

brandenburg 477 SERIES



High Voltage Lab Series

Total Power	4 Watts
Input Voltages	230 / 115V AC
# of Outputs	Single

SPECIAL FEATURES

- Input 230 / 115VAC 50/60Hz
- Switch selectable polarity
- Local or remote control
- Direct reading DPM for voltage and current
- Monitor outputs for voltage and current
- Highly stable output with low ripple and drift
- Auxiliary split rail supply

ELECTRICAL SPECIFICATION

Supply Input	115/230V ac nominal $\pm 10\%$, 50/60Hz (Switchable 2 ranges). 35VA VA rating (at full load).
High Voltage Output	See ordering information.
Voltage, current & ripple	<20ppm (0.002%) 0% to 100% load.
Load regulation	<20ppm/V (0.002%) over the full input voltage range.
Line regulation	<15ppm during any 15 minute period and <50ppm during any 8 hour period.
Stability (after hr. warm-up)	Multi-turn potentiometer allows full control of the output voltage setting.
Voltage control: Local	A signal of 0V to 10.0V corresponds to 0% to 100% of output rating (Input Z >10k Ω).
Remote	Selectable from the front panel ("Ramp"), this limits the rate of change in output voltage to <2V/mS (at max output voltage) reducing the chance of arcing within PM tube.
Limit dV/dt	<50ppm (0.005%) / deg.C at max voltage output.
Temperature coefficient	Current is limited to approximately 110% of the maximum rated output, until overload condition is removed.
Protection	Direct reading 4½ digit meter, switch selectable between HV output voltage & current . Also available are buffered monitor outputs for both output voltage & current (available from the analogue port on the rear panel, 0 to 10V corresponding to 0 to 100% of the rated output). Accuracy: Voltage mode = 1%. Current mode = 2%.
Voltage & Current Monitor	Fixed ± 5 and ± 15 V dc @ 250mA, regulation: $\pm 1\%$, ripple: 10mV pk-pk.
Auxiliary Output	+10.00V $\pm 0.05\%$ temp'co <50ppm / deg.C
Reference Output	

ENVIRONMENTAL

Operating temperature	-10 to +50 deg.C
Storage temperature	-20 to +70 deg.C
Humidity (RH)	<31°C 80% maximum. >30°C decrease linearly to 50% at 40°C (non-condensing) For indoor use only.

SAFETY

Designed to meet UL1950 and EN 61010

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ORDERING INFORMATION

Input Voltage	Output Voltage	Polarity	Output Current	Ripple pk-pk	Order Code
115/230V ac	0 to 500V	Switchable	8mA	5mV	477-301
115/230V ac	0 to 1kV	Switchable	4mA	4mV	477-302
115/230V ac	0 to 2kV	Switchable	2mA	2mV	477-303
115/230V ac	0 to 3kV	Switchable	1.3mA	5mV	477-304

MECHANICAL SPECIFICATION

Dimensions WxHxD: 212.73 x 98.88 x 254.0mm
(8.375" x 3.89" x 10.0")

Weight 4kg (9lb.) approx.

CONNECTIONS

Input: IEC mains connector on rear panel

Control: 9 way "D" type (rear panel).

HV output: 2 off HV connectors type SHV on front panel.

Aux output: Binder 680 series, 7 pins, on front panel.

Control 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 (+10V)
Pin 8	Signal ground
Pin 9	N/C

Auxiliary connector pin assignments

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

DRAWINGS

