Series PSM10
PRECISION SCIENTIFIC POWER SUPPLY MODULES

FEATURES

- 10W output power
- V & I control
- V & I monitor
- Output inhibit
- High stability
- Positive or negative polarity models
- Short circuit & flashover protected
- RoHS Compliant to EU Directive 2002/95/EC
- CE marked (LVD)

DESCRIPTION

The Series PSM10 is a range of versatile high voltage component power supply modules equally suited to both laboratory and development work and for specification in OEM equipment. Powered from 24V DC, these units allow full range control and monitoring of voltage and current via 0-10V analogue signals and inhibit signal input. Positive or negative polarity models are available.

As well as photomultipliers, the PSM10 is suitable for gamma cameras, image scanners, spectroscopy, scintillation counters, microchannel plates, piezo crystal devices, ultrasonic transducers, electron beam deflection, electrorheological fluids, and electrostatic lenses (SEMs and STMs).

SPECIFICATION

Output Power:
10W at full rated output voltage and current.

Output Voltage:
10V-1kV to 150V-15kV max depending on model (see table).

Output Current:
667µA to 10mA max depending on model (see table).

Input Voltage:
24V DC.

Input Current:
1A max.

Output Polarity:
Positive or negative to order.

Line Regulation:
Less than 0.005% change in output voltage over range 22V to 26V at rated output power.

Voltage Load Regulation:
Less than 0.005% change in output voltage for change in output current from zero to max output current at rated output voltage.

Ripple:
20mV to 1V peak to peak depending on model (see table).

Voltage Control:
Voltage Demand: 0 to 10V for 0 to max output voltage ±2%.
Input Impedance: 22kΩ (±1%).

Using DAC or OP-AMP:
Connect output of Digital to Analogue Converter (DAC) or Operational Amplifier to Pin 8 and 0V to Pin 6.

Using a potentiometer and internal reference:
Connect the high end (clockwise) of potentiometer to Pin 9, connect low end (counter clockwise) of potentiometer to Pin 6, connect wiper of potentiometer to Pin 8.

Using a potentiometer and external 10 Volt reference:
Connect the high end (clockwise) of potentiometer to external 10V reference, connect low end of potentiometer (counter clockwise) to Pin 6 and external 10V reference return, connect wiper of potentiometer to Pin 8.

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HiTek Power

Using single fixed resistor:
Connect a resistor between Pin 9 and Pin 8 using the internal impedance (22kΩ ±1%) as potential divider.

Using two fixed resistors:
Connect a resistor between Pin 9 and Pin 8, connect an additional resistor between Pin 8 and Pin 6.
Note: Internal impedance 22kΩ (±1%).

Current Control:

Current Demand:	0 to 10V for 0 to max output current ±2%. Note: If left open, circuit supply assumes maximum current capability.
Input Impedance:	1MΩ internal pull-up, to a +15V rail.

Using DAC or OP-AMP:
Connect output to Digital to Analogue Converter (DAC) or Operational Amplifier to Pin 4 and 0V to Pin 6.

Using potentiometer and internal reference:
Connect the high end (clockwise) of potentiometer to Pin 9, connect low end (counter clockwise) of potentiometer to Pin 6, connect wiper of potentiometer to Pin 4.

Using two fixed resistors:
Connect a resistor between Pin 9 and Pin 4, connect an additional resistor between Pin 4 and Pin 6.

Monitors:

Voltage:	0 to 10V ±2% or ±100mV, whichever is greater, for 0 to maximum output voltage.
Output Impedance:	10KΩ ±1%.
Current:	0 to 10V ±2% or ±100mV, whichever is greater, for 0 to maximum output current.
Output Impedance:	10KΩ ±1%.

Inhibit:

Disable:	0 to 0.8V	=OFF
Enable:	2.2V to 24V	=ON
	Open circuit	=ON

Stability:
Less than 50ppm per hour at constant ambient temperature and rated output power after 1 hour warm-up.

Temperature Coefficient:
Less than 50ppm/°C at max output power.

Operating Temperature:
0°C to 50°C at up to 90% RH non-condensing.

Storage Temperature:
-20°C to +70°C.

Altitude:
Sea level to 2000 metres (6500 feet).

Reliability:
Mean Time Between Failure (MTBF) is greater than 100,000 hours.
In accordance with MIL-HDBK-217F.

Protection:
The PSM10 is protected against continuous short circuit and flashover.

Safety:
Meets the requirements of the Low Voltage Directive, 73/23/EEC, by complying with BS EN60950 when installed as a component part of compliant equipment. Units are CE marked accordingly.

Mechanical Specification:

Dimensions:	See outline drawing.	
Weight:	PSM10/102 & PSM10/202:	0.4kg (0.88 lb)
	All other models:	0.7kg (1.54 lb)
Construction:	Fabricated alloy with black painted finish.	
Earthing:	Case internally connected to 0V.	
Output connection:	600mm long screened flying lead (see drawing).	

RoHS:
The Series PSM10 meets the requirements of EU Directive 2002/95/EC on the Restriction of use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

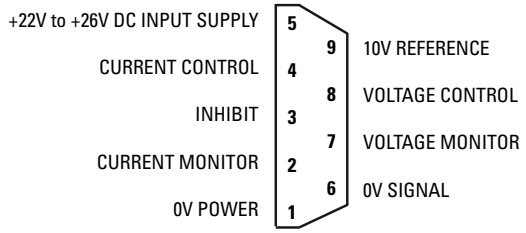
Output and Ordering Information:

Model no	Output Voltage	Output Current	Current Load Regulation	Ripple pk-pk	Output Stored Charge/ Energy
PSM10/102*	10V-1kV	10mA	0.05%	<20mV	<45µC
PSM10/202*	10V-2kV	5mA	0.05%	<20mV	<35µC
PSM10/502*	50V-5kV	2mA	0.1%	<500mV	<20µC
PSM10/103*	100V-10kV	1mA	0.1%	<1V	<15µC
PSM10/153*	150V-15kV	667µA	0.1%	<1V	<110mJ

* Please add either suffix P for positive polarity, or N for negative polarity, eg PSM10/202N for a negative polarity unit with 10V-2kV output voltage.

This model is only one of a selection of photomultiplier modules available from HiTek Power. Should you require a different output voltage or current please contact our sales team.

Interface Connections:
9-way male D-type connector fitted to module:



Please note: The above pin-out diagram is view looking at the connector pins.

CE These component power supplies meet the requirements of EC Directive 73/23/EEC (LVD).

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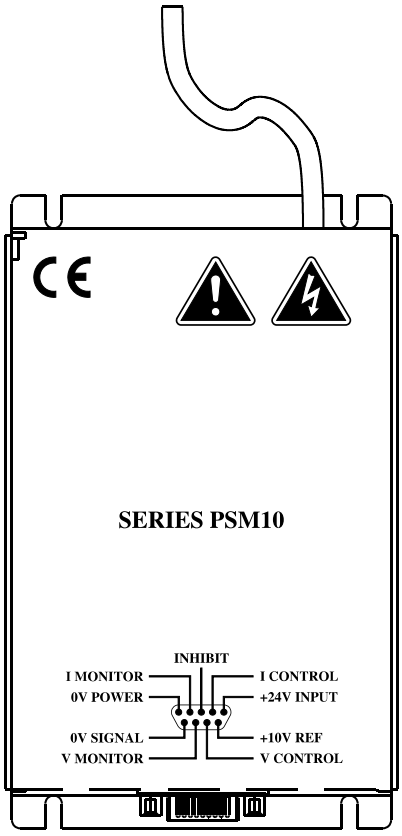

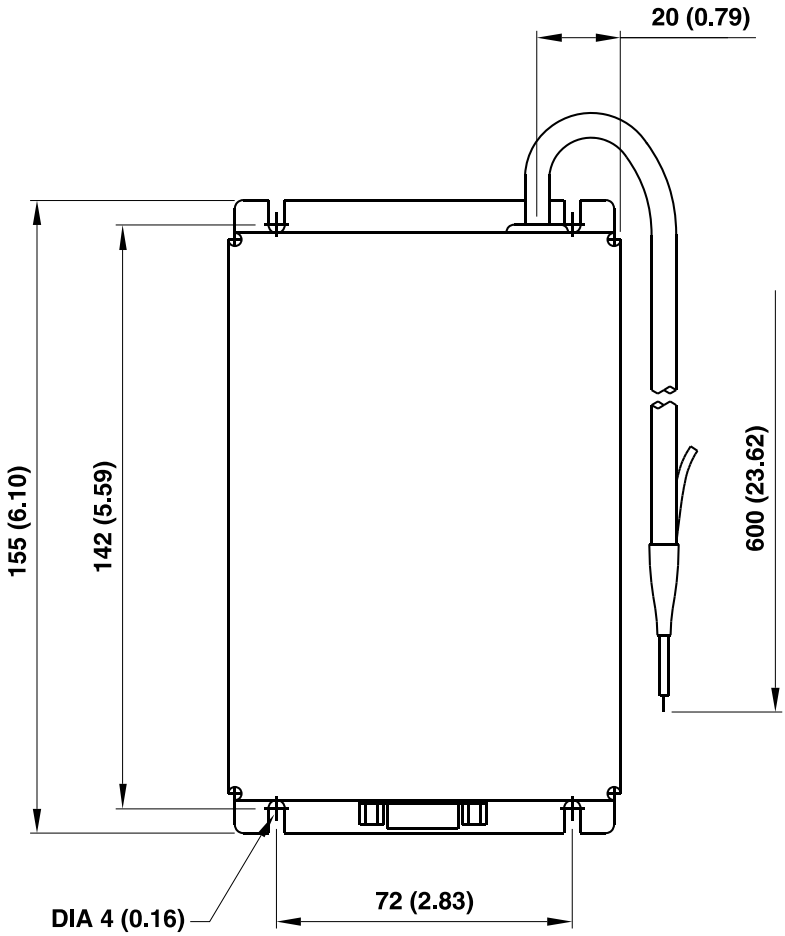

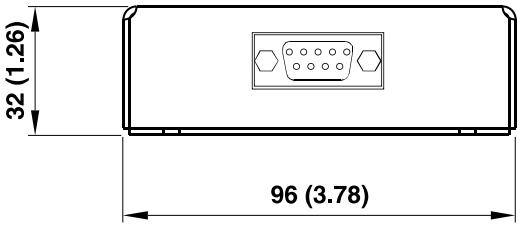

Drawing dimensions are in mm (inches)
Design developments may result in specification changes

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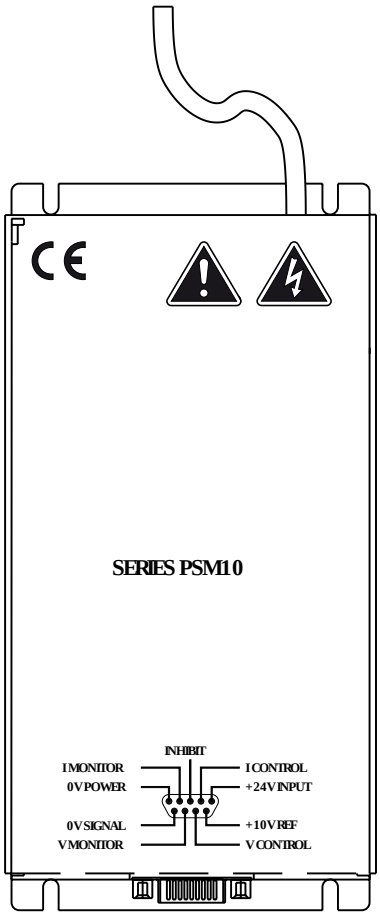
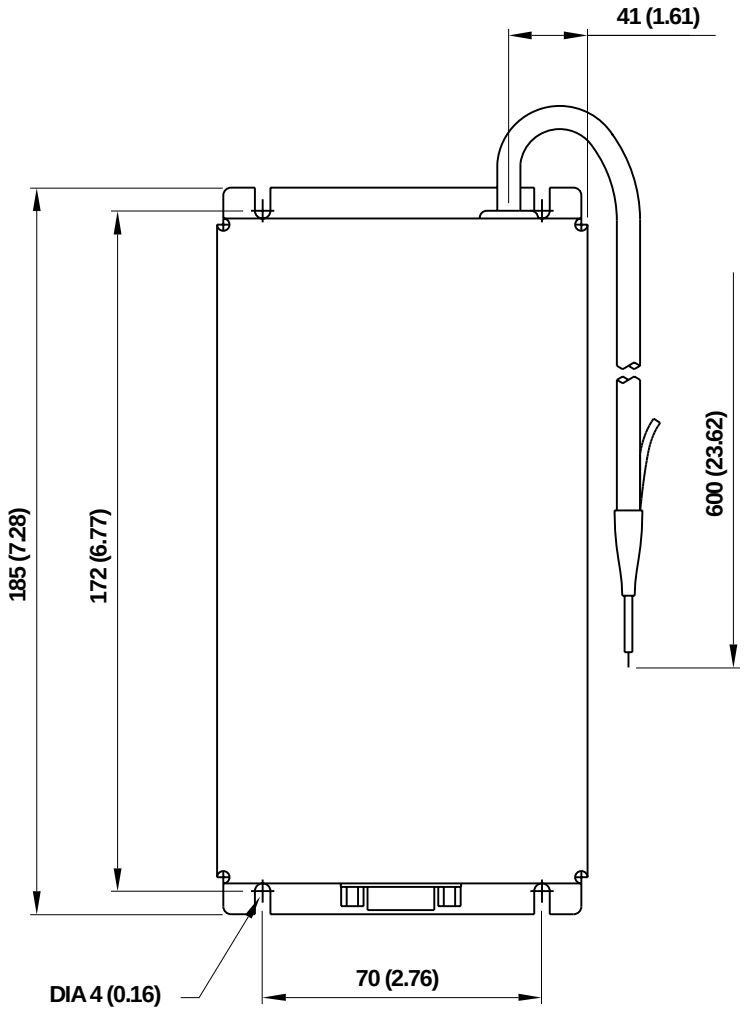
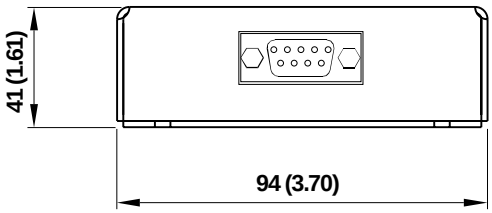




0.7kg UNIT

PSM10/502
PSM10/103
PSM10/153



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4/2011

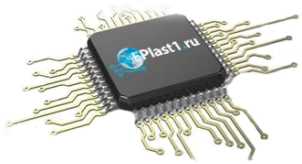
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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