

CST810E Fast Corrosion Measuring Meter

Overview

CST810E Fast Electrochemical Corrosion Measuring Meter is a simple operation instrument that integrates the Electrochemical Impedance Spectroscopy (EIS) measuring principle and is portable designed for simple and fast measurements and directly display results. EIS measurement is employed to measure the solution resistance (R_s) and the polarization resistance (R_p) and further to calculate the corrosion rate.

The instrument host components include potentiostatic/galvanostatic control circuit, microcontroller system, high-precision analog/digital, digital/analog conversion circuit, real-time clock circuit, and large-screen LCD display and communication interface.

A built-in real-timer is convenient for continuous timing measurements. Both AC and DC power supply are applied and switchable. DC power supply at full stage can produce a constant supply for 60 hours. CST810E is equipped with a flash memory to store up to 10,000 data groups, which can save the data even when the power is off in the wild. With a CorrStudio (R) management software, it can download all data into PC compatible to the format of Excel and show all results in graph or list.

The instrument could not only be controlled by panel keyboard, but also be controlled by CorrStudio software via serial communication port. Therefore, the instrument is capable of remote control and data read.



Applications

- ① corrosion rate monitoring and corrosion inhibitor evaluation & screening of industrial sites of Petrochemical, building, bridges etc.
- ② Metal corrosion rate monitoring in high-impedance system such as oily wastewater, soil, concrete and so on.

Specifications

Input impedance: $10^{11} \Omega$

Corrosion Potential range: $\pm 2.5V$

Potential resolution: 0.1mV

R_s (solution resistance) range: $10 \Omega \cdot \text{cm}^2 \sim 500K \Omega \cdot \text{cm}^2$

R_p (polarization resistance) range: $5 \Omega \cdot \text{cm}^2 \sim 10M \Omega \cdot \text{cm}^2$

Corrosion rate measuring range: $0.1 \mu \text{m/a} \sim 10\text{mm/a}$

Absolute Measurement Accuracy: $< \pm 1\%$

Sine wave amplitude: 1mV~100mV

Sine wave frequency: 10KHz~0.001Hz

Timing measurement: interval: 1~255h

Data storage: 10,000 groups

Calendar&clock error: $\pm 1\text{min/month}$



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Power: AC 220V/ DC 4 AA batteries(chargeable)

Product Dimensions: 260×165×200mm, Weight: 3.5Kg

Temperature: -10~ 50°C, relative humidity: ≤ 80%, away from corrosive gas