

Excellence in High Voltage HV Lab Series 477 Data Sheet

4W HIGH VOLTAGE LAB POWER SUPPLY

Application:

Photomultiplier, mass spectrometers, nuclear and medical instrumentation.

- $\pm 0.5\text{kV}$, $\pm 1\text{kV}$, $\pm 2\text{kV}$, $\pm 3\text{kV}$ versions
- Input 230 / 115VAC
- Switchable output polarity
- Remote voltage programming or potentiometer setting
- Very low ripple and noise
- Direct reading meter for voltage & current
- Flashover & short circuit protected



Electrical Specification

Order Code	Polarity	Output Voltage	Output Current	Ripple pk-pk	Input Voltage
477-301	Switchable	$\pm 500\text{V}$	8mA	5mV	115V / 230V ac
477-302	Switchable	$\pm 1\text{kV}$	4mA	4mV	115V / 230V ac
477-303	Switchable	$\pm 2\text{kV}$	2mA	2mV	115V / 230V ac
477-304	Switchable	$\pm 3\text{kV}$	1.3mA	5mV	115V / 230V ac

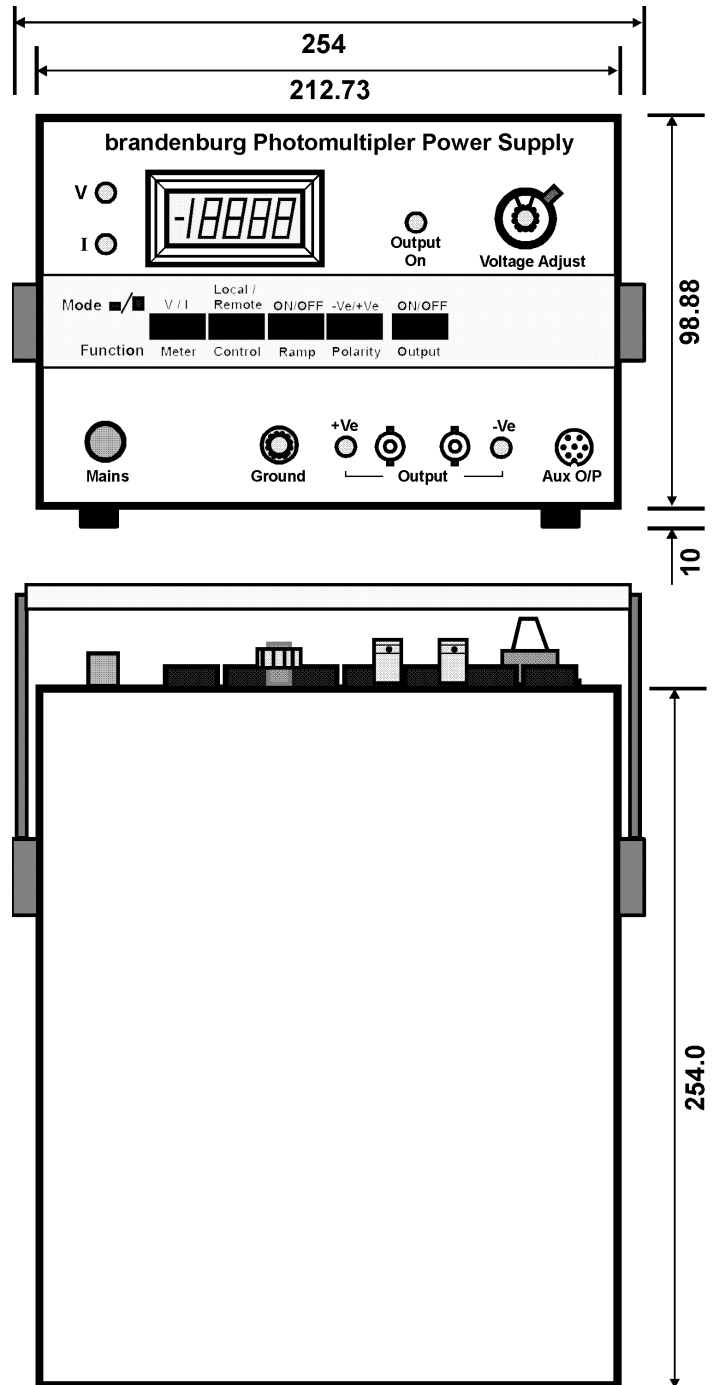
Input	115/230V ac nominal, $\pm 10\%$, 50/60Hz (Switchable 2 ranges). 35VA rating at full load.
Line regulation:	<20ppm over input voltage range.
Load regulation:	<20ppm for zero to full load.
Drift (after 1 hour warm up)	<15ppm in any 15 minute period, <50ppm in any 8 hour period.
Temperature coefficient	<50ppm / $^{\circ}\text{C}$ at maximum rated output.
Control of output (Local)	Front panel 10 turn potentiometer with locking vernier calibration.
Control of output (Remote)	0 to +10V for 0 to 100% rated output voltage, input Z = 10k.
Voltage rate of change limit	Selectable from the front panel, ("Ramp"), this limits the rate of change to <2V/mS (at max voltage) reducing the possibility of arcing within the load application or PM tube.
Protection	Current is limited to approximately 110% of maximum rated output until overload condition is removed. Protected against intermittent flashover to ground.
Voltage & current monitor	Direct reading 4½ digit meter, switch selectable between output current and voltage. Available also are buffered monitor outputs for both current and voltage (available from the analogue port on the rear panel, 0 to +10V corresponds to 0 to 100% of the rated output) Accuracy: Voltage 1%. Current =2%.
Auxiliary output	Fixed $\pm 5\text{V}$ and $\pm 15\text{V}$ dc @ 250mA, regulation : $\pm 1\%$, ripple 10mV pk-pk.
Reference output	+10V.0V $\pm 0.05\%$, temperature coefficient : <50ppm / $^{\circ}\text{C}$.

Environmental Specification

Temperature, operating	-10 to +50°C. De-rate above 35°C linearly to 80% power at 50°C.		
Temperature, storage	-20 to +75°C.	Humidity (RH) <31°C	80% maximum non-condensing
Pollution category	II	Humidity (RH) >30°C	Decrease linearly to 50% at 40°C

Mechanical Specification

Dimensions	W x H x D: 254 x 109 x 254 mm, inc feet & handle. (10" x 4.25" x 10.0")
Weight	4kg (9lb) approximately.
Input	IEC mains connector on rear panel.
Control	9 way "D" type on rear panel.
HV Output	2 off HV SHV connectors on front panel.
Aux output	Binder 680 series, 7 pins, on front panel.



Pin Assignments

Control (rear) connector pin assignments

Pin 1	N/C
Pin 2	Control input
Pin 3	Current monitor
Pin 4	Voltage monitor
Pin 5	N/C
Pin 6	N/C
Pin 7	Reference output
Pin 8	Signal ground
Pin 9	N/C

Aux (front) connector pin assignments

Pin 1	-15V
Pin 2	-5V
Pin 3	0V
Pin 4	+5V
Pin 5	0V
Pin 6	+15V
Pin 7	0V

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