



Ultrasound Testing Device

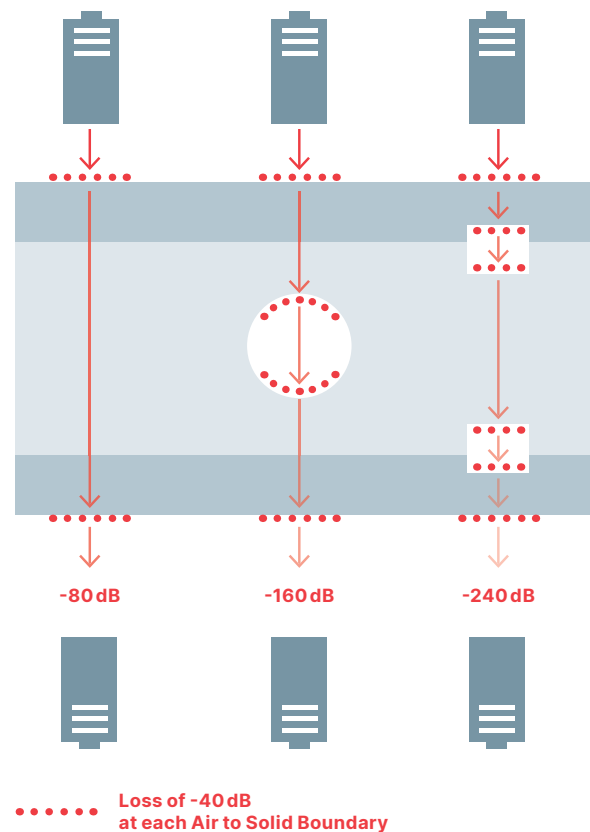
SONO-PR 10

For Air-Coupled Ultrasonic Testing

MADE IN GERMANY

The Principle of Air-Coupled Ultrasonic Testing

- New challenges for testing lightweight components where conventional methods cannot be used and contamination with couplant is not desirable
- Air-Coupled Ultrasound Testing (ACUT) allows contact-free testing without the use of additional coupling fluids
- Send-receive configuration with the test item in between 2 transducers placed opposite to each other
- The sound attenuation between sender and receiver is evaluated at a specific point (point measurement)
- By taking multiple measurements and moving the transducers it is possible to scan a larger area



Features

- Analog HF output
- Operation via touch panel
- Trigger input and output
- Saving configurations in the display
- Freely configurable burst transmitter up to 20 pulses

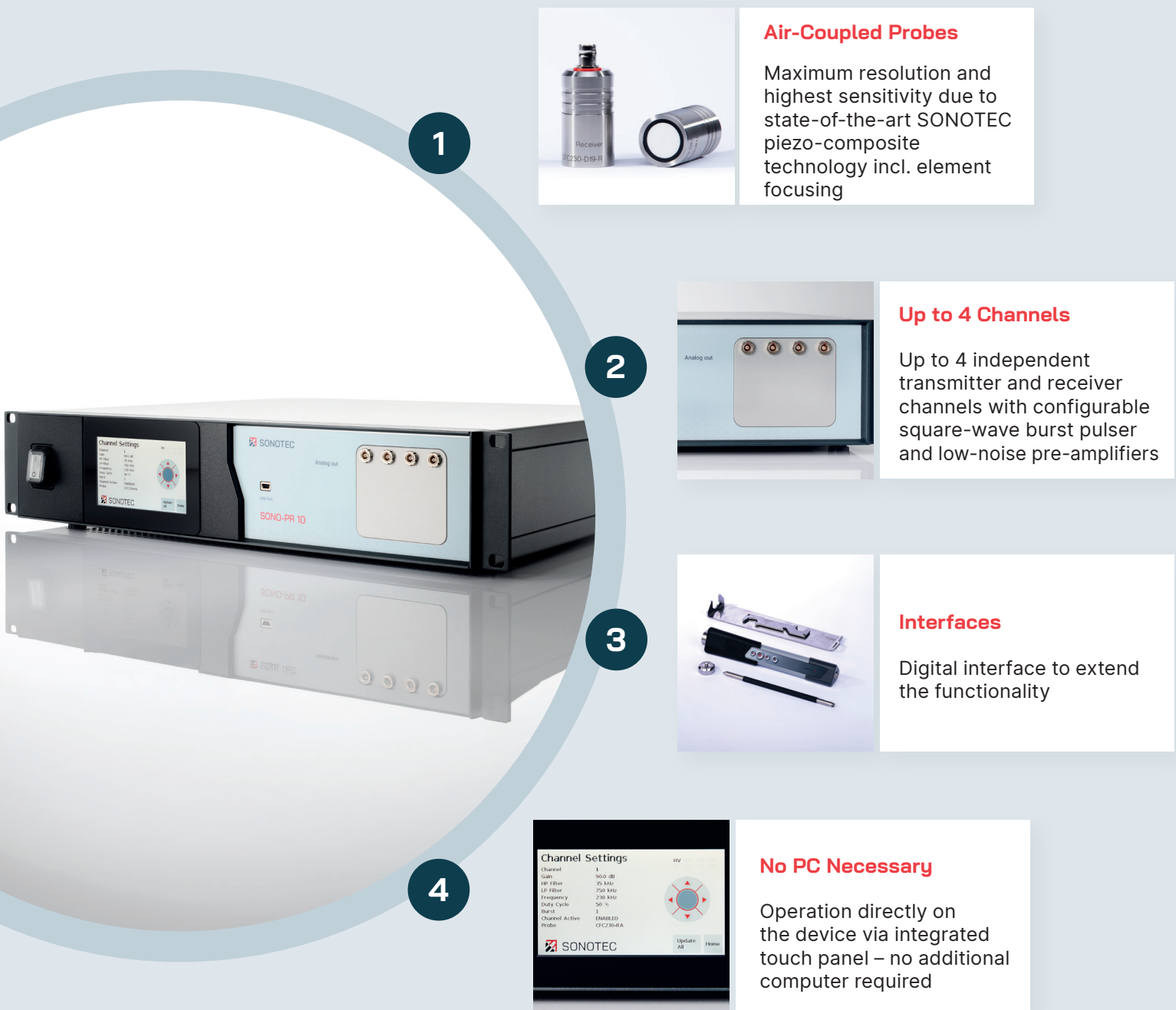
Measurements

- Of attenuation and sound propagation time of the acoustic signal
- On highly attenuating materials which are impossible or difficult to test with liquid coupled ultrasonic inspection systems
- Particularly used for foams, multi-layer honeycombs, plastics, ceramics, wood, and concrete inspection
- Modern fibre-composite structures such as CFRP or GFRP can be inspected without any compromises

Advantages

- ✓ Affordable introduction to air-coupled ultrasound
- ✓ High flexibility of the device
- ✓ Large spectrum in the air-coupled ultrasound range
- ✓ Wide range of applications
- ✓ Simple system, not automated
- ✓ No PC necessary

Components



Technical Data

General Data	
19" Unit consisting of	Ultrasonic transmitter, ultrasonic receiver
Operating Temperature	5 °C to 40 °C
Configuration Interface	1 Gbit LAN
Protection Class	IP20

Pulser	
Number of Channels	1 to 4
Pulse Height	10 V to 500 V
Frequency Range	40 kHz to 10 MHz
Type	Square wave burst (unipolar positive) with up to 20 pulses

Receiver	
Number of Channels	1 to 4
Frequency Range	35 kHz to 15 MHz
Gain with integrated CFC preamplifier	20 dB to 140 dB, 0.5 dB increment
Gain with standard external preamplifier	0 dB to 120 dB, 0.5 dB increment
Noise	1 nV/√Hz

Applications



Non-contact ultrasonic testing for defect detection and material characterization on different materials

→ Testing of bonded joints

→ Testing of fiber composite materials such as GFRP and CFRP



Suitable for materials that are difficult to test, such as foams, metals, plastics, and ceramic materials



Enables building material testing of bricks, composite panels, concrete, and wood



Honeycomb structures with different core and cover layers

Contact and Support

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