

EM1401 specifications



OKTANTA

> Design and manufacture of non-destructive testing equipment

Range of measured thickness for steel	2..80 mm
Range of measured thickness for steel without gap	2..200 mm
Thickness measurement error	0.08 mm
Permissible gap between the sensor and tested object with the EMT14012 transducer	up to 4 mm
Permissible gap between the sensor and tested object with the EMT14013 transducer	up to 6 mm
Permissible sensor skew relative to the tested object surface normal	± 25 °
Lowest permissible radius of curvature of the tested object surface	≥10 mm
Highest number of measurements per second	16
Range of sound velocity setting	1000...9999 m/s with 1 m/s step
Operating frequency of the device	4 MHz
Duration of continuous work without battery recharge	7 hours
Range of operating ambient temperature	-20...+50 °C
Range of operating temperature on the tested object surface	-20...+80 °C (-20 ...+750 °C where the EMT14014T transducer is used)
Dimensions	232 x 135 x 44 mm



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EM1401 EMA thickness gauge

- > Operating gap of up to 6mm;
- > Color display with a tempered glass screen protector;
- > The device implements A-scan, B-scan and C-scan;
- > Measurement of thickness in objects heated up to 750 °C.





Description:

- The EM1401 EMA thickness gauge is designed for thickness measurement of steel pipes, sheet metal, rods and other products made of steel, aluminum and other metals with operating gap of up to 6 mm between the sensor and metal. Operation of the EMA thickness gauge requires no preliminary surface preparation, no couplant is required. The tested sample surface may be covered with dirt, a layer of rust or salt deposits, or may have other non-conductive coating (paint, varnish, enamel, plastic, etc.).



The sensor skew makes a minor effect on the device readings in contrast to conventional thickness gauges with piezoelectric transducers that require a sensor fixed in a certain position.

The EM1401 electromagnetic acoustic thickness gauge allows the user to analyze A-scans, visualize B-scans (three display options), and save data conveniently on C-scans in a matrix form. If necessary, the user can work with strobes, select a thickness measurement mode, signal processing parameters, etc.



The EM1401 thickness gauge has a color display protected by shock-resistant glass. Like any other EMA thickness gauge produced by our company, the EM1401 thickness gauge uses a special data processing algorithm that provides automated correct thickness measurements in the presence of disturbing factors such as metal anisotropy, usage of several reflectors, exposure to external interference. In addition to the automatic mode of thickness measurement, the device allows using manual measurement modes based on the first echo and difference between any two echoes. Manual mode is recommended for severely corroded objects.

High temperature EMA transducer:

- The special EMT14014T sensor allows using the EM1401 thickness gauge for thickness measurement on objects heated up to 750 °C. The device implements a special algorithm that accounts for changes in the rate of sound propagation in metal induced by temperature.

