



### FEATURES

- 100W output power
- High reliability
- 24V DC powered
- Range of outputs available
- Positive or negative polarity
- Short circuit & flashover protection
- Remotely controllable
- V & I control
- V & I monitor
- LED status indication
- Low ripple
- CE marked

### DESCRIPTION

The Series MH100 is a range of versatile high voltage modules suitable for specification in OEM equipment as component power supplies. Powered from 24V DC, these units allow full range control and monitoring of voltage and current via 0-10V analogue signals. In addition, internal potentiometers are provided for voltage and current control.

### SPECIFICATION

**Output Power:**

100W max output power.

**Output Voltage:**

0 to 50kV depending on model.

**Output Current:**

0 to 20mA depending on model.

**Input Voltage:**

+24V DC ( $\pm 2V$  DC).

**Input Current:**

6A max.

**Polarity:**

Positive or negative to order.

**Ripple:**

Less than 0.1% peak to peak.

**Voltage Regulation:**

Line: Less than 0.01% for a 10% change in input voltage.

Load: Less than 0.1% for 10% to full load.

**Current Regulation:**

Line: Less than 0.01% for a 10% change in input voltage.

Load: Less than 0.1% for 10% to full load.

**Voltage Control:**

1 0 to 10V for 0 to rated output voltage, accuracy  $\pm 1\%$  of rated voltage.

2 Via remote potentiometer minimum resistance 9k $\Omega$ .

3 Via internal potentiometer.

**Current Control:**

1 0 to 10V for 0 to rated output current, accuracy  $\pm 1\%$  of rated voltage.

2 Via remote potentiometer minimum resistance 9k $\Omega$ .

3 Via internal potentiometer.

Note: Any combination of V and I control may be used.

**Monitors:**

Voltage: 0 to 10V  $\pm 1\%$  for 0 to rated output voltage.

Current: 0 to 10V  $\pm 1\%$  for 0 to rated output current.

Note: Each monitor has a series output resistor of 1k $\Omega$ .

**Temperature Coefficient:**

200ppm/ $^{\circ}$ C over-operating temperature range.

**Stability:**

$\pm 0.1\%$  over an 8 hour period after 30 minutes warm-up.

# Series MH100

## VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES



### Operating Temperature:

0 to +45°C.

### Storage Temperature:

-20°C to +60°C.

### Humidity:

85% maximum relative humidity non-condensing.

### Altitude:

Sea level to 2000m (6500 ft).

### Installation Category:

1 (BS EN61010-1)

### Pollution Degree:

2 (BS EN61010-1)

### Control:

The power supply is operated via the 15-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 Series MH100 is intended for installation as a component of a system. Basic EMC filtering is provided.

### Safety:

The Series MH100 meets the requirements of the Low Voltage Directive (LVD), 73/23/EEC by complying with BS EN61010 when it is installed as a component part of compliant equipment. It is CE marked accordingly.

### RoHS:

The MH100 is currently built to non-RoHS standard. This unit can, however, be configured to meet the requirements of RoHS where significant customer demand requires it, although please note that this will have an impact on delivery timescales.

### Mechanical Specification:

Dimensions: See outline drawing.

Weight: 3kg (6.6lb).

### Outputs and Ordering Information:

The standard range of units available is as follows:

Model no	Output Voltage	Output Current
MH100/502*	5kV	20mA
MH100/103*	10kV	10mA
MH100/253*	25kV	4mA
MH100/303*	30kV	3.3mA
MH100/403*	40kV	2.5mA
MH100/503*	50kV	2mA

\* Please add the required suffix or suffixes to the model number:

P or N Positive or negative polarity  
 S Screened HV cable only  
 A Front HV cable exit  
 B Rear HV cable exit (not available on MH100/503).

eg: part number for a 50kV positive unit with screened cable:  
 MH100/503PS.

For voltages not listed above, please contact our sales team.

If required, this unit can be configured to meet the requirements of RoHS providing a significant quantity is ordered - please contact our sales team.

### Interface Connection:

Input: 4W Molex Minifit 5569  
 Pin 1+2 0V, 3+4 +24V.  
 Safety Earth: M5 stud.  
 HV Output: 50kV unit has 'poke home' connector.

Control interface via a 15-way female D-type connector:



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

# Series MH100

## VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES



M4 x 8 DEEP FIXING HOLES

VIEW ON BOTTOM OF UNIT

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

# HiTek



# Power

*The Power Supply  
Pioneer*

## **UK**

HiTek Power Ltd  
Hawthorn Road, Littlehampton  
West Sussex BN17 7LT  
UK  
Tel: **+44 (0) 1903 712400**  
Fax: **+44 (0) 1903 712500**  
e-mail: [sales.uk@hitekpower.com](mailto:sales.uk@hitekpower.com)

## **USA**

HiTek Power Inc  
124 Jewett Street, Unit #2  
Georgetown, MA 01833-1868  
USA  
Tel: **+1 (978) 352-9100**  
Fax: **+1 (978) 352-9133**  
e-mail: [sales.us@hitekpower.com](mailto:sales.us@hitekpower.com)

## **GERMANY**

HiTek Power GmbH  
Joh.-Friedr.-Boettger-Str. 21  
D-63322 Roedermark  
Germany  
Tel: **+49 (0) 6074 69285 0**  
Fax: **+49 (0) 6074 69285 10**  
e-mail: [sales.de@hitekpower.com](mailto:sales.de@hitekpower.com)

## **JAPAN**

HiTek Power Japan  
1-5-13 Kyutaroumachi  
Chou-ku, Osaka 541-0056  
Japan  
Tel: **+81 (6) 6271 8180**  
Fax: **+81 (6) 6271 8190**  
e-mail: [info@hitekpowerjapan.co.jp](mailto:info@hitekpowerjapan.co.jp)