

**MD.4.****Title**

**Device and method for measuring the resistance of sensors based on nanostructured semiconductor oxides**

**Authors**

VERJBIŢKI Valeri, LUPAN Oleg

**Institution**

**Technical University of Moldova**

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**Description EN**

The invention relates to the field of measuring equipment and can be used in measuring apparatuses that use sensors based on nanostructured semiconductor

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oxides.

The method for measuring the resistance of sensors based on nanostructured semiconductor oxides consists in that it is

measured the  $U_1$  voltage of the reference voltage source, is measured the  $U_3$  voltage on the additional resistor, is calculated the voltage value that falls on the test sensor according to the formula  $U_x = U_1 - U_3$ , and is calculated the amount of current passing through the test sensor according to the formula  $I_x = U_3 / R_3$ . Calculation of  $R_x$  sensor resistance value is performed in accordance with Ohm's law, using the obtained values  $U_x$  and  $I_x$ .

The device for measuring the resistance of sensors based on nanostructured semiconductor oxides comprises a reference voltage source (1), connected to a voltmeter (6) and connected in series to the test nanostructured sensor (2) and to an additional resistor (3), to the connecting node point of which to the sensor (2) is connected the input of an amplifier (4). The output of the amplifier (4) is connected to a voltmeter (5), while the resistor (3), the common node points of the reference voltage source (1), the amplifier (4) and the voltmeters (5, 6) are connected to ground.

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