

1855

Leakage Current/IR Meter

Capacitor Leakage Testing

USES:

- Production Testing of Leakage Current on Electrolytic Capacitors, Zener diodes, Neon lamps, and other Capacitive Components
- Production Testing of Insulation Resistance on Switches, Connectors, and Other Devices
- Testing Insulation Breakdown in accordance with EIAJ RC-2364A
- Component Evaluation, Testing, and Design

FEATURES:

- 0.3% Basic Measurement Accuracy
- Constant Current: 0.5mA \pm 0.05mA meets EIAJ RC-2364A WV test
- Programmable DC Voltage: 1-650V
- Programmable Charge Current: 0.5-500mA
- Programmable Charge & Dwell Times: 0-999 seconds
- Leakage Current Measurement from: 1nA - 20.00mA
- Insulation Resistance Measurement from 10W - 99GW
- Auto Ranging
- Speeds Up to 18 Measurements/second
- Measurement Averaging (1-8)
- Standard RS-232 Interface
- Optional IEEE & Handler Interface
- Front Panel Lockout
- Comparator and Pass/Fail Function
- Enhanced LCD Display

Introduction

The 1855 Capacitor Leakage Current/IR Meter is a fast and reliable digital leakage current meter. Primarily used for electrolytic capacitor leakage current testing, and aluminum-foil withstand voltage testing, the 1855 instrument also measures insulation resistance. The 1855 instrument comes standard with an RS-232 interface plus it has an optional IEEE-488 & Handler interface for high speed automated measurements. Whether its component evaluation on the production line or bench-top testing in R&D applications, the 1855 Capacitor Leakage Current/IR Meter is right for the task.

Description

Leakage Current: The 1855 instrument measures and displays the undesirable flow of current through a capacitor or over any surface of insulation. The leakage current function provides a measurement range from 1nA to 20mA and programmable test voltage from 1- 650V DC.

Powerful Charge Current: The 1855 Model offers flexibility with programmable charge current from 0.5mA to 500mA in increments of 0.5mA.

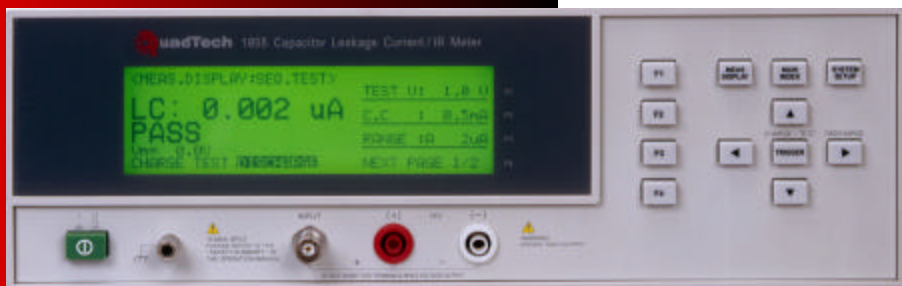
Programmable Source Voltage: The DC voltage can be programmed from 1.0V to 100V in 0.1V increments (with current to 500mA) and from 101V to 650V in 1V increments (with current to 150mA).

Precision Measurement: With a basic accuracy of 0.3%, the compact 1855 unit makes consistent, stable, and reliable test results.

Insulation Resistance: Serves as an economical megohmmeter by measuring and displaying a product's insulation resistance. This resistance can be measured over the range of 10 Ω to 99G Ω with a programmable test voltage from 1.0V - 650V DC.

Aluminum-Foil Withstand Voltage: The 1855 meets the requirements of the EIAJ RC-2364A standard with a low programmable constant current for charging aluminum electrolytic capacitors. The rise time (Tr) and final test voltage (Vf) are shown on the instrument display.

65 Watt Discharge Circuit: For operator safety and for rapid, complete discharge of large capacitors, a power discharge circuit is built into the 1855 unit.



For more detailed specifications, visit
www.quadtech.com

For more information about special purchase, rent & lease options, call

1-800-253-1230
Fax 1-978-461-4295
Intl. 1-978-461-2100

1855 Leakage Current/IR Meter

Leakage Current Test

Measurement Range: 0.001uA - 20.0mA
Accuracy: ± (0.3% + 0.005uA)
Test Voltage: 1.0V - 650V DC, 0.1V/Step
Voltage Accuracy: ± (0.5% + 0.2V)
Test Current: 0.5mA - 500mA, 0.5mA/Step DC ≤100V
 0.5mA - 150mA, 0.5mA/Step DC >100V
Charge Current Accuracy: ±(3% + 0.05mA)

Insulation Resistance Test

Measurement Range: 10Ω - 99.99GΩ
IR Accuracy: ± 0.6% (voltage & load dependent)
Test Voltage: 1.0V - 650V DC, 0.1V/Step
Voltage Accuracy: ± (0.5% + 0.2V)
Test Current: 0.5mA - 500mA, 0.5mA/step DC ≤100V
 0.5mA - 150mA, 0.5mA/Step DC >100V
Charge Current Accuracy: ±(3% + 0.05mA)

WithStand Voltage Test

Rise Time (Tr): 0.05 - 120s
Withstand Voltage (Vf): 1.0V - 650V DC, 0.1V/Step
Test Current: 0.5mA - 150mA, 0.5mA/Step
Charge Current Accuracy: ±(3% + 0.05mA)
Measure Time: 30 - 600s
MAX Charge Time: 5 - 600s

General Features

Test Types: Automatic Sequence Test
 Manual Step Test
Null: Correction for Lead Leakage
Monitor Voltage (Vm): Monitor & Display Voltage across DUT
Charge Time: 0 - 999seconds
Dwell Time: 0.2 - 990seconds
Discharge: 65 Watt Discharge Circuit
Trigger: Delay: 0 - 9.995seconds
 Edge: Falling or Rising

Measurement Mode: Continuous or Trigger (INT, EXT, MAN)
Ranging: Automatic or Hold
Measurement Rate: Fast: 18 Measurements/second
 Medium: 14 Measurements/second
 Slow: 7 Measurements/second
Averaging: 1-8
Compare: Upper & Lower Limits for LC & IR Tests
Indication: Audible Alarm, Programmable High, Low or Off for Pass or Fail
Front Panel Lockout: Keypad Lock
Display: 240 x 64 LCD Graphic Display
Standard Interfaces: RS-232
Optional Interfaces: IEEE-488 & Handler
Connectors: 1 BNC Terminal: Input
 2 Banana Terminals: HV(+), HV(-)
 1 Banana Socket: Chassis Ground
Dimensions: (w x h x d): 12.5 x 4.0 x 13.5 inches
 (317.2 x 101.5 x 342.6 mm)
Weight: 18lbs (8.2kg) net, 22lbs (10kg) shipping
Environmental: Operation: 10°C to +40°C
 Storage: -10°C to +50°C
 Humidity: <90%
 Pollution Degree 2
 Installation Category I
Power: 90-125V AC
 190-250V AC
 50/60 Hz
 400 W Maximum

Ordering Information

1855	Capacitor Leakage Current/IR Meter
Includes:	
<u>QT P/N</u>	<u>Description</u>
150767	Instruction Manual
1855-01	Test Leads: Banana to Alligator Clip & BNC to Alligator Clip
4200-0300-00	AC Power Cable
520149	Power Line Fuse 115V Operation: T4A 250V
520148	Power Line Fuse 230V Operation: T2A 250V
N/A	Calibration Certificate traceable to NIST

Optional Accessories:

<u>QT P/N</u>	<u>Description</u>
N/A	Before & After Calibration Data
700171	IEEE-488/Handler Interface
630157	RS-232 Cable

For more detailed specifications, visit www.quadtech.com
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