

Testing / Calibration Equipment & Other Tools



Multi-Calibrator **part # 8720-0007**

Generates pulses, reads frequencies, converts any input into output signals. Powers, reads & simulates digital sensors, sources. Reads millivolts, volts & milliamps. Powers, reads & simulates 2-wire transmitters, provides simultaneous input/output readings, outputs pre-set number of pulses, scale factors for readings, & stop-watch pulse counting. **Features include:**

Function/Range	Accuracy % of span
Measure mVolts (0 to 120)	+0.025 %
Output mVolts (0 to 120)	+0.025 %
Measure Volts (0 to 120)	+0.05 %
Output Volts (0 to 12)	+0.025 %
Measures mA (0 to 52)	+0.05 %
Output mA (0 to 24)	+0.05 %
Transmitter Simulation (0 to 24)	+0.05 %
Measure Frequency (0 to 10K Hz)	+0.01 Hz
(1 to 100 Hz)	+1 Hz
Counter Input (0 to 10,000,000 counts)	infinite
Counter Pulse output (0 to 10,000,000)	infinite
Pulse output low freq. (0 to 100 Hz)	+0.01 Hz
Pulse output high freq. (0 to 10kHz)	+1 Hz

DC Power Supply **part #8720-0006**

- ▶ Continuous and constant DC power supply is critical when testing DCPs, RTUs and Data Recorders.
- ▶ Laboratory instrument available to operate at 120 VAC or 240 VAC.

Output Volts	0 - 18 volts
Output Current	0 - 5 amps
Power Source	AC 100V/120V/220V/240V±3%, 50/60Hz
Voltage Regulation	Line regulation $\leq 0.01\% + 3mV$ Load regulation $\leq 0.01\% + 3mV$ (rating current $\leq 3A$) Load regulation $\leq 0.01\% + 5mV$ (rating current $> 3A$)
Voltage Ripple & Noise	$\leq 0.5mV_{rms}$ 5Hz - 1MHz (rating current $\leq 3A$) $\leq 1mV_{rms}$ 5Hz - 1MHz (rating current $> 3A$)
Voltage Recovery Time	$\leq 100\mu s$ (50% load change, minimum load 0.5A)
Voltage Temp. Coefficient	$\leq 300ppm/^{\circ}C$
Voltage Output range	0 to rating voltage continuously adjustable
Current Regulation	Line regulation $\leq 0.2\% + 3mA$ Load regulation $\leq 0.2\% + 3mA$
Ripple Current	$\leq 3mA_{rms}$
Current Output Range	0 to rating current continuously adjustable (Hi/Lo range switchable)
Dimensions	128mm (W) x 145mm (H) x 285mm (D)
Weight	5 kg

Field Service Tool Kit **part # 8720-0008**

60 Pieces. Consists of a crimp tool, cutters, hex key set, various knives and blades, mirror and magnet pick-up tool, nut drivers, penlight, various pliers, ruler, soldering iron and accessories, tweezers, and wrench set in a black zipper case.

Analog / Digital Multimeter **part # 8720-0000**

An analog/digital multimeter is a basic requirement. Sutron recommends the FLUKE 79. **Features include:**

		(% of reading plus # digits)
DC Voltage	1 mV - 1000 V	0.3% + 1
AC Voltage	0.1 mV - 1000 V	1.0% + 2
Ohms 0.1 Ohm	- 40 Meg Ohm	0.4% + 1
DC Current	1 QA - 10 QA	0.5% + 2
AC Current	1 QA - 10 QA	1.5% + 2
Frequency	10 Hz - 20 kHz	0.01% + 1
Capacitance	2 nf - 9,999 QF	1.9 + 2
Battery Life		2,000 hrs.
Warranty		3 years

Frequency Counter **part #8720-0005**

- ▶ Used for testing frequency stability of RF Radio units prior to field deployment
 - ▶ Used in the field for troubleshooting problems with RF Radio units
 - ▶ Measures from 10 Hz up to 1 GHz
 - ▶ Sensitivity 5 millivolts RMS
 - ▶ Range 10 Hz to 1 GHz
 - ▶ Display 8 digits
 - ▶ Operating Temperature 0 to 40°C
 - ▶ Power 120/ 220 VAC
 - 50/60 Hz
- Requires 10 MHz external reference

RF Directional Wattmeter **part #8720-0001**

- ▶ Portable insertion-type instrument used to accurately measure forward and reflected power of RF Radio units and antennas
- ▶ Consists of the meter unit, a 25 Watt high-frequency element, a variable RF Signal Sampler, and a 25 Watt Load Resistor
- ▶ Essential piece of test equipment for the field, as well as the laboratory