

Valhalla Scientific Model 5880A – Specifications

AC DIELECTRIC MODE

AC Voltage Output

Range	Current	Accuracy
100 to 500 VAC	20 mA	0.7% of output + 7.5V
500 to 5000 VAC	35 mA	0.7% of output + 30V
200 to 8000 VAC	10 mA	0.7% of output + 30V with option AC-8

Output Frequency: 50Hz to 100Hz with 1Hz resolution independent of line power frequency.

Output Waveform: Digitally synthesized, low distortion sinewave.

AC Current Sensing (AC Leakage)

Range	Resolution	Accuracy
13.00uA	10nA	0.5% of reading + 1uA
1.300mA	1uA	0.5% of reading + 30uA
40.0mA	100uA	0.5% of reading + 500uA

Current Sensing: Resistive current (in-phase), reactive current (out-of-phase) or total current.

Voltage Coefficient: 100pA/V

DC DIELECTRIC MODE

DC Voltage Output

Range	Current	Accuracy
100 to 500 VDC	20mA	0.3% of output + 6V
500 to 5,000 VDC	35mA	0.3% of output + 25V
5,000 to 7,000 VDC*	5mA	0.3% of output + 75V

Requires option *DC-7
DC Voltage Output with option DC-10

500 to 10,000 VDC	5mA	1% of output + 50V
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DC Current Sensing (DC Leakage)

Range	Resolution	Accuracy
1.800uA	1nA	0.4% of reading + 6nA
18.00uA	10nA	0.3% of reading + 30nA
1.800mA	1uA	0.3% of reading + 30uA
40.0mA	10uA	0.3% of reading + 300uA

Voltage Coefficient: 15pA/V

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HIGH RESISTANCE MODE (Insulation Resistance)

Resistance Range	Minimum Resistance	Test Voltage
2.6 G Ω	100 K Ω	100 VDC
13 G Ω	500 K Ω	500 VDC
26 G Ω	1 M Ω	1,000 VDC
65 G Ω	2.5 M Ω	2,500 VDC

Accuracy: Combined uncertainty of DC Voltage Output + Current Measurement Accuracy

LOW RESISTANCE MODE (Earth Continuity)

Full Scale: 8.5 ohms maximum including lead resistance.

Resolution: 1 milli-ohms

Test Current: 50 mA

Lead Compensation: Automatic offset circuit "nulls" out two wire lead resistance.

Accuracy: 0.3% of reading + 30m Ω (up to 5 Ω)

GENERAL

Warm up Time: 30 minutes

Arc Detection Sensitivity: User selectable 3 microseconds to 30 microseconds.

Display: 40 character alphanumeric vacuum fluorescent

High Voltage Indicator: Lightning bolt illuminated by independent output voltage monitor. Audible alarm sounds prior to voltage output.

Voltage Resolution: 1 volt AC or DC

Dwell Time Accuracy: +2 Seconds /minute, -500mS/ minute

Slew Rate: 10 Volts/second to 1999 volts/second, user selectable.

Limits: Test automatically aborts when digitally stored minimum or maximum limit is exceeded.

Remote Interface Option "IF-4":

GPIB - IEEE-488.2 Subset compatible

RS232C - 1200, 2400, 4800, 9600 Baud rate selectable

Parallel - IBM/Centronics compatible

VICL - Valhalla auxiliary unit control loop

Accuracy: Stated specifications are bipolar and apply for one year within $\pm 5^{\circ}\text{C}$ from calibration temperature (20 to 25 $^{\circ}\text{C}$).

Temperature Coefficient: 0.1 times stated accuracy per $^{\circ}\text{C}$ beyond calibration temperature window.

Calibration: Traceable to the National Institute of Standards and Technology (NIST). Automatic "Covers on" calibration, internal or external. Calibration constants stored in non-volatile memory.

Operating Temperature: 0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$

Humidity: 90% RH, 0 to 40 $^{\circ}\text{C}$

Power: 115/230 VAC + 10%, 350 VA Max

Dimensions: 89mm H x 432mm W x 457mm D (3.5" H x 17" W x 18" D)

Weight: 14Kg (34 lb.) Net / 18Kg (40 lb.) shipping