

PROLINE

# PROLINE<sup>USB</sup> ultrasonic inspection device

Technical data

Front view



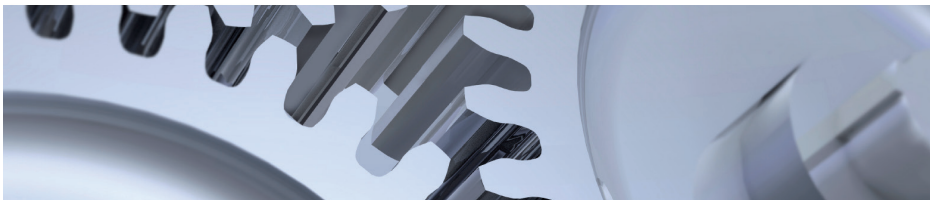
8-Channel

Back view



8-Channel

2-Channel



- Single- up to multiple channel usage ultrasound electronics
- Max. pulse repetition frequency 20 KHz
- Square wave pulse amplifier
- Encoder interfaces synchronized with A-scan
- 14 bit digitization
- Integrated flexible interfaces for digital input/outputs
- Data transfer via USB interface
- Low weight only approx. 2,5 kg

**PROLINE** USB

**Technical Data**

**Pulser**

Pulse repetition frequency per channel	1 up to 10.000 Hz
Pulse repetition frequency overall	max. 10.000 Hz
Pulse output	adjustable in 38 steps

Max. pulse amplitude	160 V/250 V
Single pulse fall time	< 5 ns at 50 Ω
Single pulse width	20 – 500 ns
Pulse width resolution	10 ns
Pulse shape	square wave negative
Number of channels	PE: 1 - 8* TR / TT: 1 - 4*

Channel isolation (PE/TR)	> 65 dB @ 5 MHz
Channel triggering	internal and external

**Receiver**

Receiving amplifier	linear, broadband, voltage controlled
Calibrated gain	80 dB(hardware compensated)
Linearity	+/-1 dB
Input voltage	0,35 mV <sub>p-p</sub> – 2 V <sub>p-p</sub>
Frequency band width	0,2 - 25 MHz (-3 dB)
Input dynamics	100 dB (regulated)
Attenuation	none
Operation mode	PE, TR, TT
Filter	digital via software

**Calibration**

Range	0,01 – 640 μsec 100 MSPS
	0,01 – 2560 μsec 25 MSPS
Delay	0,01 - 640 μsec 100 MSPS
	0,01 – 2560 μsec 25 MSPS
Resolution	10 ns
Waveform	full wave, positive, negative, RF
<b>Gates</b>	
Hardware gates	4 (overlapping), master gates, triggered on event
Software gates	4 more
Delay and range	0,1 - 640 μsec 100 MSPS
Resolution	10 ns
Amplitude detection	positive, negative or absolut
Alarm threshold	positive or negative
Interface echo triggering	depends on threshold

**Digitizing**

A/D converter type	sampling converter
Digitizing depth	14 Bit
Sampling rate	100 MSPS

**Hardware depth compensation**

Dynamic range	0 – 80 dB
Supporting points per channel	up to 1024
Amplitude resolution	0,25 dB
Range	full reception range
DAC steps	30 ns
Step resolution	10 ns (first step)
Sampling rate	20 dB/30 ns

**Interfaces**

Customized I/O's	2 – 4 inputs* (0 – 24 V), 2 – 8 outputs* (Open-Collector)
Predefined I/O's	2 inputs (0 – 24 V), 1 output* (Open-Collector)
PC interface	USB 2.0

**Speed of data acquisition**

Data transfer rate	30 MByte/s (depending on channel)
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**HOST Computer (minimum requirements)**

Port	USB 2.0
CPU	depends on application
RAM	depends on application
Hard disk	depends on application
Operating system	WIN XP/WIN 7, 32 Bit

**General**

Power supply unit	100 – 240 VAC/12 VDC
Power consumption	20 W (max.)
Operating temperature	5 °C up to 50 °C
Splash water protection	IP 65
Dimensions	w x h x l 189 x 58 x 195 mm (7,44 x 2,28 x 7,67")
Weight	approx. 2,5 kg

*\*Depends on model*



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- accredited acc. to DIN EN ISO/IEC 17025:2005
- certified acc. to ISO 9001:2008/EN 9100:2009