



 SONOTEC



Broadband Ultrasonic Pulser-Receiver

SONO-PR 200

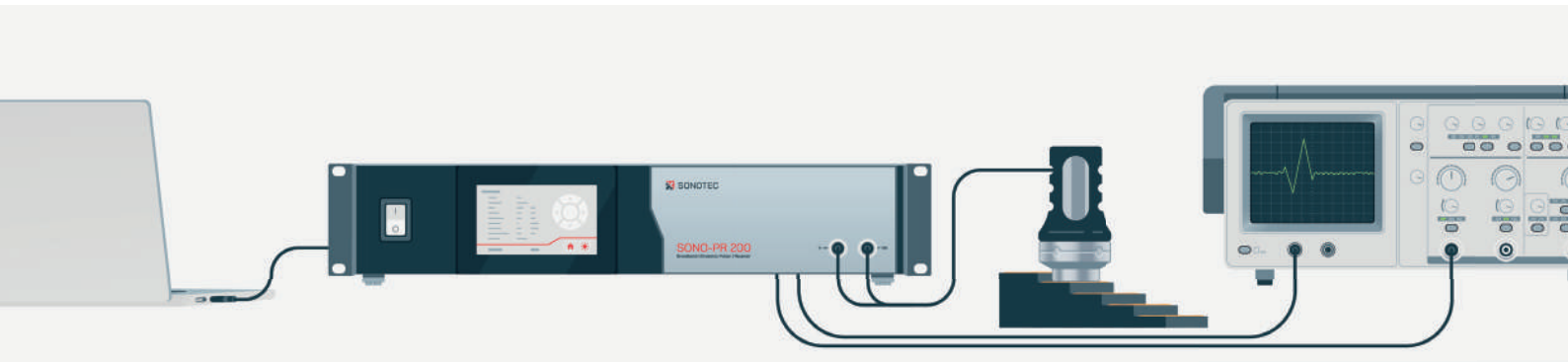
For Ultrasonic Testing

MADE IN GERMANY

Nondestructive Testing

SONO-PR 200 reliably replaces obsolete technology

- SONOTEC has specialized in customised ultrasonic solutions for over 30 years.
- The SONO-PR 200 is a broadband ultrasonic pulser-receiver with exceptional performance. It has a frequency response of up to 200 MHz and an extremely low noise level.
- It is a state-of-the-art device manufactured with the latest components.
- The SONO-PR 200 delivers a clear signal without compromise.



Features



Very high bandwidth



Numerous high-pass & low-pass filters



Extremely low noise



Digital inputs and outputs



Remote control via serial interface



Option: pre-amplifier with 20dB gain available

Applications

- Precise wall thickness measurement
- Immersion and squirter applications
- Nondestructive material testing
- Integration into automated testing systems
- Probe characterization in Research & Development
- Acoustic microscopy



SONO-AMP pre-amplifier optionally available filter

By adding the SONO-AMP pre-amplifier, a gain of max. 74 dB can be achieved. In combination with the SONO-AMP, the system achieves an extremely low inherent noise of $< 1 \text{ nV}/\sqrt{\text{Hz}}$. Thanks to a low noise level and high bandwidth, tests can also be realized under challenging conditions.

Which SONO-PR 200 is right for you?

SONO-PR 200 Variants



Spike pulser		
Fixed voltage	+	+
Energy steps	+	+
Pulser rising time (below 1 ns)	+	+
Damping steps (8)	+	+
PRF 10 Hz to 20 KHz	+	+
Spike bandwidth 200 MHz	+	+
Square wave pulser		
Variable voltage 10 to 200V	-	+
Pulser polarity (unipolar +, -, bipolar)	-	+
Selectable square wave width	-	+
Square wave frequency 500 kHz to 8 MHz	-	+
Bursts (1 to 10)	-	+
Damping steps (2)	-	+
PRF* 10 Hz to 20 KHz	-	+

* only possible for certain configurations



Tailor the device for your case!

If you wish to adapt functions or technical features, please let us know. We can take your individual wishes and adapt the solution to your needs.

SONO-PR 200: Technical data

General data	
Standards	2011/65/EU RoHS, 2014/30/EU 2014/35/EU, DIN EN 61326-1:2013
Protection type	IP20
Bandwidth	0.1 MHz to 200 MHz
Measurement methods	Impulse-Echo, Pulser-Receiver
Operating temperature	0 °C to +60 °C
Storage temperature	-20 °C to +80 °C
Display	4.3" LCD TFT colour screen display 480 × 272 pixels, touch panel
Dimensions	19", 2 U (rack units)
Power supply	110/220 VAC, 1 A, 50/60 Hz

Spike pulser	
Pulse repetition frequency	10 Hz to 20 kHz
Energy	1 2 4 8 16 32 μ J
Rise time	< 1 ns
Open circuit voltage	277 V
Damping	6.5 10 16 20 26 30 40 50 Ω

Square wave pulser	
Voltage	10 to 100 V (at damping 50 Ω) 20 to 200 V (at damping 1 k Ω)
Polarity	Unipolar+ Unipolar- Bipolar
Pulse width	63 to 1000 ns (corresponds to 500 kHz to 8 MHz frequency range)
Pulses per burst	1 to 10
Damping	50 Ω 1 k Ω (at TR mode)



Scan me to find user documentation

Receiver	
Gain	26 40 54 dB
Attenuation	Range: 0 to 65.5 dB Increment: 0.5 6 dB
Input impedance	50 Ω
Bandwidth	100 kHz to 200 MHz (-3 dB)
High-pass filter	100 kHz 1 MHz 3 MHz 10 MHz
Low-pass filter	200 MHz 100 MHz 50 MHz 20 MHz
Equivalent input noise level	maximum: 2 nV/ \sqrt Hz* typical: < 1 nV/ \sqrt Hz

* Gain: 54 dB; attenuation: 0 dB; full bandwidth

Trigger	
Source	Internal and external
Max. trigger rate	20 kHz
Trigger output	5 V 20 μ s

Interfaces	
Communication	RS-232 (9 pin D-sub male)
Switch output	4 × 5 V 200 mA, short circuit proof

SONO-AMP (optional)	
Fixed gain	20 dB
Bandwidth	30 kHz to 5 MHz
Input noise level	< 0,5 nV/ \sqrt Hz (500 kHz to 5 MHz)

Ultrasonic Probes

Customized as well as standard probes are available!

SONOSCAN Angle Beam Probes
SONOSCAN Straight Beam Probes



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Certified according to ISO 9001

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