

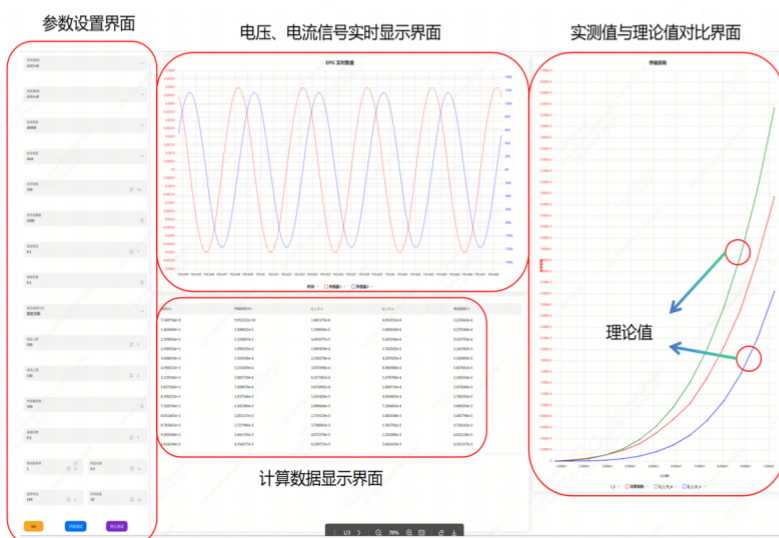
AC Loss Testing Platform Product Introduction

Introduction

The AC Loss Testing Platform is a precision test system designed to measure energy losses in superconducting materials, magnetic materials, and power electronic devices under alternating electromagnetic fields. Under actual operating conditions, AC loss appears as heat generation, which can adversely affect the performance of materials and the overall structure. Therefore, AC loss testing is essential, and AC loss parameters provide data support for magnet design and simulation calculations.

This product uses the electrical measurement method, measuring transport current, terminal voltage, and their phase difference, to test the AC loss of superconducting tapes, cables, and coils. By applying AC current with different frequencies and amplitudes to the sample through the AC power supply system, the total loss power under the operating condition can be obtained directly.

The platform integrates the required equipment into a single system, enabling program-controlled one-click testing.



Parameters

Product Model: AC-3000W

Signal Acquisition Device: Company-developed Extreme Physics Integrated Comprehensive Tester (EPIC)

Project	Specification Description
Frequency Range	20 Hz-20 kHz (expandable to 100 kHz)
Maximum Output Power	3000 W
Maximum Output Current	850 A
Voltage Acquisition Range	0 V-1000 V
Maximum Sampling Rate	5 kHz
Data Acquisition Channels	4-channel synchronous sampling (expandable to 16 channels)
Loss Power Measurement Accuracy	0.1 mW

Note: Additional parameter requirements can be customized and upgraded.

Applications

The AC Loss Testing Platform can be used in superconducting material research, magnetic material characterization, power electronic device testing, cryogenic and refrigeration system integration, teaching and research laboratories, and other fields. It quickly and intuitively obtains the loss power of the object under test, providing reliable data support for subsequent R&D and normal operation.