MX10 HIGH PERFORMANCE DC-DC CONVERTER

SPELLMAN HIGH VOLTAGE ELECTRONICS CORPORATION

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Spellman's MX10 is a well-regulated high performance DC-DC converter featuring a "hot switchable" polarity reversal capability. The MX10's low ripple specification makes it ideal for Mass Spectrometry applications; especially security detection systems, Dynodes, sample ionization as well as capillary electrophoresis and electrostatic printing applications.

The MX10 is rated at 10kV @ 100uA and is packaged in a shielded metal enclosure. This unit features a logic signal input to control output polarity reversal. A HV inhibit feature, along with voltage and current monitors are provided. Easily customized to meet OEM requirements, the MX10 can be provided with current control, improved ripple performance and higher voltage and current capabilities.

TYPICAL APPLICATIONS

Mass Spectrometry Capillary Electrophoresis Electrostatic Printing

OPTIONS

VCC: Voltage and Current Control

SPECIFICATIONS

Input Voltage:

+24Vdc, ±1 volt

Input Current:

<400mA continuous <1.2A during reversing

Output Voltage:

±200Vdc to ±10kV

Output Current:

0 to 100uA max.

Polarity:

Remotely reversible via logic signal, 250mS to settle to $\pm 2\%$, 1 Hz maximum switch rate

Voltage Regulation:

Load: 0.1% of maximum output voltage

- for a no load to full load change
- Line: 0.1% of maximum output voltage for a 1 volt input line change

HOT SWITCHABLE POLARITY REVERSIBLE VIA A LOGIC SIGNAL

- WELL REGULATED, LOW RIPPLE
- POLARITY REVERSAL WITHIN 250mS (OPTION TO IMPROVE TO 100mS)
- VOLTAGE AND CURRENT MONITOR OUTPUTS
- REMOTE HV INHIBIT
- FLYING HIGH VOLTAGE OUTPUT CABLE
- VOLTAGE OR CURRENT CONTROL OPTIONS

www.spellmanhv.com/manuals/MX10

Current Regulation: (VCC Option)

Load: 0.1% of maximum rated current for a

- 0 to 100% voltage change
- Line: 0.1% of maximum rated current for a 1 volt input line change

Voltage/Current Programming:

0 to 10 volt corresponds to 0 to 100% of rated output voltage

Voltage/Current Monitor:

0 to 10 volt corresponds to 0 to 100% of rated output voltage

Programming and Monitor Accuracy:

±2%

Ripple:

≤0.005% Volts p-p

Stability:

0.1% per hour after 1 hour warmup

Temperature Coefficient:

≤100ppm per degree C

Environmental:

Temperature Range: Operating: 0°C to 40°C Storage: -40°C to 85°C

Humidity:

10% to 90%, non-condensing.

Cooling:

Convection cooled

Dimensions:

1.63" H X 6.61" W X 4.53" D (41.5mm X 168mm X 115mm)

Weight:

Approximately 3 pounds (1.4kg)

For locations worldwide

Interface/Power Connector:

9 pin male D connector

HV Output Connector:

39.4" (1m) Flying Lead of URM76 LSF cable

www.spellmanhv.com

Regulatory Approvals:

Compliant to 2004/108/EC, The EMC Directive and 2006/95/EC, The Low Voltage Directive.



Corporate Headquarters Hauppauge, New York USA +1-631-630-3000 FAX: +1-631-435-1620 e-mail: sales@spellmanhv.com

Spellman High Voltage is an ISO 9001:2008 and ISO 14001:2004 registered company

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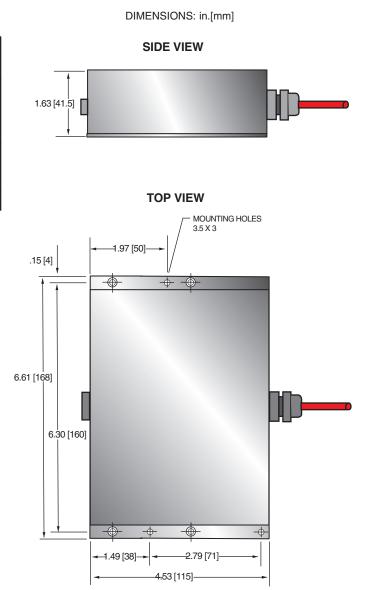
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| MX10 TERMINAL BLOCK 9 PIN | | | |
|---------------------------|-----|---------------------------|--|
| | JB1 | SIGNAL | SIGNAL PARAMETERS |
| | 1 | Voltage Monitor | 0-10V=0-100% of Rated Output |
| | 2 | External Inhibit Input | Open or >10V = "OFF"; <4V = "ON" |
| | 3 | Current Programming Input | 0-10Vdc = 0-100% of Rated Output (on VCC option) |
| | 4 | Signal Ground | Signal Ground |
| | 5 | Current Monitor | 0-10Vdc = 0-100% of Rated Output |
| | 6 | Polarity Control Input | Open or >10V = "NEGATIVE"; <4V = "POSITIVE" |
| | 7 | Voltage Programming Input | 0-10Vdc = 0-100% of Rated Output |
| | 8 | +24V Input | +24V Input |
| | 9 | Power Ground | Power Ground |

| How to Order: | | |
|-----------------------------------|--|--|
| Standard: PART NO.:MX10PN24 | | |
| VCC Option: PART NO.:MX10PN24/VCC | | |



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Corporate Headquarters Hauppauge, New York USA +1-631-630-3000 FAX: +1-631-435-1620 e-mail: sales@spellmanhv.com For locations worldwide
WWW.Spellmanhv.com



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