



### FEATURES

- 100W max output power
- High reliability
- 24V DC powered
- Positive or negative polarity
- Short circuit & flashover protection
- Remotely controllable
- V & I control
- V & I monitor
- Low ripple
- CE marked

### DESCRIPTION

The Series MHX is a range of versatile high voltage modules suitable for specification in OEM equipment as component power supplies. Suitable applications include X-ray equipment, insulation and materials testing, electron and ion beam acceleration, and ion acceleration. 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, depending on model.

#### Output Voltage:

0 to 80kV max depending on model.

#### Output Current:

0 to 1.67mA 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 0.05% no load to full load.

#### Current Regulation:

Line: Less than 0.1% 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.

# Series MHX

## VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES



### Stability:

±0.1% over an 8 hour period after 30 minutes warm-up.

### 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 MHX is intended for installation as a component of a system. Basic EMC filtering is provided.

### Safety:

The Series MHX 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 Series MHX 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: 3.5kg (7.7lb).

### Outputs and Ordering Information:

The standard range of units available is as follows:

Model no	Output Voltage	Output Current	Output Power
MHX-603*	60kV	1.67mA	100W
MHX-803*	80kV	1mA	80W

\* Please add suffix P (Positive) or N (negative) to the model number for the required polarity.

eg: part number for a 50kV positive unit: MHX-503P.

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

### Interface Connection:

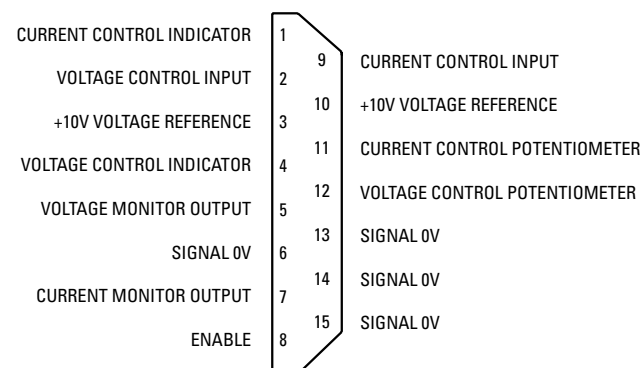
+24V input: 4W Molex Minifit 5569

Pin 1+2 0V, 3+4 +24V.

Safety Earth: M5 stud.

HV Output: 50kV unit has 'poke home' connector.

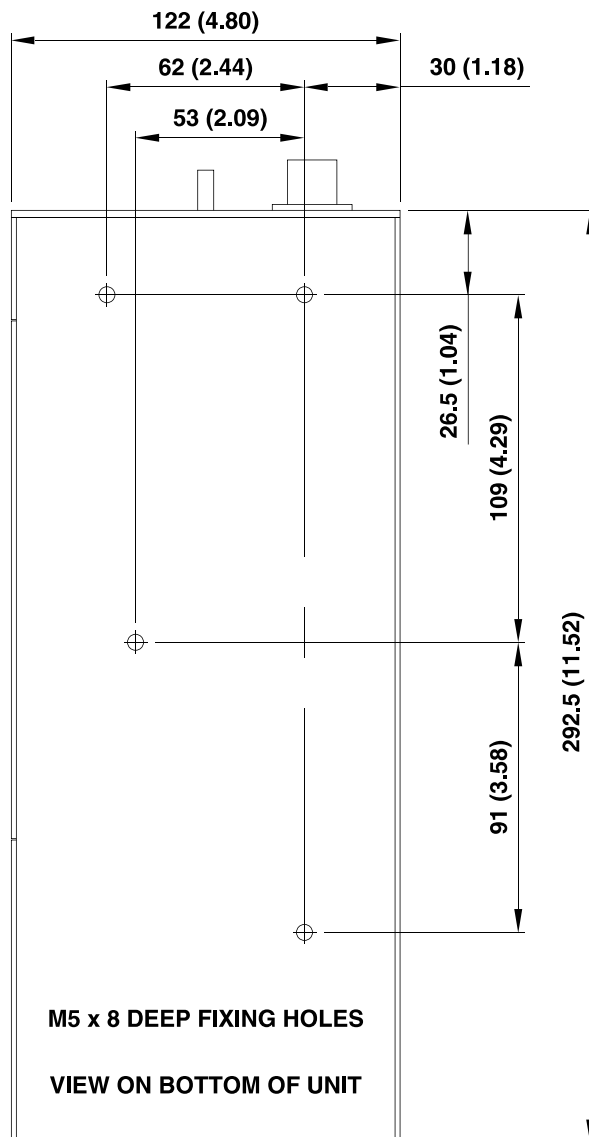
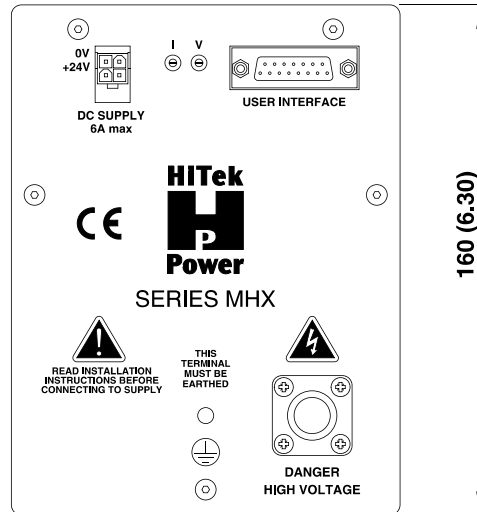
Control interface via a 15-way female D-type connector:



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

# Series MHX

## VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES



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

# HiTek



# Power

*The Power Supply  
Pioneer*

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