PCUS®*pro* Single

Single-Channel Ultrasonic Frontend

General

- USB Bus-powered (no power supply required)
- USB 2.0 High-Speed with a maximum of 40MB/sec data transfer rate
- Dimensions: 120mm x 100mm x 40mm (L, W, H)
- Near-transducer setup

Transmitter

- Single-channel transmitter
- Transmitter pulse voltage: -50V to -250V, adjustable in 1V increments
- Negative rectangle pulse
- Output impedance: 50Ω
- Pulse delay: 0µs to 40µs, adjustable in 5ns increments
- Pulse width: 10ns to 500ns, adjustable in 2.5ns increments
- Pulse repetition frequency: up to 400Hz (limited by USB power supply)

Receiver

- Single-channel receiver, impedance 50Ω or 300Ω, software selectable
- Pulse/Echo or Transmit/Receive mode
- Frequency range: 500kHz to 30MHz (-3dB)
- Receiver filter: up to four analog band filters (user selectable frequencies)
- TGC with 80dB dynamic range, adjustable in 0.1dB increments, 256 points, slope ≤40dB/µs
- Attenuation/amplification: >100dB adjustable in 0.1dB increments
- Input sensitivity: 100µVss

Signal Path

- Transducer delay: 0µs to 655µs, in 10ns increments
- Maximum recording length: 65,535 samples
- A/D Converter: 14bit (13bit + sign), 100MS/s
- One start gate and four measurement gates
- RF-Data or compressed TD-Data recording
- Rectification: positive-, negative-, or full-wave

Interface and Connectors

- Transducer connectors: Lemo 00
- USB 2.0 High-Speed, USB-B connector
  power consumption: max. 5V/500mA
- Trigger IN: TTL high or low active, pulse width >100ns, opto-coupled (MCX)
- Trigger OUT: LVTTL high active (MCX)

Software

- Digitally signed device driver for Windows® XP (SP2 or higher), Windows® Vista and Windows® 7 (32 bit and 64 bit)
- Managed Windows® API (based on .NET 4.0 framework)

System Conformity

The PCUS®*pro* Single system meets all relevant requirements of DIN EN 12668, Part 1.

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