HITEK POWER MSRZ SERIES

MASS SPECTROMETRY POWER SUPPLY MODULES

HiTek Power® MSRZ series reversible source modules provide a fast reversible output voltage with high stability, low ripple, and excellent repeatability for precision applications. They perform reliably even under short-circuit or arc conditions.

The modular design of AE high voltage products for mass spectrometry enables an array of performance features and combinations. From simple options, such as cable length and connector type, to complete custom designs, we deliver solutions that precisely fulfill your specific requirements.

PRODUCT HIGHLIGHTS

- Output power: 3.2 W
- Output voltage: ±1 to ±20 kV
- Ripple: < 40 to < 300 mV
- Temperature coefficient: 25 ppm/°C
- Stability: < 0.01% per hour, 0.05% in eight hours after warmup
- Reversible outputs
- Fast switching
- Four quadrant power stage
- Controllable through zero
- High reliability

ELECTRICAL SPECIFICATIONS

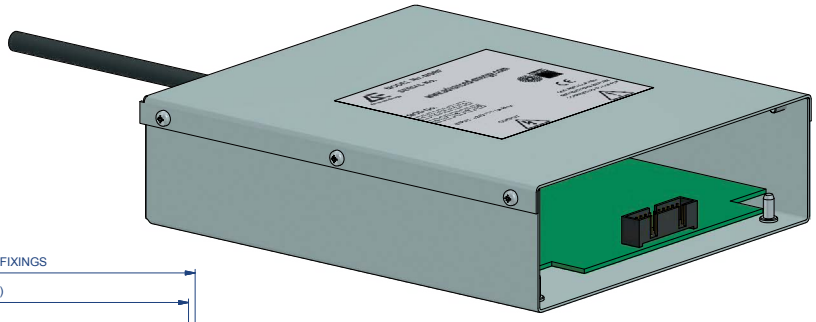
Output Power	3.2 W, max
Output Voltage	±1 to ±20 kV
Output Current	0.35 to 1 mA
Input Voltage	+24 VDC ±10%
Input Current	1 A, max
Line Regulation	< 10 ppm for a 1 V input voltage change
Load Regulation	< 10 ppm for a 10 to 100% load change
Ripple	< 40 to < 300 mV, depending on model
Voltage Control	0 to 10 V = 0 to 100%, accuracy ±2%
Current Control	Fixed at approximately 110 to 130% of max
Voltage Monitor	±10 V = +100 to -100%, accuracy ±2%
Current Monitor	±10 V = +100 to -100%, accuracy ±2%
Polarity Control	Low < 0.8 V = Negative
	High > 3.5 V or open = Positive
Inhibit	Low < 0.8 V = Enabled
	High > 3.5 V or open = Inhibited
Stability	< 0.01 % per hour, 0.05% in eight hours (after one hour warmup)
Temperature Coefficient	25 ppm/°C at max output voltage (tested with external voltage control, 10 ppm available on request)
Cooling	Convection cooled
Protection	Units are fully protected against over-voltage, short circuit, and intermittent arcs to ground.
Operational Temperature	10 to 50°C (50 to 122°F)
Storage/Transport Temperature	-20 to 85°C (-4 to 185°F)
Operational Altitude	Sea level to 2000 m (6500′)
Storage/Transport Altitude	Sea level to 18,000 m (59,055′)
Reliability	MTBF > 50,000 hours
Humidity	80% max relative humidity up to 31°C (88°F), reducing linearly to 50% at 40°C (104°F); 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	Meets the requirements of EU Directive 2011/65/EC on the Restriction of use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).
Construction	A fabricated aluminum alloy case is used for good heat dissipation and screening.
Options	A control option can be supplied with a bipolar input voltage program of ±10 V without the polarity control signal. Please consult our Sales Team for part numbering for this option.

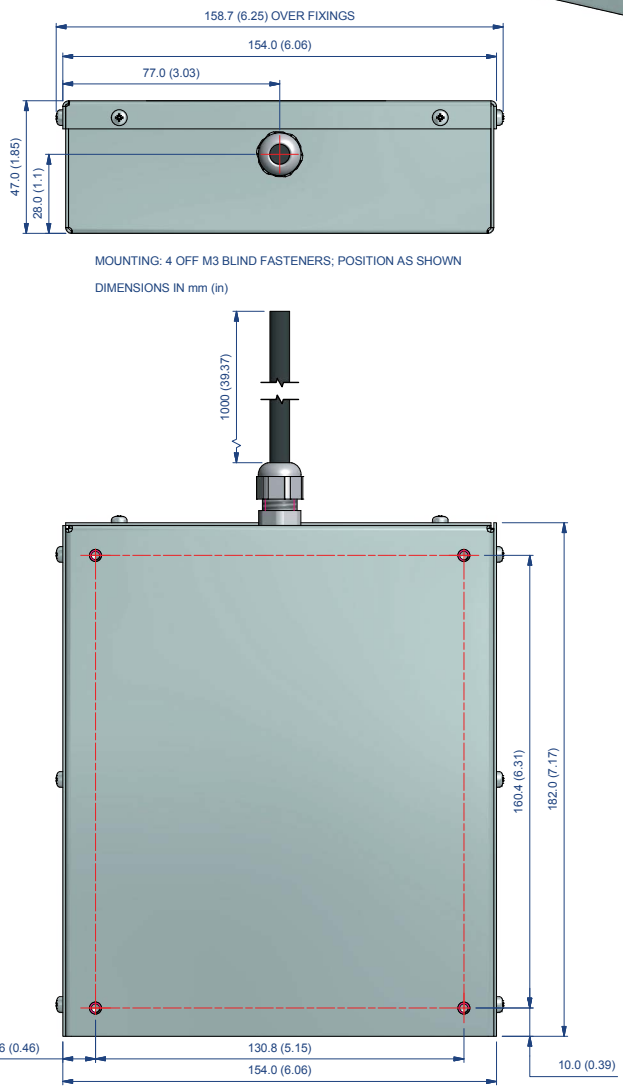
MECHANICAL SPECIFICATIONS

Dimensions	159 mm x 182 mm x 47 mm (6.25″ x 7.16″ x 1.85″)
Weight	1.5 kg (3.3 lb)
Casing	Aluminum, clear non-chrome passivate finish
Output Cable	Unterminated URM76; 1 m (39.37″) of screened output cable
Connectors	Various options are available upon request.

Drawing dimensions are in mm (inches).

Design developments may result in specification changes.





INTERFACE

20-Way IDC Connector

Connections	
Pin	**Function**
1	+24 VDC Input Supply
2	Not Connected
3	+24 VDC Input Supply
4	Voltage Monitor
5	+24 VDC Input Supply
6	Current Monitor
7	+24 VDC Input Supply
8	Voltage Control
9	+24 VDC Input Supply
10	Control Return
11	0 V Input
12	0 V Input
13	0 V Input
14	Signal Ground
15	0 V Input
16	Not Connected
17	0 V Input
18	Polarity Select
19	0 V Input
20	Not Connected

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.

For international contact information, visit advancedenergy.com.

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