

15W



The MJ Series is a family of sophisticated, medium power, high voltage power supplies that complies with current international safety and EMC directives.

These 15 Watt high voltage supplies feature flexible embedded controls with low ripple and noise, they are air insulated, fast response units, with tight regulation and extremely low arc discharge currents.

Packaged as a space saving module to avoid the expense of front panels and displays, with no compromise in performance and/or operating features. The result is a power supply that offers outstanding value for a wide range of demanding applications.



Features

- ▶ Output voltages 0-3kVDC through 0-30kVDC
- ► Compact module
- ► Constant voltage/constant current operation
- ► Short circuit, overload & arc protection
- ► Tight regulation
- ► Low ripple
- ► Air insulated
- ▶ 3 year warranty

Applications







- ► Ion implant
- ► E-beam/Ion beam
- ► Industrial technology
- ► Capacitor charging
- ► High voltage bias

Dimensions

Case size A

82.5 x 133.3 x 292.1 mm (3.25" x 5.25" x 11.5")

Case size B

82.5 x 133.3 x 349.2 mm (3.25" x 5.25" x 13.75")

More resources

Click the link or scan the code





Models & ratings

Positive polarity	Negative polarity	Output voltage	Output current	Output cable ⁽³⁾	Case size
MJ3P5000	MJ3N5000	0 - 3kVDC	0 - 5mA	RG-8U	А
MJ5P3000	MJ5N3000	0 - 5kVDC	0 - 3mA	RG-8U	Α
MJ10P1500	MJ10N1500	0 - 10kVDC	0 - 1.5mA	RG-8U	Α
MJ15P1000 ⁽¹⁾	MJ15N1000 ⁽¹⁾	0 - 15kVDC	0 - 1mA	RG-8U	А
MJ20P700	MJ20N700	0 - 20kVDC	0 - 0.7mA	RG-8U	В
MJ30P400 ⁽²⁾	MJ30N400 ⁽²⁾	0 - 30kVDC	0 - 0.4mA	RG-8U	В

- 1. Stored energy: <200mJ
- 2. Stored energy: <400mJ
- 3. Detachable, 2.4m (8ft) RG-8U shielded high voltage coaxial cable is provided.





Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions	
Input voltage	105		125	V RMS	Input current 0.25A. Version must be specified when ordering.	
Input voltage	210		250	V RMS		
Input frequency	48		63	Hz	Single phase. 400Hz version available to order.	
Input connector	3 position terminal block with cover provided.					

Notes:

1. A DB15S D-subminiature connector, and mating plug, is provided for all control input functions. They include 10VDC reference, interlock, current monitor, current programming, voltage monitor, voltage programming, TTL, ground, and local control.

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage range	0		30	kVDC	See models and ratings table.
Output current range	0		5	mA	See models and ratings table.
Polarity	Available with	n either positive	or negative pola	rity with respect	t to chassis ground.
Output control	Continuous, stable adjustment, from 0 to rated voltage or current by panel mounted 10-turn potentiometer with 0.05% resolution or by external 0 to 10V signals.				
Chability		0.01		%	Per hour after 30 min. warm up.
Stability		0.05		%	Per 8 hours.
Temperature coefficient		0.01		%/°C	
Voltage rise/decay time constant		50	100	ms	Using either the HV ON/OFF or remote voltage control with a 50% load.
Ripple			0.05	RMS	At full load. Ripple is proportional to load and decreases linearly to approximately 0.01% at no load.
Repeatability			0.1	%	
Voltage regulation	0.005			%	Line and load.
Current regulation	0.1			%	At any load.

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions	
HV insulating medium	Outputs are a	Outputs are air insulated.				
External interlock	Open = OFF, closed = ON.					
Remote HV enable/disable	0 to 1.5VDC = OFF; 2.5 to 15VDC = ON					
Voltage accuracy	1% of setting +0.5% of rated					
Voltage monitor	0 to +10VDC signal is provided for 0 to rated voltage. Accuracy is 1% of reading +0.5% of rated. Output impedance is 10kΩ.					
Current monitor	0 to +10VDC signal is provided for 0 to rated current. Accuracy is 1% of reading +0.5% of rated. Output impedance is 10kΩ.					

- 1. Specifications apply from 5% to 100% rated voltage.
- $2. \ All \ units \ operate \ down \ to \ zero \ output \ with \ very \ slight \ degradation \ of \ performance.$







Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-20		+60	°C	
Storage temperature	-40		+85	°C	
Protection	Automatic current regulation protects against all overloads conditions, including arcs and short circuits. Fuses, surge limiting resistors and low energy components provide the ultimate protection.				
RoHS	Restriction of	Restriction of the use of Hazardous Substances			

EMC: emissions

Phenomenon	Standard	Test level	Notes & conditions
Conducted	EN61000-6-4		
Radiated	EN61000-6-4		

EMC: immunity

Phenomenon	Standard	Test level	Notes & conditions
Conducted	EN61000-6-2:2005		
Radiated	EN61000-6-2:2005		
Line harmonics	EN61000-3-2		

Safety approvals

Certification	Standard	Notes & conditions
EN	EN61010/IEC61010	Safety
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

- 1. Full compliance with European Directives for MJ Series models ordered with 230VAC nominal input.
- 2. Specifications apply from 5% to 100% rated voltage.
- 3. Operation is guaranteed down to zero voltage with a slight degradation of perfomance.

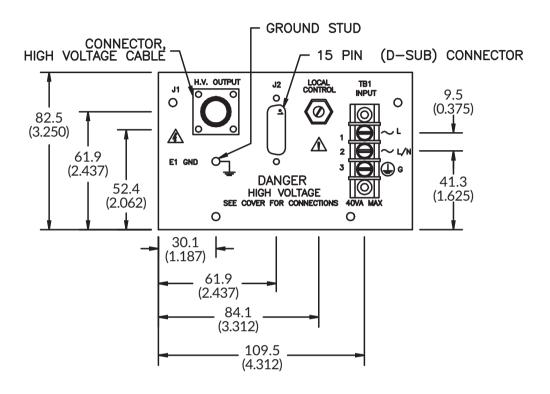






Mechanical details

Front view



J2						
Pin	Function	Pin	Function	Pin	Function	
1	X1	6	REFERENCE	11	CURRENT PROGRAM	
2	COMMON	7	X2	12	GROUND	
3	COMMON	8	INTERLOCK	13	VOLTAGE PROGRAM	
4	COMMON	9	CURRENT MONITOR	14	VOLTAGE MONITOR	
5	REFERENCE	10	TTL	15	LOCAL CONTROL	

TB1				
Pin	Function			
1	AC input			
2	AC return			
3	Ground			

^{1.} All dimensions shown in mm (inches).

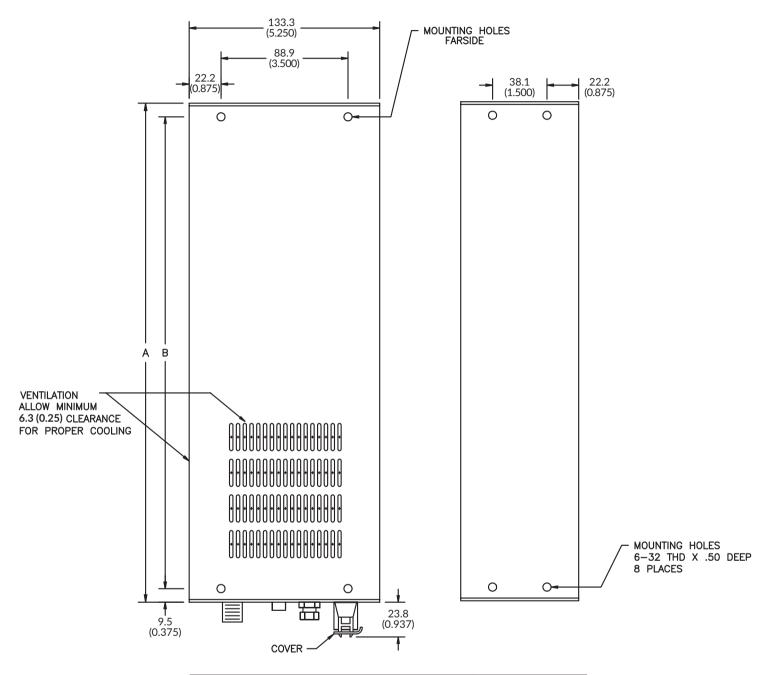






Mechanical details

Front & side view



Case size	A - Dimensions	B - Dimensions	Weight
Α	292.1mm	273mm	3kg
	(11.5")	(10.75")	(6.5lbs)
В	349.2mm	330.2mm	4.3kg
	(13.75")	(13")	(7.5lbs)

- 1. All dimensions shown in mm (inches).
- 2. Weight shown in kg (lbs).