



FEATURES

- **85W output power**
- **Quad outputs**
- **Each output individually protected**
- **High reliability**
- **Screened case for low magnetic radiation**
- **Compact design**

DESCRIPTION

HiTek Power's Mass Spectrometry product ranges draw on our extensive high voltage design skills and Mass Spectrometry application knowledge.

The Series MSQ is a range of quad output modules for use in high leakage electrostatic lens applications. The MSQ modules provide reliable and consistent operation over long working periods.

HiTek Power uses a modular design approach within its Mass Spectrometry products, which enables us to offer an extensive range of performance combinations.

Simple changes can be made from changing cable lengths and connectors to completely new custom solutions using HiTek Power's proven power conversion topologies, control methods and mechanical knowledge. Please contact the Sales Team to discuss your specific requirements.

SPECIFICATION

Output Power:

85W max.

Output Voltage:

±430V to ±1.35kV depending on model.

Output Current:

Up to 70mA depending on model.

Output Polarity:

Not selectable.

Input Voltage:

+24V DC ±10%.

Input Current:

6A maximum.

Line Regulation:

Less than 0.5% for a 1V input voltage change.

Load Regulation:

Less than ±1% for output 1.
 ±4% for outputs 2, 3 and 4.

Ripple:

Less than 0.05% peak to peak.

Voltage Control:

Output voltages are fixed.

Current Control:

Fixed at approximately 110% to 130% of maximum.

Stability:

0.25% per hour after 1 hour warm up.

Temperature Coefficient:

250ppm/°C at max output voltage.

Cooling:

Forced cooled (integral fan).

Protection:

The units are fully protected against over voltage, thermal and short circuit on all outputs.

Series MSQ

MASS SPECTROMETRY POWER SUPPLY MODULES



Temperature:

Operational: 10°C to 45°C
Storage/transport: -20°C to 85°C.

Altitude:

Operational: Sea level to 2000 metres (6500 ft).
Storage/transport: Sea level to 18,000 metres (59,055 ft).

Reliability:

MTBF greater than 50,000 hours.

Humidity:

80% maximum relative humidity up to 31°C, reducing linearly to 50% at 40°C. Non-condensing (ref EN61010-1).

Safety:

Meets the requirements of the Low Voltage Directive, 2006/95/EC by complying with BS EN61010-1:2010 when installed as a component part of compliant equipment. Units are CE marked accordingly.

RoHS:

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

Construction:

A machined aluminium alloy case is used for good heat dissipation and screening.

Mechanical Specification:

Dimensions: 216 x 155 x 52 mm (8.1 x 6.1 x 2 in).
Weight: 0.8kg (1.76 lb).
Casing: Aluminium, clear non-chrome passivate finish.

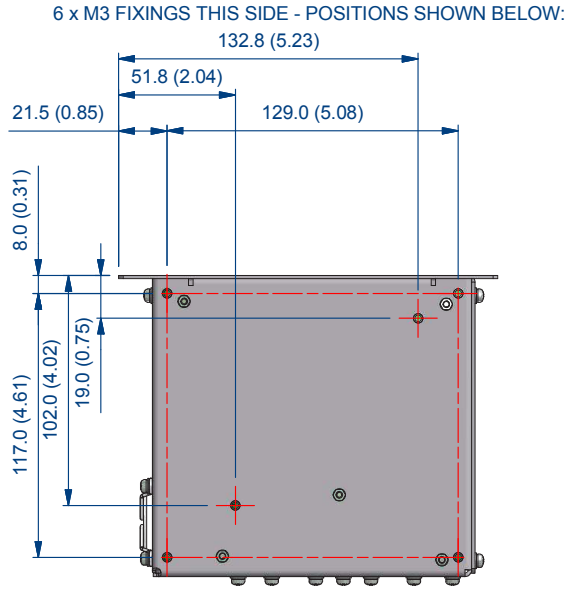
Output and Ordering Information:

| Model No | Output 1 | Output 2 | Output 3 | Output 4 |
|----------|------------|------------|--------------|--------------|
| MSQ-801 | +430V 70mA | -430V 70mA | +800V 15mA | -800V 15mA |
| MSQ-142 | +430V 50mA | -430V 50mA | +1.35kV 15mA | -1.35kV 15mA |

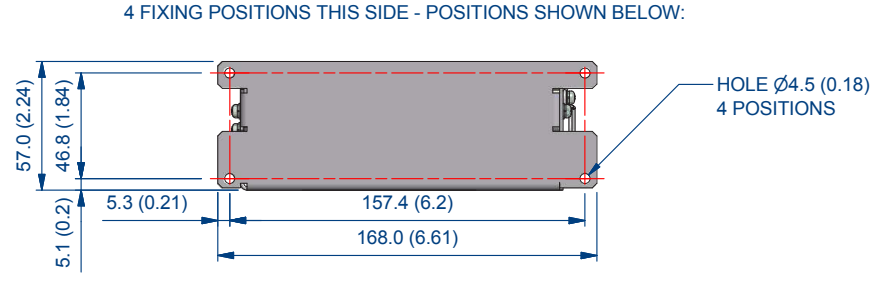
Interface Connections:

Molex Minifit 16-way connector (please note that the input and output 0V are connected together and also connected to the chassis).

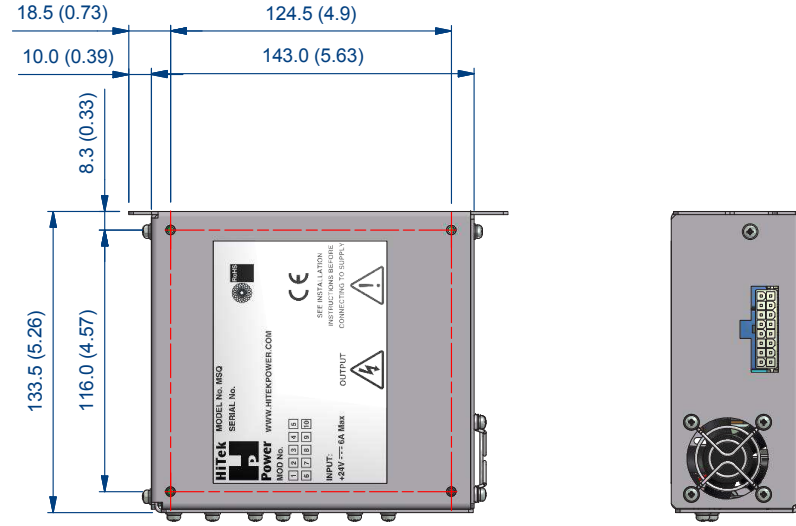
| Pin | Function |
|-----|------------|
| 1 | |
| 2 | |
| 3 | |
| 4 | +24V input |
| 5 | 0V input |
| 6 | |
| 7 | |
| 8 | |
| 9 | Output 3 |
| 10 | |
| 11 | Output 1 |
| 12 | 0V output |
| 13 | 0V input |
| 14 | Output 2 |
| 15 | |
| 16 | Output 4 |



DIMENSIONS mm (in)



4 x M3 FIXINGS THIS SIDE - POSITIONS SHOWN BELOW:



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

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

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

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