

brandenburg 4479 SERIES

Miniature Photomultiplier Modules

Total Power	2 Watts
Input Voltages	12 VDC 24 VDC
# of Outputs	Single



SPECIAL FEATURES

- 12V or 24V dc nominal input
- Excellent line and load regulation
- Low output ripple, noise and temp'co
- Remote voltage programming
- Positive and Negative output versions
- Voltage & Current monitor
- For printed circuit or chassis mounting
- UL, CSA, EN and CE approved

ENVIRONMENTAL

Temperature	Operating	-10 to +50°C.
	Storage	-10 to +70°C.
Humidity (RH)	<31°C	80% maximum.
	>30°C	decrease linearly to 50% at 40°C. (non-condensing)

SAFETY

UL1950

DESCRIPTION

This range of power supplies are designed for use with a photomultiplier tube detector system.

ELECTRICAL SPECIFICATION

	12V input versions
Input voltage range	+11V to +15V dc
Max. input voltage	18V maximum surge < 5 seconds
Input current (no load)	125mA max.
(full load)	400mA max.
Control of output	5V for 100% input impedance 1MΩ (o/p slew rate: 50V/mS typ)
Fixed Reference output	5V ± 0.05% 3mA max, temp'co 50ppm/degC
Variable Reference output	0-5V multi-turn
Current & Voltage Monitor	5V for 100% accuracy ± 1%, source impedance 10KΩ
	24V input versions
Input voltage range	+22V to + 28V dc
Max. input voltage	32V maximum surge < 5 seconds
Input current (no load)	100mA max.
(full load)	250mA max.
Control of output	10V for 100% input impedance 1MΩ (o/p slew rate: 50V/mS typ)
Fixed Reference output	10V ± 0.05% 3mA max, temp'co 50ppm/degC
Variable Reference output	0-10V multi-turn
Current & Voltage Monitor	10V for 100% accuracy ± 1%, source impedance 10KΩ
	12V & 24V input versions
HF ripple	1mV pk-pk typ
LF noise	4mV pk-pk typ
Line regulation	20ppm/V over full input voltage range
Load regulation	20ppm 0% to 100%
Temperature coefficient	50ppm/degC 20ppm/degC typically
Drift (short term)	15ppm during any 15 minute period after 1 hour warm-up
(long term)	50ppm during any 8 hour period after 1 hour warm-up
Protection	Proof against output short circuit & flash-over (HV current limited to >110% of max). Input protection against polarity reversal

HV output voltage & current - See Ordering Information

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ORDERING INFORMATION

Input Voltage	Output Voltage	Output Polarity	Output Current	Ordering Code with connector	Ordering Code with pins
12V dc	0 – 300V	Positive	3mA	4479-101	4479-113
12V dc	0 – 300V	Negative	3mA	4479-201	4479-213
12V dc	0 – 600V	Positive	3mA	4479-102	4479-114
12V dc	0 – 600V	Negative	3mA	4479-202	4479-214
12V dc	0 – 800V	Positive	2.5mA	4479-103	4479-115
12V dc	0 – 800V	Negative	2.5mA	4479-203	4479-215
12V dc	0 – 1.0kV	Positive	2mA	4479-104	4479-116
12V dc	0 – 1.0kV	Negative	2mA	4479-204	4479-216
12V dc	0 – 1.7kV	Positive	1.2mA	4479-105	4479-117
12V dc	0 – 1.7kV	Negative	1.2mA	4479-205	4479-217
12V dc	0 – 2.0kV	Positive	1mA	4479-106	4479-118
12V dc	0 – 2.0kV	Negative	1mA	4479-206	4479-218
24V dc	0 – 300V	Positive	3mA	4479-107	4479-119
24V dc	0 – 300V	Negative	3mA	4479-207	4479-219
24V dc	0 – 600V	Positive	3mA	4479-108	4479-120
24V dc	0 – 600V	Negative	3mA	4479-208	4479-220
24V dc	0 – 800V	Positive	2.5mA	4479-109	4479-121
24V dc	0 – 800V	Negative	2.5mA	4479-209	4479-221
24V dc	0 – 1.0kV	Positive	2mA	4479-110	4479-122
24V dc	0 – 1.0kV	Negative	2mA	4479-210	4479-222
24V dc	0 – 1.7kV	Positive	1.2mA	4479-111	4479-123
24V dc	0 – 1.7kV	Negative	1.2mA	4479-211	4479-223
24V dc	0 – 2.0kV	Positive	1mA	4479-112	4479-124
24V dc	0 – 2.0kV	Negative	1mA	4479-212	4479-224

MECHANICAL SPECIFICATION

Dimensions	95.2 x 49.0 x 15.0mm (3.75" x 1.94" x 0.6")
Weight	70 g (2.5 oz.) approx.
Mounting	Two holes 4.2 mm dia. on 88.8mm (3.5") centres.

CONNECTIONS

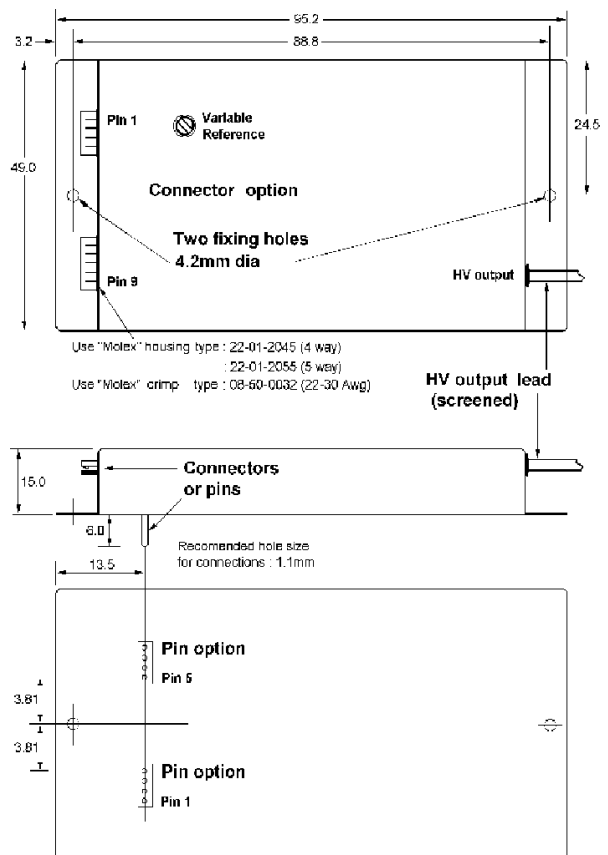
Output	Fly lead, 0.5m (RG178B/U)
HV return	Fly lead braid
Input	Connections by 0.1" connector or pins, see above for ordering codes.

Connector & pin assignments:

Pin 1	Supply +12V or +24V dc
Pin 2	Supply 0V
Pin 3	Signal 0V
Pin 4	Fixed reference output
Pin 5	Control input
Pin 6	Variable reference output
Pin 7	Voltage monitor
Pin 8	Current monitor
Pin 9	Not used (connector versions only)

All pins and connectors are 0.1" pitch

DRAWINGS



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