



Features

- Selectable, tunable square wave or negative spike excitation pulser
- Light, ergonomically designed (5.7 lbs./2.6 Kg)
- Fast, minimum 60 Hz display update rate
- Large, bright, high-resolution ELD with full/split screen views
- Display Freeze holds waveform and soundpath data
- Basic DAC/TVG standard
- Peak Memory
- RF display mode
- Alarms, threshold positive/negative, or minimum depth
- Numeric datalogger
- Security Key enables remote upgrade of software options

Instrument Software Options

- Advanced DAC/TVG
- Expanded Memory
- Low PRF
- Echo-to-Echo thickness measurement
- Extended range
- Narrowband filters
- AWS D1.1/D1.5
- API 5UE

General Purpose Ultrasonic Flaw Detector

The Panametrics-NDT™ EPOCH 4B is a general purpose digital ultrasonic flaw detector that combines many practical features for flaw detection and thickness measurements, a rugged and splash proof housing, and a numeric datalogger. An intuitive direct-access keypad with fewer keys, easy thumb control of critical parameter settings, and convenient portability make the EPOCH 4B an excellent choice for inspectors who need an affordable and easy-to-use flaw detector.

Standard measurement features include DAC and TVG software, a 25 MHz bandwidth for thin material testing, a fast 60 Hz display update rate, a tunable square wave pulser for attenuating materials, and many other benefits for weld inspection, thickness monitoring, bond inspection, and crack detection and sizing.

The EPOCH 4B offers several software options. The narrowband filter option improves signal-to-noise ratio in high gain applications. AWS D1.1/D1.5 provides a “dynamic reflector” indication rating for

various weld inspection classifications. The API 5UE software uses the Amplitude Distance Differential technique from API’s Recommended Practice 5UE to size cracking in OCTG pipe during prove-up. Echo-to-Echo provides true metal thickness measurements with no need to remove paint or coating. Other options include Low PRF, Expanded Memory, and Extended Range.

Extensive Documentation and Transfer Capabilities

The optional Windows-based GageView™ PRO Interface program adds practical collection, editing, and review capabilities to the EPOCH 4B. GageView PRO is a powerful tool that collects, manages, and formats stored inspection data.

GageView PRO database tracking allows setup of inspection plans with pre-loaded calibrations, IDs, and memos. Data can be printed or easily copied and pasted into word processing and spreadsheet documents for further reporting needs.

EPOCH 4B Specifications*

Measurements

Sensitivity: 110 dB Max and Reference level sensitivity feature with 6 dB or 0.1 dB selectable resolution

Auto Transducer Calibration: Automated calibration of transducer Zero Offset and/or Velocity

Reject: 0% to 80% of full scale in 1% increments

Units: English, Metric, or Microseconds

Material Velocity: 0.025 to 0.6000 in/μsec (635 to 15240 m/S)

Range:

- Standard 0.16 inch to 200 inches (4 mm to 5,000 mm)

- Optional 0.038 inch to 400 inches (1 mm to 10,000 mm)

Refracted Angle: Fixed settings of 0°, 30°, 45°, 60°, 70°, or variable from 10° to 85° in 0.1° resolution

Peak Memory: Simultaneous display of live A-scan at 60 Hz update rate and peak envelope of A-scan display

Pulsar Type: User selectable, tunable square wave, negative spike excitation

Pulse Energy: Low (100 V), Medium (200 V), High (300 V), and Max (400 V)

Damping: 50, 63, 150, and 400 Ohms

Rectification: Full Wave, Half Wave Positive or Negative, and unrectified RF settings

Analog Bandwidth: 0.3 MHz to 25 MHz at -3 dB

Filters: Broadband; Optional narrowband filters

Test Modes: Pulse Echo, Dual, or Thru-Transmission

Alarms: Selectable threshold positive/negative or minimum depth modes

Display

Display: 320 pixels (W) X 240 pixels (H), ELD screen

Display Update Rate: Minimum 60 Hz

Power Supply

Power Requirements: AC Mains: 100-120 VAC, 200-240 VAC, 50-60 Hz

Battery: Internal Rechargeable NiMH battery pack rated at 12 V at 4000 mAH

Battery Operating Time: 7 hours nominal. 2 hours typical recharge time

Outputs

High Speed Parallel Port: Allows output of alarm conditions

Analog Output: Keypad selectable voltage output of depth or amplitude data

VGA Output Port: Connects to standard VGA monitor or A/V projector

RS-232 Communications Port: Allows interfacing with PCs and printers. Max Baud Rate, 38.4.

General

Keypad: English or International symbols

Languages: Available in keypad selectable languages: English, French, German, Spanish, Italian, Russian, Japanese, and user-defined custom languages

Transducer Cable Connectors: Fits BNC or Number 1 LEMO®

Dimensions:

11.15" H x 6.55" W x 2.6" T

Weight: 5.7 lbs. (2.6 Kg) with battery

Operating Temperature:

-20° C to 50° C (-4° F to 122° F)

Storage Temperature: -40° C to 70° C (-40° F to 158° F) depending on battery and display

PC Requirements: Compatible with Microsoft® Windows® XP®, Microsoft Windows 2000®

Warranty: One year warranty, battery not included. Optional second year warranty available.

Standard Inclusions

EPOCH 4B Microprocessor-Based Ultrasonic Flaw Detector includes:

EP4/MCA: Mini Charger Adapter

EP4/BAT: Nickel Metal Hydride Rechargeable Battery

EP4/CAL-NIST: NIST Calibration Certificate

EP4B/MAN: Instruction Manual

EP4/TC: Transport Case

EP4/PS: Stainless Steel Pipe Stand

EP4/HS: Hand Strap

Optional Accessories

EP4/SC: Shipping Hard Shell Case

EP4/BAT-AA: Alkaline Battery Pack

EP4/EC: External Stand-Alone Charger

EP4/RPC: Rubber Protective Carrying Case

EP4/PR Printer: 110-120 V

EP4/PRE Printer: 230-240 V

EP4/DP-E: Display Protectors (ELD)

EP4/C-15VGA-6: VGA Cable

EP4/C-25PRL-6: Parallel Port Cable

EP4/C-9FAT-6: Serial Port Cable

GAGEVIEWPRO-KIT-SERIAL: Interface Program including Serial Port Cable

OLYMPUS®

www.olympusNDT.com

info@olympusNDT.com

OLYMPUS NDT

48 Woerd Avenue • Waltham, MA 02453 • USA
Tel.: (1) 781-419-3900 • Fax: (1) 781-419-3980
12569 Gulf Freeway • Houston, TX 77034 • USA
Tel.: (1) 281-922-9300 • Fax: (1) 952-487-8877

OLYMPUS NDT U.K. LTD.

12 Nightingale Close • Rotherham, South Yorkshire S60 2AB • UK

OLYMPUS SINGAPORE PTE. LTD.

491B River Valley Road 12-01/04, Valley Point Office Tower, 248373 • Singapore

OLYMPUS AUSTRALIA PTY. LTD.

PO Box 985 • Mount Waverley, VIC 3149 • Australia

