

up to 32 daisy-chained transmitters per cable drop

maximum number of dual-element transducers per transmitter:

8

networked to control room for continuous remote measurement

direct link to tablet PC for on-demand field datalogging

maximum number of single-element high-temp transducers per transmitter:

16

Remote, Permanently-Installed Wall Thickness Monitoring.

smartPIMS Modbus is an ultrasonic transducer network that can automate wall-thickness measurement and flaw monitoring of your most critical plant assets.

- Installation of up to 512 TMLs (or 256 dual-element probes) on a single multi-drop network.
- View real-time data from any connected tablet PC or your control room.
- Upload for cloud-based data viewing and analysis.

productivity

cost savings

data integrity

safety

specifications

transmitter

model no.	C-PIMS 100 Modbus
protocol	Modbus
communication	RS-485, 2-wire, max. 1000'
power	10-20 VDC
ultrasonic system	channels 16 ultrasonic, 1 temperature pulser voltage ±5V bipolar square wave receiver 1-10 MHz (-3dB) gain -10dB to +70dB digitizer frequency 40 Msps certification Class 1, Div. 1, ATEX Zone 1 (coming 2Q16)
enclosure	type instrumentation housing material aluminum rating Class 1, Div. 1, Group BCD, NEMA 4X, IP66 dimensions/weight 5" × 5¼" × 4¼" / 4 lbs.

tablet datalogger

performance	processor Intel i5-4200U 1.6GHz w/ 3MB L3 cache (dual-core) memory 8 GB RAM storage M2-SATA SSD, 64 GB operating system Windows 10
connections	network power, data via RS-485-to-USB adapter
physical	drop/shock resistance MIL-STD-810G environmental IP65, 14-131°F (-10 to +55 °C) dimensions/weight 11.4" × 7.48" × 0.78" / 2.73 lbs.

transducer cable

transducers

type	armored, ¾" dia.
maximum length to transducer	standard 10' (3.0m), custom to 25' (7.6m)

	single-element contact	delay-line contact	dual-element	angle-beam or shear-wave
model	XD-101	XD-201	XD-301	custom
application	general purpose	ultra-high temp	severe pitting	cracking
frequency	5 MHz	7 MHz	5 MHz	2.25-10 MHz
active area (dia.)	0.25"/6.35mm	0.375"/10mm	0.375"/10mm	custom
overall (dia. x h)	1.0 × 1.0" 25.4 × 25.4 mm	0.8 × 2.25" 20.3 × 57.2 mm	0.75 × 0.75" 19 × 19 mm	custom
no. transducers	1-16	1-16	1-8	2-8 (TT), 1-16 (PE)
resolution	0.001"/0.025mm	0.001"/0.025mm	0.001"/0.025mm	custom
thickness range	application- dependent	0.125-1.0" 3.0-25.0mm	0.040-6.0" 1.0-150.0mm	custom
temp range	application- dependent	-5 to +932 °F -20 to +500 °C	-5 to +300 °F -20 to +150 °C	custom
attachment	magnet/adhesive	mechanical clamp	magnet/adhesive	custom

TT = through-transmission, PE = pulse-echo

smartPIMS systems are available for rent or purchase, or as a service.

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Installed ultrasonic sensors for asset-integrity monitoring

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