



HITEK POWER® MSRD SERIES
MASS SPECTROMETRY POWER SUPPLY MODULES





MSRD SERIES

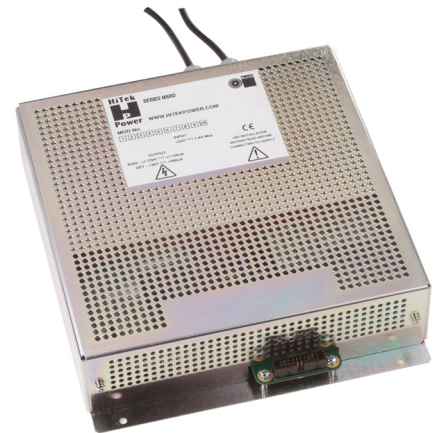
The MSRD series consists of high-stability, reversible source modules that perform reliably even under short-circuit or arc conditions. It pairs fast reversible bias output with a floating +3 kV, 400 μ A detector output, offers a differential programming input, and can be set by an external voltage.

MODULAR DESIGNS, CUSTOM SOLUTIONS

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.

FEATURES

- › Output power: 1.8 W, reversible
- › Output voltage: 0 to ± 12 kV (bias), 0 to +3 kV (detector)
- › Ripple: < 200 mV (bias and detector)
- › Temperature coefficient: 25 ppm/ $^{\circ}$ C (bias), 300 ppm/ $^{\circ}$ C (detector); lower values available
- › Stability: 100 ppm (bias)
- › Variable floating detector: 1.2 W
- › Bias four quadrant output stage
- › Bias controllable through zero
- › High reliability



PROVEN POWER-CONVERSION TOPOLOGIES, CONTROL METHODS, AND MECHANICAL EXPERTISE



SPECIFICATIONS	BIAS	DETECTOR
Output Power	1.8 W, max	1.2 W, max
Output Voltage	0 to ±12 kV	0 to +3 kV
Output Current	150 to 250 µA (depending on model)	400 µA
Input Voltage	+24 VDC ±10%	
Input Current	1.4 A, max (depending on model)	
Line Regulation	< 1.2 V	< 3 V for a 5% input voltage change
Load Regulation	< 1.2 V	< 3 V for a 10 to 100% load change
Ripple	< 200 mV	< 200 mV
Voltage Control	0 to +10 V for full scale accuracy ±2%	0 to +10 V for full scale accuracy ±5%
Current Control	Fixed at 100 µA above nominal	Fixed at 500 µA
Voltage Monitor	0 to ±10 V for full scale accuracy ±2%	0 to +10 V for full scale accuracy ±5 %
Current Monitor	0 to ±10 V for full scale accuracy ±5%	--
Polarity Control	Bias output, < 1 V = negative output, > 3.5 V or open = positive output	
Inhibit	Bias and detector outputs < 1 V or open = off/inhibited, > 3.5 V = operating	
Stability	100 ppm	1000 ppm over a one hour period
Temperature Coefficient	25 ppm/°C (lower values available upon request)	300 ppm/°C (lower values available upon 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 aluminium alloy case is used for good heat dissipation and screening.	

Mechanical Specification	
Dimensions	240 mm x 216 mm x 56 mm (9.5" x 8.5" x 2.2")
Weight	4.5 kg (9.9 lb)
Casing	Aluminum, clear non-chrome passivate finish
Output Cable	Unterminated URM76; 2 x 1 m (3.3') of screened URM76 output cable
Connectors	Various options are available upon request.



OUTPUT AND ORDERING INFORMATION

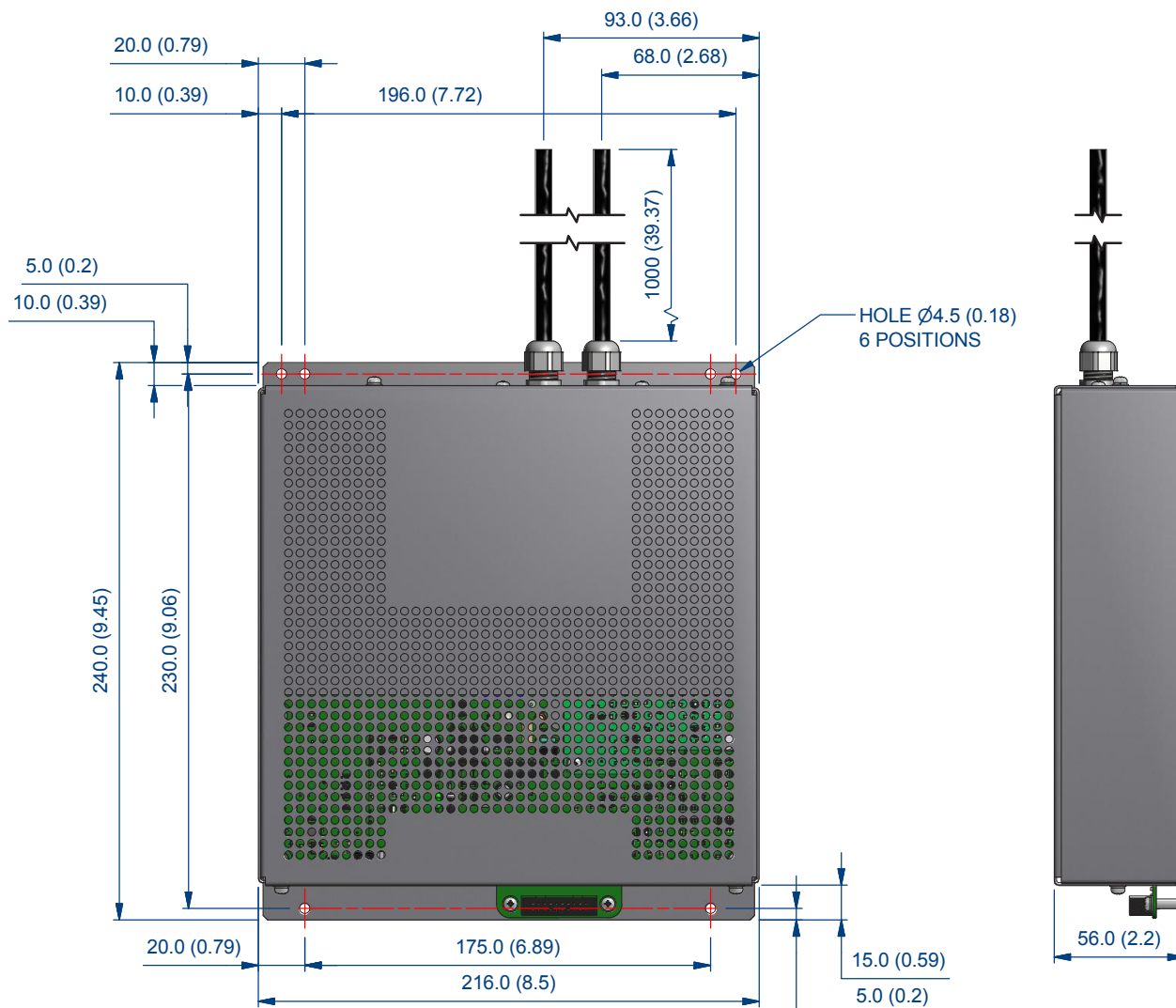
Model	Bias Output	Detector Output	Ripple (Bias/Detector)	Bias Speed
MSRD-502	±5 kV, 250 μA	+3 kV, 400 μA	< 200 mV/< 200 mV	< 150 msec max to 99 %
MSRD-752	±7.5 kV, 200 μA	+3 kV, 400 μA	< 200 mV/< 200 mV	< 150 msec max to 99 %
MSRD-103	±10 kV, 175 μA	+3 kV, 400 μA	< 200 mV/< 200 mV	< 150 msec max to 99 %
MSRD-123	±12 kV, 150 μA	+3 kV, 400 μA	< 200 mV/< 200 mV	< 150 msec max to 99 %

INTERFACE CONNECTIONS

20-Way IDC Connector

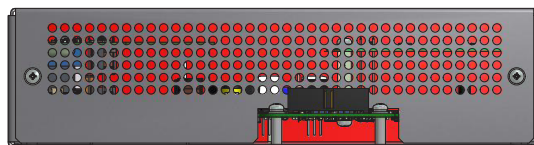
+24 VDC INPUT VOLTAGE	1
NOT CONNECTED	2
+24 VDC INPUT VOLTAGE	3
BIAS V MONITOR	4
+24 VDC INPUT VOLTAGE	5
BIAS I MONITOR	6
+24 VDC INPUT VOLTAGE	7
BIAS V PROGRAM (POSITIVE INPUT)	8
+24 VDC INPUT VOLTAGE	9
BIAS V PROGRAM (NEGATIVE INPUT)	10
0 V SIGNAL	11
DETECTOR V PROGRAM (POSITIVE INPUT)	12
0 V INPUT	13
DETECTOR V PROGRAM (NEGATIVE INPUT)	14
0 V INPUT	15
DETECTOR V MONITOR	16
0 V INPUT	17
POLARITY SELECT	18
0 V INPUT	19
INHIBIT INPUT	20

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



MOUNTING: 6 OFF M4 CLEARANCE HOLES IN BASE AS SHOWN.

DIMENSIONS IN mm (in).





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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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