



SONATEST MASTERSCAN 700M

Portable narrowband ultrasonic flaw detector with 450 V pulser for demanding inspection tasks



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The SONATEST MASTERSCAN 700m is a high-performance narrowband ultrasonic flaw detector for demanding manual inspection tasks. High near-surface resolution, a powerful 450 V spike and square wave pulser, and an excellent signal-to-noise ratio support reliable flaw detection and evaluation. Typical applications range from weld and corrosion inspection to composites, bonded joints, forgings and castings, as well as applications in power generation.

Different flaw evaluation and sizing methods are available to meet a variety of inspection requirements. DAC is included as standard, while additional functions such as Split DAC, DGS/AVG, TCG, AWS, API, and Backwall Echo Attenuation (BEA) are available as options.

Additional functions and software options can be added as required, allowing the MASTERSCAN 700m to adapt flexibly to different inspection procedures and future requirements.

Designed for mobile use in demanding industrial environments, the MASTERSCAN 700m combines a rugged, impact-resistant housing with up to 13.5 hours of battery life for extended inspections in the field. The transreflective VGA color display provides good readability under varying lighting conditions.

UT-Lity software supports efficient management of inspection data. Calibrations, A-scans, B-scans, and thickness measurement logs can be managed both on the device and on a PC. Users can also create customized inspection report templates, analyze and export thickness measurement data, and update firmware and device software.

YOUR ADVANTAGES AT A GLANCE

Reliable flaw detection: High near-surface resolution, a powerful 450 V pulser, and an excellent signal-to-noise ratio support demanding ultrasonic inspections

Flexible flaw evaluation: DAC is included as standard, while optional methods such as Split DAC, DGS/AVG, TCG, AWS, API, and BEA allow the device to be adapted to different inspection requirements

Wide range of applications: From weld and corrosion inspection to composites, bonded joints, forgings, and castings, the MASTERSCAN 700m supports a variety of industrial inspection tasks

Flexible upgrade options: Additional functions and software options can be added as required, allowing the device to adapt to new applications and inspection requirements

Rugged for mobile use: The impact-resistant housing and up to 13.5 hours of battery life support extended inspections even in demanding field conditions

Efficient data management: UT-Lity enables users to manage calibrations and inspection data, analyze and export thickness measurements, and create customized inspection reports

NORMS

DIN EN ISO 22232-1: Specifies the characterization and verification requirements for ultrasonic test instruments used in non-destructive testing.

TECHNICAL INFORMATION

DISPLAY:	Transflective VGA TFT display, 640 × 480 px
IP RATING:	IP67
WEIGHT:	2.5 kg incl. battery
DIMENSIONS:	255 × 145 × 145 mm
OPERATING TEMPERATURE:	-10 °C to +55 °C
BATTERY LIFE:	Up to 13.5 hours
STORAGE:	4 GB
MEASUREMENT MODES:	7
RECTIFICATION:	RF, full wave, positive half wave, negative half wave
GATES:	2
GAIN RANGE:	0–110 dB
PULSER VOLTAGE:	100–450 V, negative spike and square wave
PULSE WIDTH:	35–2500 ns
PULSE REPETITION FREQUENCY (PRF):	Adjustable from 5 Hz to 5 kHz; external synchronization available
PROBE CONNECTORS:	BNC or LEMO (factory option)
EXTERNAL SYNCHRONIZATION:	Yes
PROPORTIONAL OUTPUT:	Yes
USB PORT:	Yes
FLAW SIZING METHODS AND SOFTWARE OPTIONS::	— DAC (standard) — Split DAC (option) — DGS/AVG (option) — TCG (option) — BEA (option, requires TCG) — AWS (option) — API (option) — Interface Trigger (option) — Corrosion Software (option) — Dryscan (option)



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