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INSPECTION



Olympus Epoch 600

The EPOCH 600 Digital Ultrasonic Flaw Detector combines Olympus' industry leading conventional flaw detection capabilities with the efficiency of a highly portable, intuitive instrument. The EPOCH 600 flaw detector's blend of efficient menus and direct access keys allows you to take advantage of the highest quality flaw detection platform with exceptional ease of use. The large, full VGA transfective display combined with the patent-pending digital high dynamic range receiver provides a stable, striking A-scan representation in any lighting condition. Available in two hardware configurations, the EPOCH 600 offers you the choice to adjust parameters with a knob or with a navigation area on the keypad. The EPOCH 600 is designed to meet the requirements of EN12668-1 and allows a full range of standard and optional flaw detection features. The rugged, ergonomic design allows use in nearly any inspection environment, while the flexible PerfectSquare™ pulser and digital filtering capabilities can tackle nearly any application.

Key Features

- Designed to meet the requirements of EN12668-1
- PerfectSquare™ tunable square wave pulser
- Digital high dynamic range receiver
- Eight digital filters for enhanced signal-to-noise ratio
- 2 kHz PRF for rapid scanning
- Knob or navigation pad adjustment configurations
- Large, full VGA sunlight readable display
- Long battery life, supporting lithium-ion or alkaline batteries
- Standard dynamic DAC/TVG and onboard DGS/AVG
- 2 GB MicroSD memory card for data transfers and storage
- USB On-The-Go (OTG) for PC communication
- Alarm and VGA outputs
- Optional analog output



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Epoch 600 Technical Specifications

General

Overall dimensions (W x H x D)	236 mm x 167 mm x 70 mm (9.3 in. x 6.57 in. x 2.76 in.)
Weight	1.68 kg (3.72 lb), including lithium-ion battery
Languages	English, Spanish, French, German, Japanese, Chinese, Portuguese
Transducer connections	BNC or Number 1 LEMO
Data storage	50,000 IDs onboard, removable 2 GB MicroSD card (standard)
Battery type/life	Single lithium-ion rechargeable standard/12 h to 13 h (lithium-ion), 3 h (alkaline)
Power requirements	AC Mains: 100 VAC to 120 VAC, 200 VAC to 240 VAC, 50 Hz to 60 Hz
Display type	Full VGA (640 x 480 pixels) transfective color LCD, 60 Hz update rate
Display dimensions (W x H, Diag.)	117 mm x 89 mm, 146 mm (4.62 in. x 3.49 in., 5.76 in.)

Pulsar

Pulsar	Tunable Square Wave
PRF	10 Hz to 2000 Hz in 10 Hz increments
Energy settings	100 V, 200 V, 300 V or 400 V
Pulse width	Adjustable from 25 ns to 5,000 ns (0.1 MHz) with PerfectSquare™ technology
Damping	50, 100, 200, 400 Ω

Gates

Measurement gates	2 fully independent gates for amplitude and TOF measurements
Gate start	Variable over entire displayed range
Gate width	Variable from Gate Start to end of displayed range
Gate height	Variable from 2 to 95% full screen height
Alarms	Positive and Negative Threshold, Minimum Depth (Gate 1 and Gate 2)

Receiver

Gain	0 to 110 dB
Maximum input signal	20 V p-p
Receiver input impedance	400 Ω \pm 5%
Receiver bandwidth	0.2 MHz to 26.5 MHz at -3 dB
Digital filter settings	Eight digital filter sets standard (0.2-10 MHz, 2.0-21.5 MHz, 8.0-26.5 MHz, 0.5-4 MHz, 0.2-1.2 MHz, 1.5-8.5 MHz, 5-15 MHz, DC-10 MHz)
Rectification	Full-wave, Positive Half-wave, Negative Half-wave, RF
System linearity	Horizontal : \pm 0.2% FSW
Vertical linearity	0.25% FSH, amplifier accuracy \pm 1dB
Reject	0 to 80% FSH with Visual Warning
Amplitude measurement	0 to 110% full screen height with 0.25% resolution
Measurement rate	Equivalent to PRF in all modes

Measurements

Measurement display locations	5 locations available (manual or auto selection)
Gate 1	Thickness, Soundpath, Projection, Depth, Amplitude, Time-Of-Flight, Min./Max. Depth, Min./Max. Amplitude
Gate 2	Same as Gate 1
Echo-to-Echo	Same as Gate 2-Gate 1
Other measurements	Overshoot (dB) value for DGS/AVG, ERS (equivalent reflector size) for DGS/AVG, AWS D1.1, D1.5 rating (D), Reject Value
DAC.TVG	Standard
DAC points	Up to 50 points, 110 dB dynamic range
Special DAC modes	Custom DAC (up to 6 curves)
Curved surface connection	Standard OD or Bar correction for Angle Beam measurements

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