Dakota NDT
an Elcometer company

PZX1-DL

Precision Thickness Gauge

HIGHLIGHTS:

- Powered by: 120MHz FPGA timing.
- 100 volt spike pulser.
- Measure Modes: Pulse-Echo, Echo-Echo, Interface-Echo, and Plastics.
- Automatic time dependent gain (TDG) with manual override.
- Single element delay line and contact transducers (5 to 20MHz).
- Low temperature custom LCD display (-22°F/-30°C).
- CDC compatible serial over USB.
- Optional serial RS232 or bluetooth module.
- USB-C connectivity.
- Data Storage: 32 megabit flash memory.
- 5 year limited warranty.

DAKOTA PZX1-DL THICKNESS GAUGE

The PZX1-DL is a digital display, single element precision gauge, and equipped with a variety of measurement modes to address a number of potential applications. This gauge can use both high and low frequency transducers with a variety of diameter options. The PZX1-DL has USB-C connectivity, with data storage, and serial over USB-C using a CDC class. Optional RS232 and bluetooth modules available for connection with data collectors and custom apps. Our 5 year limited warranty indicates how we feel about the durability of the PZX1-DL gauge.

SPECIFICATIONS

PHYSICAL

Weight:
11 ounces (with batteries).

Size:
Width (2.5 in / 63.5mm)
Height (5.17 in / 131.3mm)
Depth (1.24 in / 31.5mm)

Operating Temperature:
-22 to 167°F (-30 to 75°C).

Case:
Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed).

KEYPAD

Sealed membrane that is resistant to both water and petroleum products. Nine tactile-feedback keys.

TRANSDUCER

Single-element (delay line & contact).

5 to 20MHz frequency range.

Locking quick disconnect LEMO connectors.

4 foot cable.

Custom transducers available for special applications.

DATA

Sequential data storage, 40 files of 250 readings per file, for 10,000 readings (PZX1-DL).

WARRANTY

5 year limited.

CERTIFICATION

Factory calibration traceable to NIST & MIL-STD-45662A.

POWER SOURCE

Two 1.5V alkaline, 1.2V NiCad, or 1.5V Lithium AA cells.

Typically operates for 35 hours on alkaline and 18 hours on NiCad.

Low battery indicator on display. Auto shut-off after 5 minutes of inactivity.

Line power USB-C connected to PC or power adapter.

DISPLAY

Multi-function 7 segment 4.5 digit liquid crystal display with 0.500 in digit height. Two 0.125 in 14 segment fields for labels and values, and one 7 segment field for labels and values.

Additional icons to indicate features and modes.

Backlight is selectable on/off/auto, and selectable brightness (Lo, Med, Hi) options.

Bar graph indicates stability of reading.

FEATURES

Transducer Types:
Single delay line & contact styles.
Selectable diameters for contact style.
High Speed Scan:
Display the lowest reading found during a scan. Scan speed at 100Hz.
Differential Mode:
Display the +/- difference from a nominal value entered.
Alarm Mode:
High & low alarm limits with audible and visual indicatiors.
VX velocity:
Measure in terms of velocity for nodularity testing.

MEASURING

Measurement Modes:
Pulse-Echo (P-E):
0.040 to 36.0 in (1.0 to 914.4mm).
Echo-Echo (E-E):
Delay line - 0.006 to 1.00 in (0.152 to 25.4mm).
Contact - 0.040 to 6.0 in (1.0 to 152.4mm).
Interface-Echo (I-E):
Delay Line - 0.060 to 1.0 in (1.524 to 25.4mm).
Plastics (PLAS):
Graphite Delay Line - 0.005 to 0.250 in (0.127 to 6.35mm).

Range:
Ranges dependent on transducer type, material type, transducer frequency and diameters.

Units: English & Metric (Low & High resolution).

Resolution:
0.001 or 0.0001 in (0.01 or 0.001mm).
Velocity Range:
0.0120 to .7300in/µs
(305 to 18,542m/sec)

PRF: 200Hz

Display Update Rate: 10Hz

Gain: Automatic or manual control.
Time Dependent Gain (TDG):
Implemented in all measure modes

SOFTWARE

Comes complete with USB download cable. No software required, comma separated file type (.csv).

REPLACEMENT

PZX1-DL replaces PZX-7 DL

CE UK CA

MADE IN THE USA

Dakota NDT
an Elcometer company

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