



CUSTOM APPLICATION



- **OPTIONAL RS-232 OR RS-485 IS AVAILABLE**
- **HOT SWITCHABLE POLARITY REVERSIBLE VIA A LOGIC SIGNAL**
- **WELL REGULATED , LOW RIPPLE**
- **POLARITY REVERSAL WITHIN 10ms**
- **VOLTAGE AND CURRENT MONITOR OUTPUTS**
- **REMOTE HV INHIBIT**
- **ARC AND SHORT CIRCUIT PROTECTED**
- **OEM CUSTOMIZATION AVAILABLE**

## INTRODUCTION

Wisman's PRB is a well-regulated high performance DC-DC converter featuring a “hot switchable” polarity reversal capability. The PRB'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 PRB is rated at ±20KV and is packaged in an ashielded 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 PRB can be provided with improved ripple performance and higher voltage and current capabilities.

An optional RS-232 or RS-485 is available, Reversible time option 10ms, 25ms, 50ms, 100ms, 250ms, 500ms, 1s.

## TYPICAL APPLICATIONS

Mass spectrometry, Electrophoresis, Photomultiplier tubes, Electrostatic Printing, Electron tubes, Ion tubes, ESD, Electron research, DNA Analytical, Electrospinning, E-Chuck, Medical, chemical Applications, Science, Laboratory Applications, Industrial applications.

## PRB SELECTION TABLE

KV	mA	P(W)	MODEL	KV	mA	P(W)	MODEL	KV	mA	P(W)	MODEL
5	0.4	2	PRB5*2	10	0.2	2	PRB10*2	18	0.11	2	PRB18*2
	1	5	PRB5*5		0.5	5	PRB10*5		0.28	5	PRB18*5
	1.6	8	PRB5*8		0.8	8	PRB10*8		0.44	8	PRB18*8
	2	10	PRB5*10		1	10	PRB10*10		0.56	10	PRB18*10
8	0.25	2	PRB8*2	15	0.13	2	PRB15*2	20	0.1	2	PRB20*2
	0.625	5	PRB8*5		0.33	5	PRB15*5		0.25	5	PRB20*5
	1	8	PRB8*8		0.53	8	PRB15*8		0.4	8	PRB20*8
	1.25	10	PRB8*10		0.67	10	PRB15*10		0.5	10	PRB20*10

## PRB SELECTION EXAMPLE

<b>PRB</b>	<b>10</b>	<b>*</b>	<b>10</b>	<b>M1</b>	<b>LR1</b>	<b>RT1</b>	<b>LX</b>
Series Name	Maximum Output Voltage (kV)	Polarity Reversible Polarity	Maximum Output Power (W)	Option Option : M1~M6	Ripple 1: 0.01% 2: 0.1% 3: 0.05% 4: 0.005% 5: 0.001%	Reversible Time 1: 10ms 2: 25ms 3: 50ms 4: 100ms 5: 250ms 6: 500ms 7: 1s	Option LX: Unshield cable 0.7m (X option) LCX: shield cable 0.7m (X option)

## SPECIFICATIONS

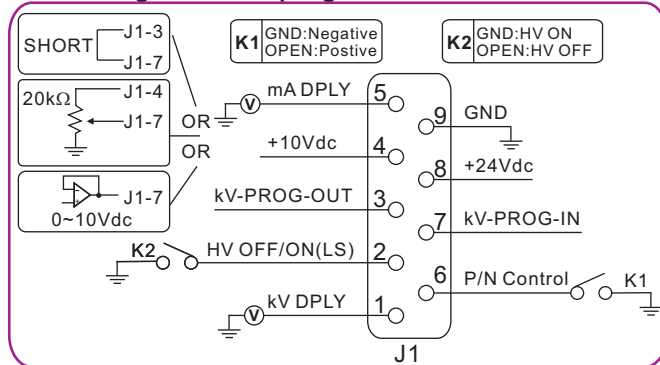
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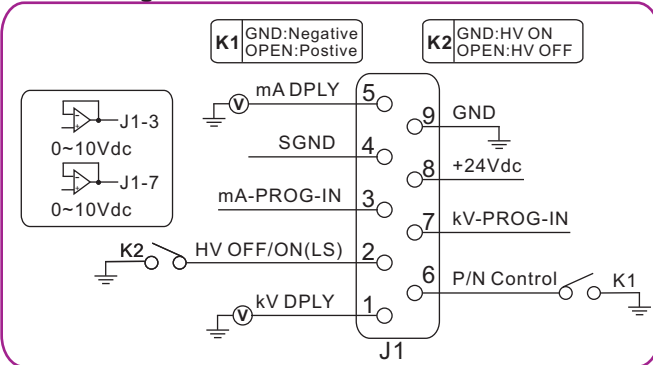
PARAMETER	DESCRIBE
Input	+24Vdc±2%, Maximum current 1A
Output	±5kV, ±8kV, ±10kV, ±15kV, ±18kV, ±20kV Maximum output Voltage option.
Stability	0.1% per 8 hours after 1 hour warm-up.
Temperature Coefficient	≤25ppm/°C。
Ripple	≤0.01%Vp-p, option 0.1%, 0.05%, 0.005%, 0.001%.
Polarity	Reversible time 10ms, option 25ms, 50ms, 100ms, 250ms, 500ms, 1s。
Voltage/Current Monitor	0 to +10Vdc corresponds to 0 to maximum output, Zout=20kΩ, accuracy:±1%.
Voltage Programming	0 to +10Vdc proportional from 0 to maximum output voltage, Zin=100kΩ.
Voltage Load Regulation	0.1% (no load to full load change).
Voltage Line Regulation	±0.1% (input Voltage line change ±10%).
Current Load Regulation	0.1% (no load to full load change).
Current Line Regulation	±0.1% (input Voltage line change ±10%).
Operating Temperature	0°C ~ +40°C。
Storage Temperature	-40°C ~ +85°C.
Cooling	Convection cooled.
Humidity	20% ~ 85% RH, non-condensing.
Dimensions	10kV : 1.63" H X 6.61" W X 4.53" D (41.5mm X 168mm X 115mm). 20kV : 2.05" H X 6.61" W X 6.50" D (52mm X 168mm X 165mm).
Weight	10kV : 1.4kg; 20kV : 2.5kg.

## PRB ANALOG INFORMATION

### M1: Voltage external program

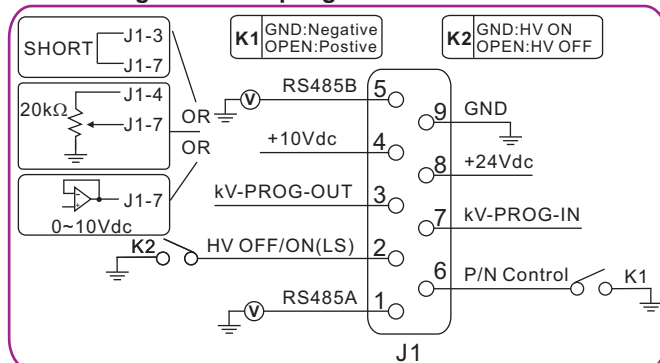


### M2: Voltage and Current Control

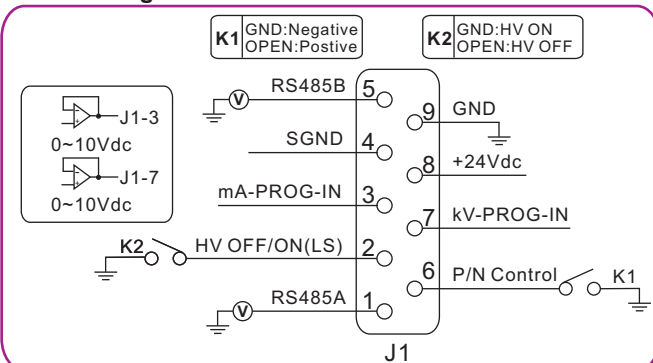


## PRB DIGITAL AND ANALOG COMPATIBLE INFORMATION(RS485) <sup>Ⓟ</sup>

### M3: Voltage external program

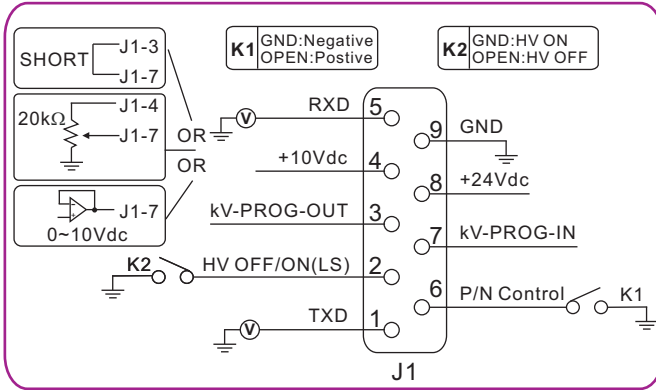


### M4: Voltage and Current Control

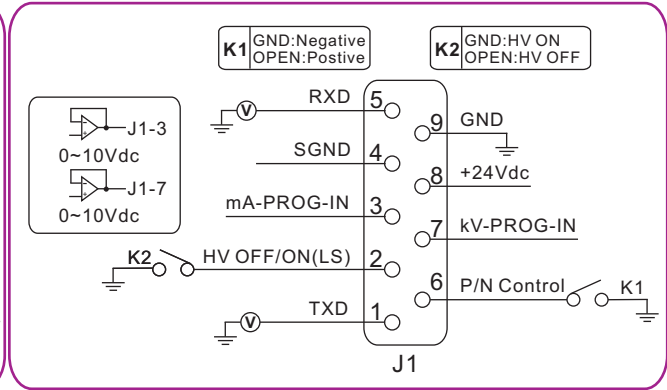


## PRB DIGITAL AND ANALOG COMPATIBLE INFORMATION(RS232)<sup>®</sup>

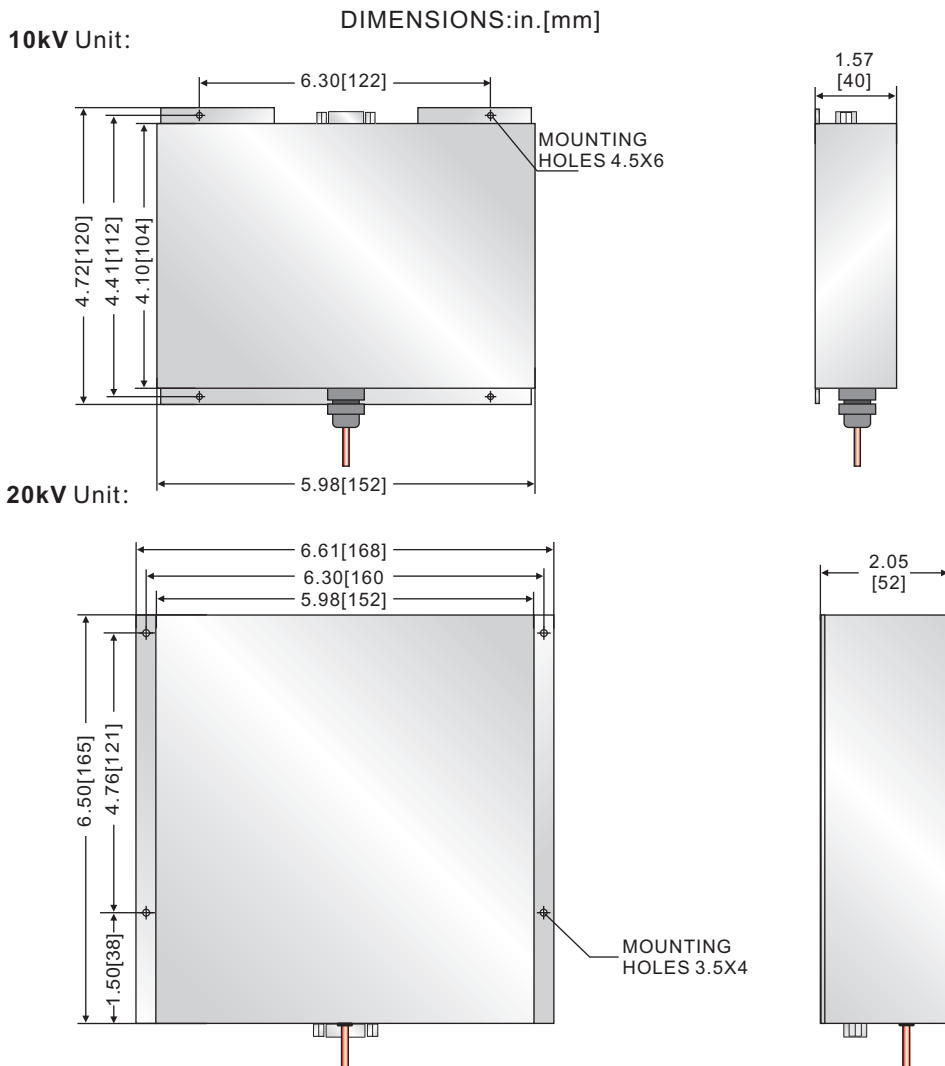
### M5: Voltage external program



### M6: Voltage and Current Control



## PRB DIMENSIONS



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