

VALHALLA SCIENTIFIC – MODEL 2575A PRECISION AC/DC ACTIVE CURRENT SHUNT

Truly a hardworking, versatile instrument designed for the calibration laboratory

The 2575A Precision AC-DC Active Current Shunt is truly a hard working and versatile instrument designed for the calibration laboratory. The unit doubles as a measurement tool for AC and DC current as well as a working standard for low level resistance calibration requirements. In addition, the 2575A now features an improved built-in precision gain 10, chopper stabilizer buffer amplifier.

Features:

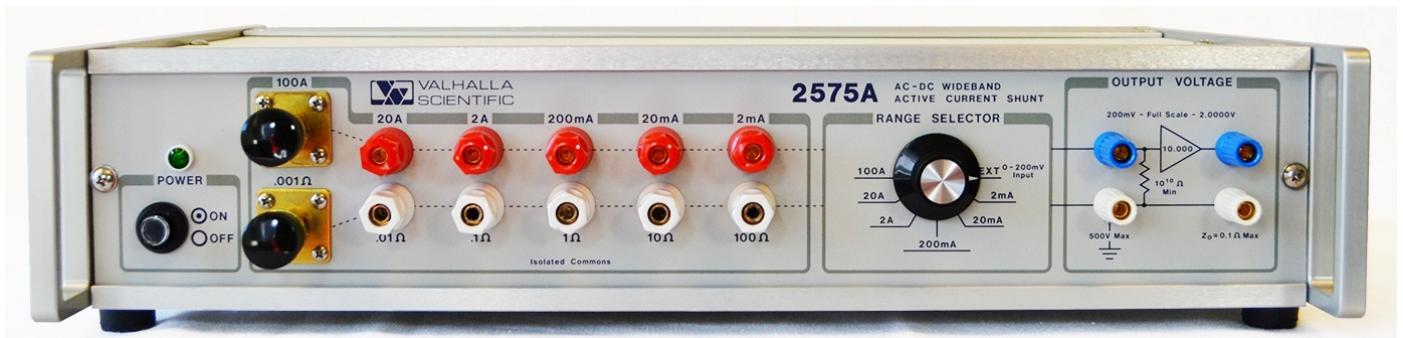
- AC & DC Current Measurement to 100 Amps
- Built –In Chopper Stabilizer Amplifier
- Working Calibration Standard
- Six Independent Switch Selectable Current Ranges
- Fan-Cooled Shunt for Thermal Stability
- Low Resistance Lab Standard Resistance Bank
- Calibration Traceable to NIST

What's Wrong With Using DC Resistors to Certify AC Current?

Plenty! To start with most lab standard resistors are designed to permit close trimming to a nominal DC value. These DC resistors contain inductive components, which even though very small, can result in significant AC voltage error (especially in the lower resistance values). To this end, each range of the 2575A utilizes a specially designed non-inductive resistance element which insures a flat frequency response to 10kHz.

AC & DC Current Measurement to 100 Amps

In the current measurement mode, the 2575A offers six independent switch selectable ranges from 1 milliamp full scale to 100 amperes. All but the maximum range feature 100% over-range capability. The 100A, 10A and 1A range shunt resistors are fan cooled to insure minimum heat rise and thereby maximize thermal stability ($<0.001\% / ^\circ\text{C}$).



MODEL 2575A

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Four-Terminal Performance You Can Bank On

When used as a lab standard resistance bank, the 2575A provides six decade values of 4-terminal resistors from .001 ohm to 100 ohms. Each range of the 2575A is independently adjustable.

Built-In Chopper Stabilizer Amplifier

The full scale voltage drop across the shunt is 100.00 mV at rated current. A precision gain of 10.000 wide-band chopper amplifier is incorporated to provide a higher level output, capable of driving thermal transfer standards. The amplifier is available for use with external inputs and features an input impedance of 10,000 MΩ.

Specifications

Range	Shunt Value	Frequency Response	Accuracy (% of Range)	
			DC	AC ^[1]
100A	0.001Ω	DC to 1kHz	±0.05%	±0.1%
20A	0.01Ω	DC to 10kHz	±0.02%	±0.1%
2A	0.1Ω	DC to 10kHz	±0.02%	±0.1%
200mA	1Ω	DC to 10kHz	±0.01%	±0.1%
20mA	10Ω	DC to 10kHz	±0.01%	±0.1%
2mA	100Ω	DC to 10kHz	±0.01%	±0.1%

[1] AC accuracy is ±0.5% of range above 1000Hz.

Amplifier Characteristics

Amplifier Gain:..... 10.000
Gain Accuracy:..... ± 0.01% ± 10μV RTI @ DC
Frequency Response: ± 0.05% to 10kHz
Input Resistance:..... Greater than 10¹⁰Ω
Output Resistance:..... Less than 0.1Ω

General Specifications

Temperature Range:..... 0 to 50°C
Temp. Coefficient: Less than 0.001% /°C
Voltage Drop (before amplifier): 100mV for FS input current
Size:..... 3.5"H x 17"W x 10"D (8.9cm x 43.2cm x 25cm)
Weight:..... 8 lbs. (3.6KG) Net 13 lbs. (5.9 KG) Shipping
Power:..... 115/230 VAC 50-60 Hz 12 Watts

Accessories

HC	100Amp Cable Set (Spade Lugs)	R3	Rack Mount Adapter
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