## V X20 HIGH PERFORMANCE SPELLMAN HIGH VOLTAGE ELECTRONICS CORPORATION

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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:**

±500Vdc to ±20kV

#### **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

#### 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:**

±2% Voltage Programming/Monitor ±5% Current Programming/Monitor

#### **Ripple:**

≤0.0025% 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:**

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.



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#### www.spellmanhv.com 128048-001 REV. K Spellman High Voltage is an ISO 9001 and ISO 14001 registered company

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#### MX20 TERMINAL BLOCK 9 PIN

A20 TERIMINAL BLOCK 9 PIN		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

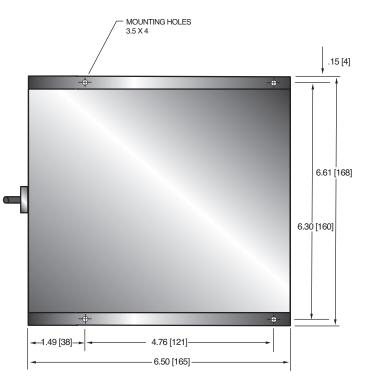
How to Order:		
Standard: PART NO.:MX20PN24		
VCC Option: PART NO.:MX20PN24/VCC		

### DIMENSIONS: in.[mm]

#### SIDE VIEW



#### **TOP VIEW**







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