



Spellman's MXR Series are well-regulated high performance DC-DC converters. The MXR's low ripple specification makes it ideal for Mass Spectrometry and electron microscopes. The MXR20 is rated at 20kV @ 300uA and MXR30 is rated at 30kV @ 300uA. Both are packaged in a shielded metal enclosure. These units feature 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 MXR Series can be provided with current control, improved ripple performance and higher voltage and current capabilities.

TYPICAL APPLICATIONS

Mass Spectrometry
Electron Microscopes
Capillary Electrophoresis
Electrostatic Printing

OPTIONS

MXR can be ordered as an analog or a digital controlled unit. See how to order on page 2

Custom captive cable options available upon request.

SPECIFICATIONS

Input Voltage:

24Vdc ($\pm 5\%$)

Input Current:

<1.25A

Output Voltage:

0V to ± 20 kV (MXR20)

0V to ± 30 kV (MXR30)

Output Current:

<300 μ A

- **Hot Switchable Polarity Reversible within 2s settling to <3ppm**
- **Remote Polarity Reversal and HV Inhibit**
- **Voltage and Current Monitor Outputs**
- **Arc and Short Circuit Protected**
- **Well Regulated, Low Ripple, High Stability**
- **UL Recognized**
- **OEM Customization Available**

Voltage Regulation:

Load: <50ppm of maximum output voltage for a no load to full load change

Line: <20ppm of maximum output voltage for a 5% input line change

Programming and Monitor Accuracy:

$\pm 2\%$ Voltage Programming/Monitor

Ripple:

20kV: 100mVp-p

30kV: 150mVp-p

Stability:

1hr = 10ppm max. after 1 hr warm-up

8hrs = 20ppm max. after 1 hr warm-up

Temperature Coefficient:

10ppm/ $^{\circ}$ C

Reversing Time:

2s for +20kV to -20kV or +30kV to -30kV settling to <3ppm, faster versions are available

Environmental:

Temperature Range:

Operating: 10 $^{\circ}$ C to 50 $^{\circ}$ C

Storage: -35 $^{\circ}$ C to 85 $^{\circ}$ C

Humidity:

0% to 85%, non-condensing

Cooling:

Convection cooled

Dimensions:

2.05" H X 8.47" W X 9.45" D (52mm X 215mm X 240mm)

Weight:

Approximately 8.80 pounds (4.0kg)

Input Connectors:

Power: 2 way Molex Mini-fit Jr connector

Digital: 10 way 'IDC Ribbon cable' connector

Analog: 12 way Molex KK5.08 series connector

Output Connectors:

Standard output is GES HB30 receptacle. Mating part is GES HS30 (not included). Mating cable assembly can be ordered separately, see how to order page 2.

Regulatory Approvals:

Compliant to EEC Low Voltage Directive. RoHS Compliant. UL 61010-1 & CAN/CSA-C22.2 No. 61010-1

MXR POWER— 2 PIN MOLEX MINI-FIT JR

PIN	SIGNAL
1	+24Vdc Input
2	Ground return for +24Vdc

MXR DIGITAL INPUT— 10 PIN IDC RIBBON CONNECTOR

PIN	SIGNAL
1	Transmit data (output) with respect to pin 2
2	Serial signal ground return (if required)
3	Receive data (input) with respect to pin 2
4	N/C
5	N/C
6	N/C
7	Interlock opto-isolator input
8	Interlock opto-isolator signal return
9	Polarity change signal opto-isolator input
10	Polarity change signal opto-isolator signal return

MXR ANALOG INPUT— 12 PIN MOLEX KK5.08 CONNECTOR

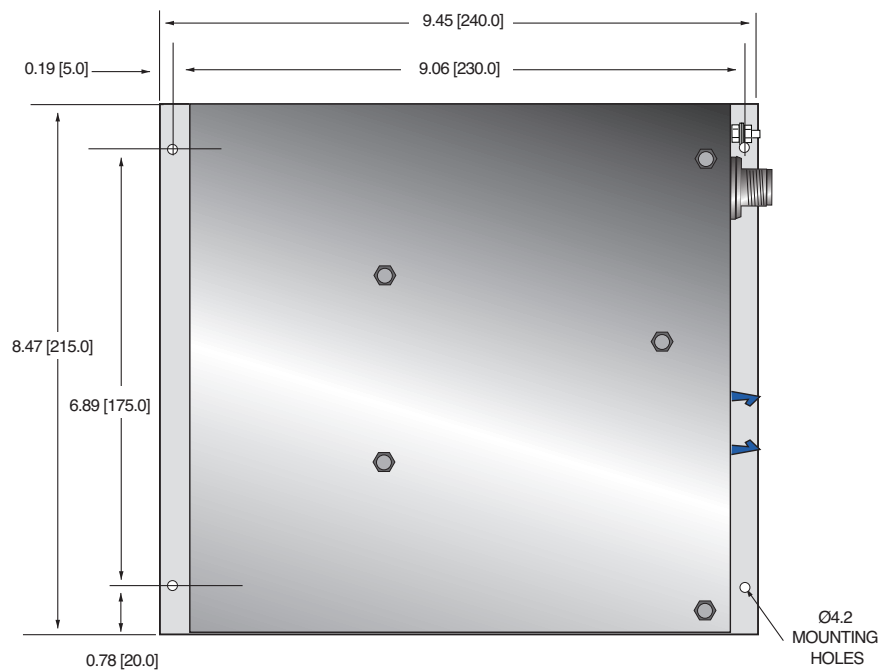
PIN	SIGNAL
1	Current monitor output 0-10V = 0V to 500uA
2	+24Vdc Input
3	Voltage monitor output 0-10V = 0V to Max V
4	N/C
5	N/C
6	N/C
7	Voltage program input 0-10V = 0V to Max V
8	Polarity set input LO = +VE, HI/Open = -VE
9	Signal ground
10	+24Vdc return
11	N/C
12	Polarity status output LO = +VE, HI = -VE (24V with 2k2 ohm Source Z)

DIMENSIONS: in.[mm]

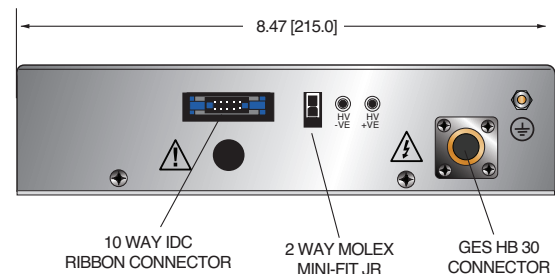
SIDE VIEW



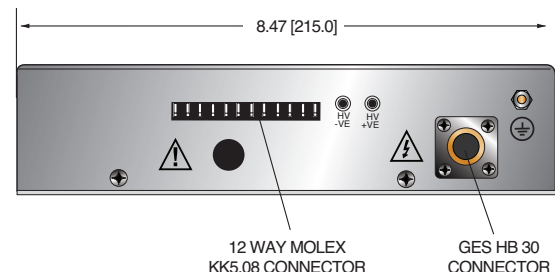
TOP VIEW



FRONT VIEW (Digital)



FRONT VIEW (Analog)



How to Order:

Analog (standard): PART NO.: MXR20PN24
PART NO.: MXR30PN24

Digital (option): PART NO.: MXR20PN24/DCC2
PART NO.: MXR30PN24/DCC2

Mating cable, length 2m: PART NO.: HVC30/1S/1279

