



Spellman's MX20 is a well-regulated high performance DC-DC converter featuring a "hot switchable" polarity reversal capability. The MX20'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 MX20 is rated at 20kV @ 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 MX20 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: Variable Current Control

SPECIFICATIONS

Input Voltage:

+24Vdc, ± 1.2 volts

Input Current:

<500mA continuous
<1.2A during reversing

Output Voltage:

± 500 Vdc to ± 20 kV

Output Current:

0 to 100uA max.

Polarity:

Remotely reversible via logic signal, 500ms to settle to $\pm 2\%$, 1 Hz maximum switch rate

Voltage Regulation:

Load: 0.02% of maximum output voltage for a no load to full load change
Line: 0.01% 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 500ms**
- **Voltage and Current Monitor Outputs**
- **Remote HV Inhibit**
- **Flying High Voltage Output Cable**
- **Current Control Option**

www.spellmanhv.com/manuals/MX20

Current Regulation: (VCC Option)

Load: 0.1% of maximum rated current for a 0 to 100% voltage change
Line: 0.01% of maximum rated current for a 1 volt input line change

Voltage/Current Programming:

0 to 10 volts corresponds to 0 to 100% of rated output voltage/current

Voltage/Current Monitor:

0 to 10 volts corresponds to 0 to 100% of rated output voltage/current

Programming and Monitor Accuracy:

$\pm 2\%$ Voltage Programming/Monitor
 $\pm 5\%$ Current Programming/Monitor

Ripple:

$\leq 0.0025\%$ Volts p-p

Stability:

0.1% per hour after 1 hour warmup

Temperature Coefficient:

≤ 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:

2.05" H X 6.61" W X 6.50" D (52mm X 168mm X 165mm)

Weight:

Approximately 5.51 pounds (2.5kg)

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. RoHS Compliant.

MX20 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.:MX20PN24

VCC Option: PART NO.:MX20PN24/VCC

DIMENSIONS: in.[mm]

SIDE VIEW



TOP VIEW

