

Electrical Conductivity Meter EE0022



*** EE0022 is made comply to ASTM E1004 and the conductivity standards is performed in accordance with the requirements of MIL-STD-1537.**

■ Description:



EE0022 is a portable conductivity meter for metals. This metal conductivity meter uses eddy current to determine the electrical conductivity of non-ferrous metals such as aluminum and copper.

Featuring an operating frequency of 60 kHz, the conductivity meter has a large measuring range from 6.9%IACS to 110%IACS with an accuracy of $\pm 0.3\%$ at $20^{\circ}\text{C} / 68^{\circ}\text{F}$. Thanks to a resolution of up to 0.01% IACS and automatic temperature compensation, the device ensures quick, easy, accurate and reproducible measurements.

Measurement of the electrical conductivity of non-ferrous metals, such as aluminum, copper, titanium, magnesium or bronze, is necessary in applications involving electrical conductors and the characterization of alloys. Typical application areas are the assessment of strength differences in heat-treated or hardened materials, the authenticity testing of coin alloys, the verification of alloy inhomogeneities in critical components and the sorting of materials.

The eddy current conductivity meter EE0022 is powered by an internal battery that can be charged via the interface on the bottom of the unit.

■ Features:

- 1、 EE0022 uses 60KHz (aviation industry standard) and 120KHz working frequency.
- 2、 EE0022 equipped with 12mm and 8mm 2 probes, 8mm probes are mainly used for the inspection of ultra-thin materials.
- 3、 Automatic temperature compensation to ensure the accuracy of the test.
- 4、 The calibration process is very simple.
- 5、 The test data can be read in %IACS and MS/m units.
- 6、 Its large font, backlit lighting design, beneficial to users in low light conditions can also read the detection data.
- 7、 The use of large-capacity battery ensures that it can maintain more running time.
- 8、 Mini size for easy carrying and gripping.
- 9、 Users can replace the probe outdoors, no need to go back to the company to adjust the matching of the probe and conductivity meter.
- 10、 Memory for up to 1000 groups of measurements.
- 11、 USB interface allowing for the transfer of measurement data to a PC for further analysis.

■ Technical parameters:

NAME	CONTENT	
Measurement technology	Eddy current	
Operating frequency	60KHz, 120KHz	
Display screen	240X320 pixels TFT-LCD; 4 kinds of background color	
L*B*H	180*80*30 mm	
Instrument case	Anti-intense impact, water-proofing polyester.	
Weight	260g	
Power supply	High capacity, high performance lithium polymer battery	
Measuring range	Conductivity	6.9%IACS—110%IACS(4.0 MS/m -64MS/m)
	Resistivity	Correspond the Conductivity
Distinguishing rate	0.01% IACS	
	0.000001Ω·(mm) 2/m	
Measuring accuracy	0℃ to 45℃	
	23%IACS : ±0.1%IACS	
	100%IACS : ±0.3%IACS	
Temperature compensation	Automatic compensation to the value of 20 ℃.	
Normal work environment	Relative humidity	0~95%
	Operating temperature	0℃~50℃
Language	English, Chinese	
Fitting	Portable box; probe; probe in cable; operating manual; conductivity standard sample; adapter.	
Probe	Diameter:12.7mm (Applicable to minimum measuring area diameter at 60KHz is 10mm.)	
	Diameter: 8mm (Applicable to minimum measuring area diameter at 120KHz is 7mm.)	

Note: The conductivity measurements automatically rectified to the value at 20 ℃。

■ Applications:



- Test the conductivity of aluminum, copper and other non-ferrous magnetic metal in the processing industry.
- In the aerospace and automotive industries, monitor the process of heat treatment, the strength and hardness of aluminum alloy.
- Test the conductivity aluminum when it has not been oxidized.
- Test the purity grade of materials.
- Test materials resistivity.
- Material Thermal Performance analysis.

■ Advantages of eddy current conductivity meter:

- 1、 Digital signal acquisition for the first minute about 1000 times, with the subtle changes in temperature, to make temperature compensation, lift away from the compensation, to ensure the accuracy of detection.
- 2、 Microprocessor data processing, to ensure the accuracy of detection.
- 3、 LCD display count, no error, visual comfort.
- 4、 Integrated circuit to ensure small size and stable reading.
- 5、 Due to digital circuit data acquisition and processing, no periodic instrument calibration.

