



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,  $\pm 1$  volt

### Input Current:

<400mA continuous  
<1.2A during reversing

### Output Voltage:

$\pm 200$ Vdc to  $\pm 10$ kV

### 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](http://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:

$\pm 2\%$

### Ripple:

$\leq 0.005\%$  Volts p-p

### Stability:

0.1% per hour after 1 hour warmup

### Temperature Coefficient:

$\leq 100$ ppm 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)

### Interface/Power Connector:

9 pin male D connector

### HV Output Connector:

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

### Regulatory Approvals:

Compliant to EEC EMC Directive. Compliant to EEC  
Low Voltage Directive. UL/CUL recognized file E227588.  
RoHS Compliant.

## MX10 TERMINAL BLOCK 9 PIN

PIN	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

DIMENSIONS: in.[mm]

### SIDE VIEW



### TOP VIEW

