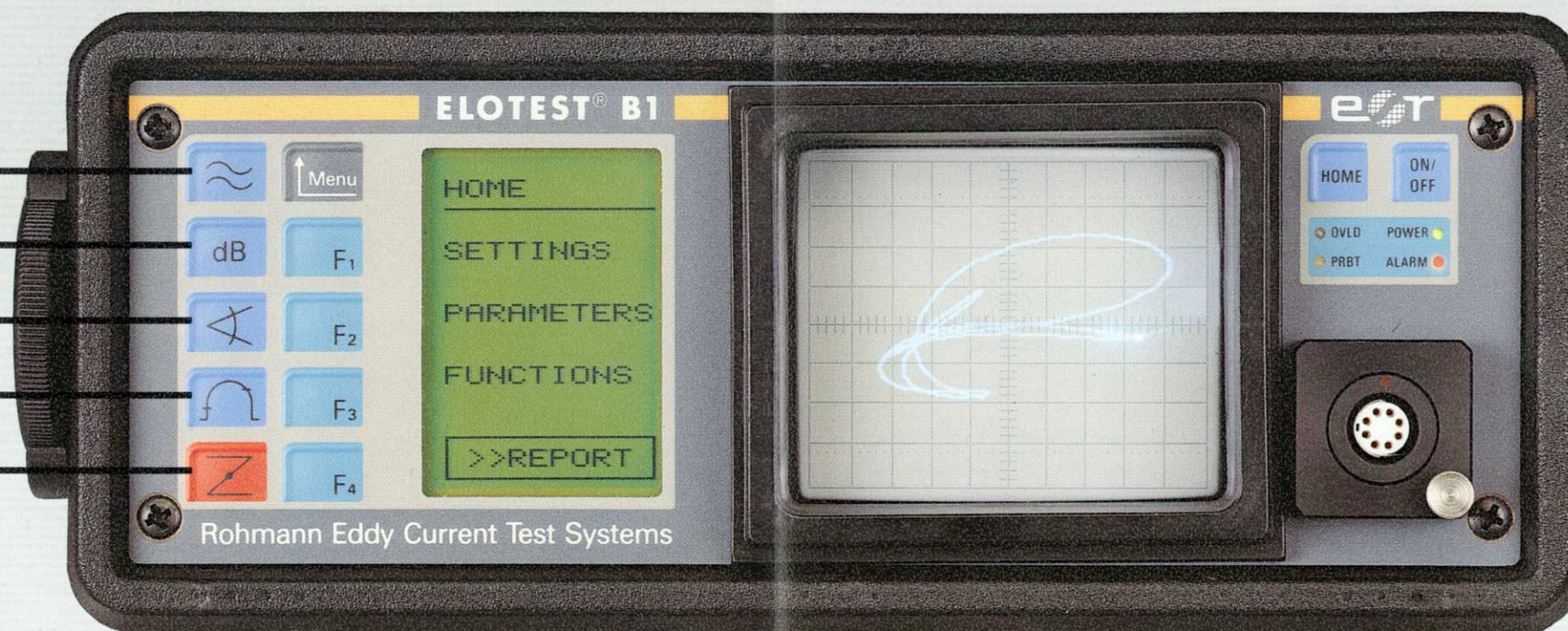
- Vector compensation in static operation mode with 16 bit precision

Large, clear dialogue display

with ergonomically placed function keys and rotary knob for easy operation.

Oscilloscope signal display

no losses or deterioration at high testing speed. High precision and brilliance. Suitable for high-speed dynamic rotor applications.



MENU CHOICES

Setting

50 complete instrument set-ups for specified applications can be stored, recalled and deleted. Sample set-ups (cannot be deleted), covering a range of test applications can be loaded either via a table of applications or a list of probes.

Parameter

Secondary settings: threshold, alarm, signal display mode, dot position.

Function

Memory: Digital signal memory (4 areas) to be used as reference and for documentation purposes via PC or printer.

Set-up: Instrument configuration for language, data transfer and printer selection.

Service: Instrument status, self-test routines and safety functions.

Documentation

Fast saving of the current signal including the instrument settings for transfer to the printer.

SAFETY FUNCTIONS

The ELOTEST B1 V4 performs various selectable and automatic safety functions.

- Automatic self-test when instrument is switched on
- Continuous function test of cable and probe
- Receiver overload alarm
- Automatic switch-off when instrument is not being used and in case of excess or low battery-voltage
- Selectable self-test routine indicating the test function

RAPID BATTERY CHARGER

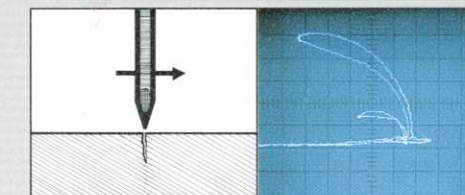
The battery pack can be recharged with the intelligent rapid battery charger within a very short period of time (approx. 1h) or operated continuously in the buffer mode. Thus, a high availability of the test instrument is assured.

MEMORY CARD

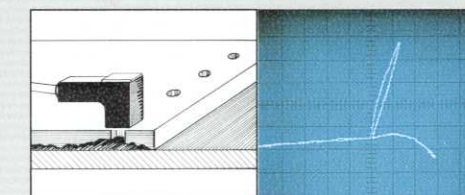
Slot for commercially available standard PCMCIA-2.0 memory cards up to 1 MB capacity. To store a multitude of signals and instrument set-ups in DOS-compatible format.

Free transfer to other B1-V4 instruments and to personal computers for evaluation, documentation and archiving.

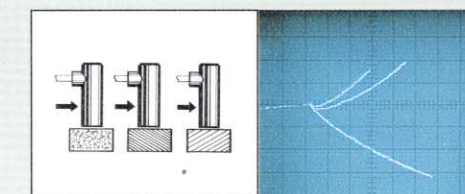
Typical applications



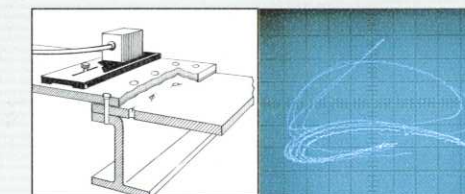
Manual tests with differential and absolute probes



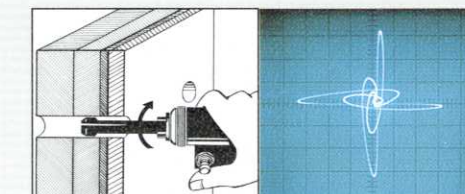
Corrosion and conductivity measurement



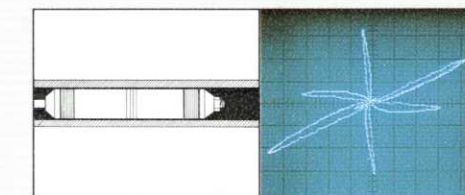
Material properties/hardness sorting



Tests for surface defects and subsurface defects of structure



Multi-layer crack detection in bore-holes with high-speed rotor scanners



Flaw analysis of in-situ tubes with coaxial and rotating inner-tube probes

Technical Data

Frequency range

10 Hz to 10 MHz, continuous.

Sinusoidal driver current

20 V_{ss} at 50 Ohm.

Interference signal suppression

Input filter to suppress noise and disturbing signals may be switched off.

Probe adjustment

Adjustment of the preamplifier to the probesensitivity, adjustable in 10 dB steps from -20 to +40 dB, automated balance of preamplifier and automatic overload alarm.

Sensitivity of instrument

< 1µV for 6 dB S/N at 100 Hz,
dynamic range > 70 dB
200 mV/Ohm to 2000 Volts/Ohm.

Amplification

Adjustable range 122 dB, main amplifier 0 - 60 dB, selectable in 1 dB steps, preamplifier -12 up to +30 dB, spreading of X or Y axis up to 20 dB in 1 dB steps.

Phase

360° continuously in 1° steps, automatic lift-off phase adjustment, relative phase angle measurement.

RS232

Serial interface for PC or printer.

Signal display

89 mm / 3.3" precision oscilloscope with internal graticule, high brilliance and definition.

Probe adaptor

Exchangeable plug-in adaptors for all probe types of renown manufacturers.

Operation

Microprocessor-controlled, menu-guided operation. Storage of 50 user set-ups. 50 non-erasable sample set-ups. Settings can be altered with rotary knob. Direct-access keys for the main functions of the instrument (frequency, gain, phase, filter, compensation). Function keys for gate, alarm, dot position, time base.

Power supplies

Optional: intelligent rapid battery charger, charging time 1h with over-charge protection, ensuring optimum maintenance of batteries and maximum battery life, automatic switch-over to buffer mode. Battery eliminator (inserts in place of battery).

Dimensions

Height: 106 mm / 4.2"
Width: 308 mm / 12.2"
Length: 395 mm / 15.6" (handle included)
325 mm / 12.8" (without handle)

Weight

6,9 kg including battery.

Parameter display

Backlit LCD graphic display
Dimensions: 59 x 41 mm / 128 x 64 pixel

Instrument versions, combinations and options

S = static applications (hand-held probes)
B = dynamic applications (rotary probes etc.)
U = static and dynamic operating mode (universal)
M = signal memory for report printout and reference signal display
C = PCMCIA Memory Card (option)
Commercial memory cards available for the following capacities 128 kB, 256 kB, 512 kB and 1 MB.
Capacity:
128 kB: 12 x 50 parameter sets + 17 images with adjustment
1 MB: 12 x 50 parameter sets + 214 images with adjustments

The serial interface RS232 makes the autonomous test instrument ELOTEST B1 V4 an important part of quality management. Please ask about our PC-software!

The wide range of Rohmann probe and our well-known service for customised applications offer your company a qualified potential to solve your test problems.



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