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ATLAS 0941

HIGH FREQUENCY IMPEDANCE ANALYSER



ATLAS 0941 HIGH FREQUENCY IMPEDANCE ANALYSER is the instrument dedicated for high impedance spectroscopy of technical objects modelled by multi-element two terminal networks, with impedance absolute value from $0,1\Omega$ to $100M\Omega$, measured in wide range of frequencies from very low $10\mu\text{Hz}$ to 10MHz , at free or forced potential.

The analyser is destined to measure impedance spectra of two-terminal elements and circuits, and has application in area of material engineering research, in particular to diagnostic and evaluate of different kinds of materials, coats, structures and their physicochemical properties.

ATLAS 0941 HIGH FREQUENCY IMPEDANCE ANALYSER is cased in compact, reliable, light metal case. The case is covered with solid powdery lacker which is very resistant to mechanical action and atmospheric conditions.

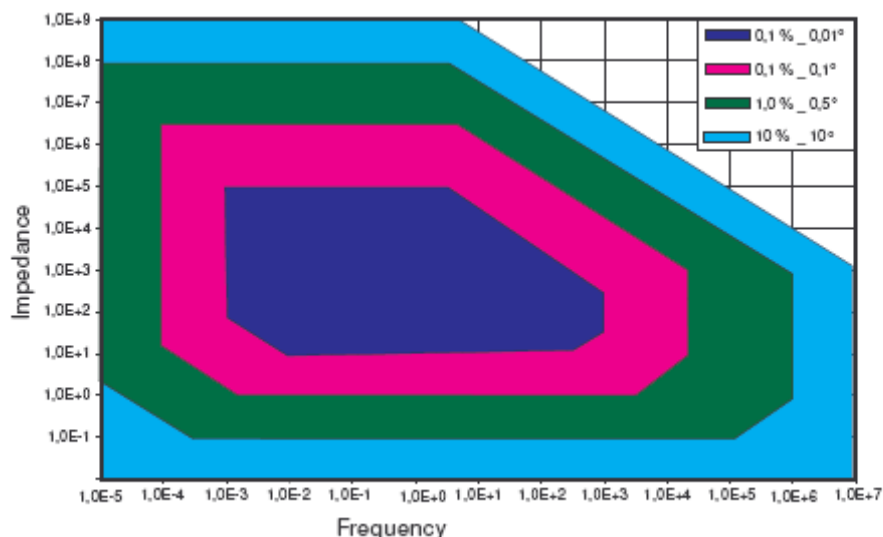
Front panel is made from film layer which is resistant to atmospheric conditions and scratch-resistant.

Measure probe is attached to the device with the aid of measuring cable. The probe is an external input circuit of the device, which enables to connect measured object using short wires.

Four-wire probe was developed which is destined to impedance measurement in the range: $0,1\Omega < |Z_x| < 100\text{ M}\Omega$, in frequency range: 100 μ Hz to 10 MHz.

TECHNICAL DATA

- Measurement signal amplitude which can be programmed in the range 1 mV to 1000 mV (with 1mV step), is automatically kept on programmed level when frequency and impedance measurement range is changed;
- Constant forced potential can be set in range $\pm 2\text{V}$ with 16-bit resolution. It enables automatic compensation of constant-voltage component which is present on tested material sample, or to force different potential than free potential on tested sample;
- Impedance spectroscopy frequency range: 10 μ Hz to 10 MHz;
- Impedance measurement range: $0,1\ \Omega < |Z_x| < 100\ \text{M}\Omega$ (in 8 subranges);
- Autodiagnosics and autocalibration of measuring pathes was implemented in the analyser;
- Accuracy of impedance measurement is presented below on accuracy graph = $f(|Z|, f)$



- Analyser is powered from DC supply voltage, range 9-18V or AC supply voltage, 50Hz, 230V; power consumption: 12 W;
- The length of standard cable for connecting measure head to the device is 2 meters;
- Dimension of the analyser: W x H x D = 260 x 160 x 380 mm.