

HITEK POWER MH60 SERIES

VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES



The HiTek Power® MH60 series is a range of versatile high voltage power supply modules suitable for specification in OEM equipment. Powered from 24 VDC, they supply up to 60 W output and allow full range control and monitoring of output voltage and current. Custom versions can be produced for specific requirements.

PRODUCT HIGHLIGHTS

- 60 W output power
- High reliability
- 24 VDC powered
- Range of outputs available
- Positive or negative polarity
- Short circuit and flashover protection
- Remotely controllable
- V and I control
- V and I monitor
- LED status indication
- Low ripple
- EU RoHS compliant to 2002/95/EC marked for EU LV Directive 73/23/EEC

TYPICAL APPLICATIONS

- Wide angle, high definition CRTs
- X-ray equipment
- Insulation and materials testing
- Projection

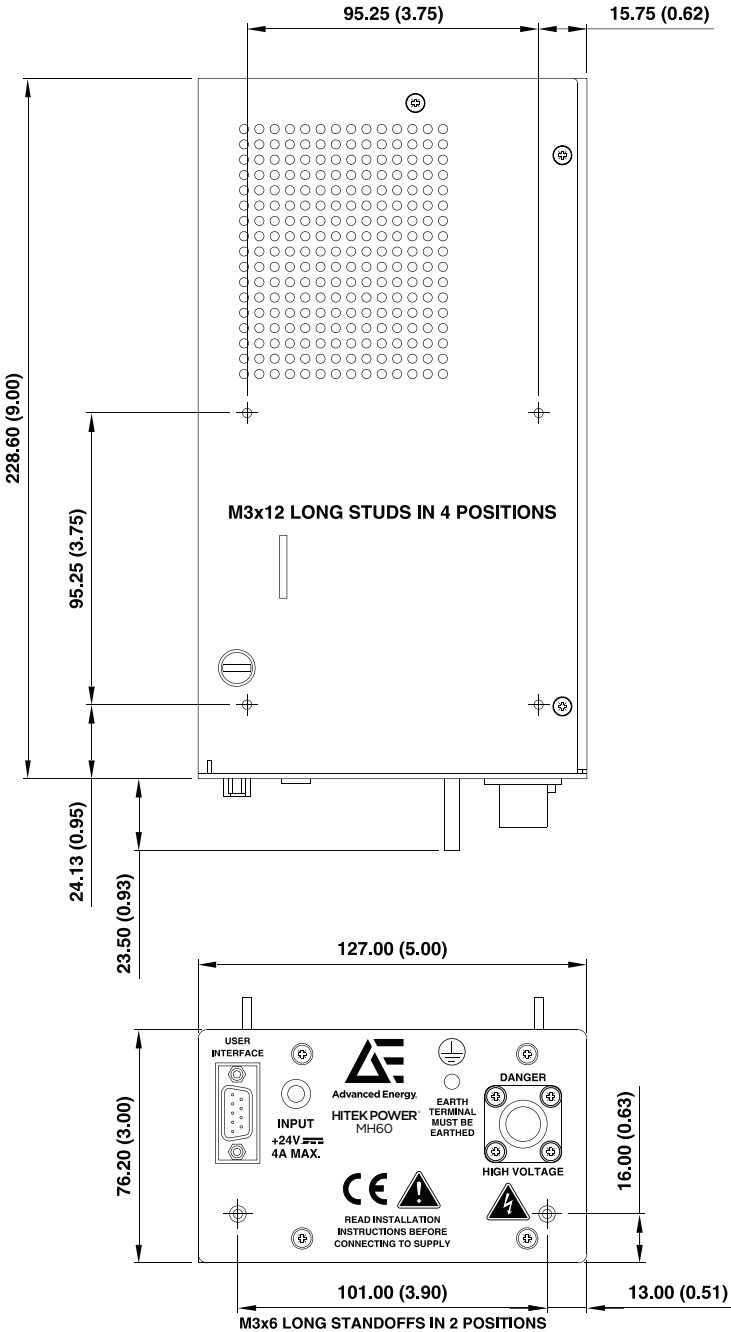
ELECTRICAL SPECIFICATIONS

Parameters	Specifications
Output Power	60 W max
Output Voltage	0 to 50 kV depending on model
Output Current	0 to 2 mA depending on model
Input Voltage	+24 VDC ($\pm 10\%$)
Input Current	4 A max
Polarity	Positive or negative to order
Ripple	< 0.05% +10 V peak to peak
Voltage Regulation	Line: < 0.01% for a 10% change in input voltage
	Load: < 0.01% ± 1 V no load to full load
Current Regulation	Line: < 0.01% for a 10% change in input voltage
	Load: < 0.01% ± 1 μ A for a 50% voltage change
Voltage Control	0 to 10 V for 0 to 50 kV accuracy 0.25% ± 10 V
Current Control	0 to 10 V for 0 to 1.2 mA accuracy 0.25% ± 1 μ A
Monitors	Voltage: 0 to 10 V $\pm 0.25\%$ ± 5 mV for 0 to 50 kV
	Current: 0 to 10 V $\pm 0.25\%$ ± 5 mV for 0 to 1.2 mA
	Each monitor has a series output resistor of 1 k Ω
Temperature Coefficient	100 ppm/ $^{\circ}$ C over operating temperature range
	Applies to voltage control, voltage monitor and current monitor
Stability	$\pm 0.1\%$ over an 8 h period after 30 min warmup
Operating Temperature	0 to +45 $^{\circ}$ C
Storage Temperature	-20 $^{\circ}$ C to +60 $^{\circ}$ C
Humidity	85% max relative humidity non-condensing
Altitude	Sea level to 2000 m (6500')
Installation Category	1 (BS EN61010-1)
Pollution Degree	2 (BS EN61010-1)
Control	The power supply is operated via the 9-way, D-type connector situated on the rear panel. Full control and monitoring functions are available by this method.
Cooling	Free convection (no fan)
Protection	The units are fully protected against flashover and continuous short circuit (no trip).
EMC	The MH60 series is intended for installation as a component of a system. Basic EMC filtering is provided.
Safety	The MH60 series meets the requirements of the Low Voltage Directive (LVD), 2006/95/EC, by complying with BS EN61010 when it is installed as a component part of compliant equipment. It is CE marked accordingly.
RoHS	The MH60 series meets the requirements of EU Directive 2002/95/EC on the Restriction of use of certain Hazardous Substances in electrical and electronic equipment (RoHS).

MECHANICAL SPECIFICATIONS

Dimensions	
Dimensions	See outline drawing
Weight	
Weight	3 kg (6.6 lb)

Construction	
Casing	Aluminium, clear non-chrome passivate finish



Drawing dimensions are in mm (inches).

INTERFACE

Connections																												
Input DC	2 x ¼" space terminals																											
Safety Earth	M5 stud																											
HV Output	50 kV unit has 'poke home' connector																											
Control interface via a 9-way, female D-type connector	<table border="0"> <tr> <td>SIGNAL GROUND 0 V</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td>6</td> <td>CURRENT MONITOR</td> </tr> <tr> <td>HV ON/OFF</td> <td>2</td> <td></td> </tr> <tr> <td></td> <td>7</td> <td>INTERLOCK INPUT</td> </tr> <tr> <td>VOLTAGE PROGRAM</td> <td>3</td> <td></td> </tr> <tr> <td></td> <td>8</td> <td>INTERLOCK MONITOR</td> </tr> <tr> <td>VOLTAGE MONITOR</td> <td>4</td> <td></td> </tr> <tr> <td></td> <td>9</td> <td>+10 V REFERENCE</td> </tr> <tr> <td>CURRENT PROGRAM</td> <td>5</td> <td></td> </tr> </table>	SIGNAL GROUND 0 V	1			6	CURRENT MONITOR	HV ON/OFF	2			7	INTERLOCK INPUT	VOLTAGE PROGRAM	3			8	INTERLOCK MONITOR	VOLTAGE MONITOR	4			9	+10 V REFERENCE	CURRENT PROGRAM	5	
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ORDERING INFORMATION

Options		
Model	Output Voltage	Output Current
MH60/303*	30 kV	2 mA
MH60/403*	40 kV	1.5 mA
MH60/503*	50 kV	1.2 mA
Accessories		
33400206-00	MH60 1M HV Cable	
33400206-01	MH60 3M HV Cable	
33400206-02	MH60 3M HV Cable	

* Add P for a Positive polarity unit or N for a Negative polarity unit. eg: part number for a 50 kV positive unit: MH60/503P
For voltages not listed above, please contact our sales team.



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ABOUT ADVANCED ENERGY

Since 1981, Advanced Energy (AE) has perfected how power performs for its customers. For both end users and OEMs, AE's comprehensive portfolio of standard and custom high voltage components precisely match system specifications to deliver unparalleled energy, quality, and performance. Through close customer collaboration, design expertise, application insight, and world-class support, AE creates successful partnerships and enables customers to push the boundaries of innovation and stay ahead of evolving market needs.

PRECISION | POWER | PERFORMANCE



CAUTION:
High Voltage

Read and understand all documentation before you install, operate, or maintain Advanced Energy high voltage power supplies. Follow all safety instructions and precautions to protect against property damage and serious or possibly fatal bodily injury. Never defeat safety interlocks or grounds.

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