Dakota NDT
an Elcometer company

MultiMax

Bolt Tension Monitor

HIGHLIGHTS:

- Connect multiple MultiMax together.
- Compatible MultiUI interface software to setup your MultiMax.
- Glue on transducers eliminate transducer placement errors or movement once stuck.
- Real-time temperature monitoring and compensation.
- Automatic zeroing, gating & display configuration.
- Measurements can be auto stored from six times a minute to once per month.
- Measurement range of 1 in to 50 ft (25.4mm to 15.2 M)
- 2 year limited warranty.

DAKOTA MULTIMAX BOLT TENSION MONITOR

SPECIFICATIONS

PHYSICAL

Weight:
13.5 ounces (with batteries).

Size:
Width (3 in / 76.2 mm)
Height (6.5 in / 165 mm)
Depth (1.5 in / 38.1 mm)

Operating Temperature:
14 to 140°F (-10 to 60°C).

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

Keyboard:
None. PC controlled software display platform.

Environmental:

Meets IP65 requirements.

CONNECTIONS

USB: Direct USB-C 1.1 PC connectivity. Windows interface software.

Temperature Sensor: 5 pin Lemo 1.

Transducer Connectors: 4 Lemo 00.

MEMORY

Log Format: Fixed grid format.

Capacity: 4GB internal SD memory.

DISPLAY VIEW

A-Scan: RF waveform, with large digital numeric display.

FEATURES

Data Sampling: Measurements can be auto stored from six times a minute to once per month.

Data Archive: Automatic and manual archive options to proprietary format (.sm2), and comma separated (.csv).

Auto Set: Automates the detection, scope, and display setting process for each individual bolt.

TRANSDUCERS

Transducer Types:
Single element - 1MHz to 10 MHz frequencies, and 1/8" to 1"diameters.

Glue-On:
Available for permanent installation and remote monitoring.

Connectors:
Potted/Integral, Microdot, Lemo 00, or BNC options.

Custom Transducers:
Available for special applications.

Temperate Probe:
Automatic temperature compensation.

ELECTRONICS

Timing: Precision TCXO timing with single shot 100 MHz 8 bit ultra low power digitizer.

Pulser Type: Square Wave.

Pulser Voltage: Selectable 100, 150 and 200 volts.

Pulser Width: Selectable options Spike,Thin, and Wide. 80 to 400 ns.

Damping: 100 ohms.

Frequency Band: Broadband 1.8 - 19 MHz (-3dB) filter.

Horizontal Linearity: +/- 0.4% FSW.

Vertical Linearity: +/- 1% FSH.

Amplifier Linearity: +/- 1 dB.

Delay: 0 - 999.9 in (25,400 mm) at steel velocity.

Measurement Gate: Single gate with adjustable threshold and polarity.

4 Channel MUX: Multiplexed switching between channels. Multiple Modules can be stacked to increase the number of overall channels monitored, using the MultiUI PC software.

POWER SOURCE

Line Power: USB to PC or AC adaptor.

MEASURING

Units: English (in), Metric (mm), or Time (µs). Farenheit or Centigrade.

Velocity: 0.0492 to .5510 in/µs (1250–13995 m/s).

Measurement Modes: Pulse-Echo (P-E).

Measurement Range: 1 in to 50 ft (25.4mm to 15.2 M), dependent on material type and consistency.

Detection: Zero Crossing.

Resolution: +/- 0.00001 in (0.0001mm).

Calibration: Automatic or Fixed, Single or Two-Point zero calibration options.

Quanties:

Time - Nanoseconds.

Elongation - Change in length (inches/millimeters).

Load - Force load applied (pounds KIP, or megapascals MPa).

Stress - Force for unit area stress applied (inches per inch or millimeters per millimeter).

%Strain - Ratio of elongation to effective length.

Bolt Materials: Select types from a preset list, or enter custom values.

Repeatability Bar Graph: Bar graph indicates stability of measurement.

CERTIFICATION

Factory calibration traceable to NIST & MILSTD-45662A.

WARRANTY

2 year limited

CE UK CA

MADE IN THE USA

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