

1W

DC-HVDC
power supplies

The MS Source range of high voltage DC-DC power solutions are specifically designed for mass spectrometry ion sources and other mass spectrometry subsystems requiring reverse polarity. It provides a reversible output up to $\pm 6\text{kV}$, with low ripple, high stability, and fast polarity switching down to 5ms.

Optimized for the ionization stage, MS Source power supplies deliver tightly regulated, low-noise power to ensure stable and repeatable ion generation in both positive and negative ion modes. The series features voltage and current monitoring and fast switching in a compact chassis-mount design enabling high throughput and high accuracy in mass spectrometry platforms.



Features

- ▶ Input: +24VDC
- ▶ Output: up to $\pm 6\text{kV}$ reversible (bias)
- ▶ Other output voltages available on request
- ▶ Switching speeds of 25ms; optional 5ms
- ▶ Output voltage and current regulated
- ▶ Voltage and current monitor outputs
- ▶ Short circuit, arc, and overload protection
- ▶ Low ripple, high stability
- ▶ Designed to meet UL 61010
- ▶ Operating temperature: +10°C to +60°C
- ▶ 3 year warranty

Applications



- ▶ Mass spectrometry
- ▶ Electrophoresis
- ▶ High voltage biasing

Dimensions

254 x 100.33 x 50.8mm (10.00" x 3.95" x 2.00")

Dimensions can be tailored to exact customer requirements.

Documentation

For further information click the link or scan the code

→ xppower.com



Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range	22.8	24	25.2	VDC	24V nominal
Input current			2	A	
Voltage programming input	0		10	VDC	Analog DC voltage controls output 0 to 100%

Main output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage			±6000	VDC	Other voltages available on request
Output current			100	µA	
Turn on time			2	s	
Polarity reversal time	25ms with 5ms as an option				
Linearity: output vs program			1.5	%	10 to 100% output
Temperature coefficient		100		ppm/°C	
Line regulation			0.01	%	100% Vpgm, Full Load, (min to max input)
Load regulation			0.01	%	100% Vpgm, 24Vin, [NL to FL]
Ripple & noise	Can be modified for the specific customer requirement				
Stability			100	ppm/hr	After 1 hour warm up

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Isolation: input to output	N/A - input ground is internally connected to output ground				

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	+10		+60	°C	
Storage temperature	-20		+85	°C	
Cooling	Natural convection				
Humidity			95	%RH	Non-condensing

Safety approvals

Certification	Standard	Notes & conditions
UL	Designed to meet UL 61010	
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Signals

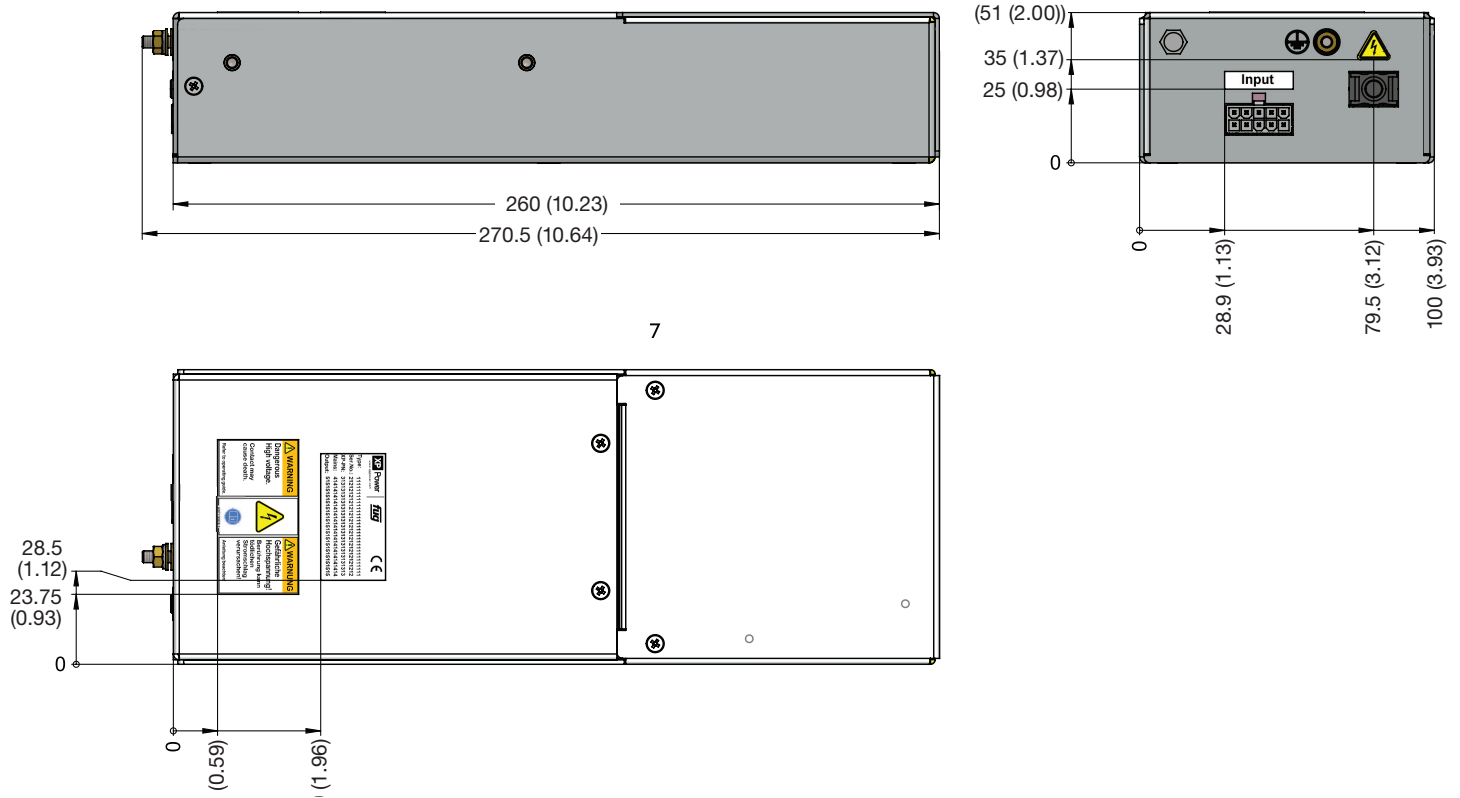
Signal	Notes & conditions	Notes & conditions
Control signal	Can be configured according to customer requirements	

Electrical connections

Pin	Connection	Description
1	+24VDC input	+24VDC input power (referenced to Power ground)
2	Ground return for +24VDC input	Power ground
3	Enable/inhibit input	TTL (high = enabled)
4	Voltage monitor output	Analog (0-10VDC = 0 to full scale)
5	Voltage control input	Analog (0-10VDC = 0 to full scale)
6	Current monitor output	Analog (0-10VDC = 0 to full scale)
7	Current monitor input	Analog (0-10VDC = 0 to full scale)
8	Polarity control input	TTL (high = pos.)
9	Analog ground	Control ground
10	Current/voltage control indicator	TTL (high = current mode)

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Mechanical details



Notes:

1. All dimensions shown in mm (inches).
2. Dimensions can be tailored to exact customer requirements.
3. Connectors can be tailored to exact customer requirements.