

## FF Series

### Application:

Mass spectrometers, electron guns, electron gun evaporators, X-ray tube filament drivers

### Features:

- 5kV, 15kV, 30kV isolation
- Power & input control at ground potential
- Current controlled
- High stability
- Low ripple



These power supplies use the proven power oscillator from the standard 100 watt HW series and are intended to power ion gun, electron gun & X-ray filaments of up to 1.5 ohm (including cable resistance). The filaments can be isolated from ground by up to 30 kV, while power input & all controls remain at ground potential. O/P current from 0.8A to 5A is current controlled. Higher isolation voltages are also possible. Please consult the factory for more details.

### ELECTRICAL SPECIFICATION: FF SERIES

UNIT TYPE	FIL OUTPUT	ISOLATION	OUTPUT RIPPLE	SIZE (mm)	WEIGHT (kg)
FF005DAA060	7.5V @ 5A	±5kV	<200mV pk to pk	230 x 120 x 60	2.3
FF015DAA079	7.5V @ 5A	±15kV	<200mV pk to pk	230 x 120 x 60	2.3
FF030DAA104	7.5V @ 5A	±30kV	<200mV pk to pk	230 x 120 x 60	2.3

### ELECTRICAL SPECIFICATION

Input:	+24V dc ±0.5V <3A. 0V input common to chassis
Control of output current:	1.6V to +10V for 0.8A to 5A ±3%, (Z <sub>in</sub> = 20Kohm pin 7) Internal or External potentiometer (Z <sub>in</sub> = 10Kohm pin 5)
Current monitor:	1.6V to 10V ±5% for 0.8A to +5A. (Z <sub>out</sub> = 10k)
Inhibit (pin 8):	Low=<1.5V = ON, High = >3.5V or OC = OFF [Z <sub>in</sub> =2.7k to 24V]
Temperature co-efficient:	< 0.1% per °C
Line regulation:	Less than 1% for 0.5V change in 24V
Load regulation:	Less than 1% for 10% change in filament resistance. The output impedance of the power supply is electronically controlled to maintain the filament temperature as the filament ages.

# FF Series

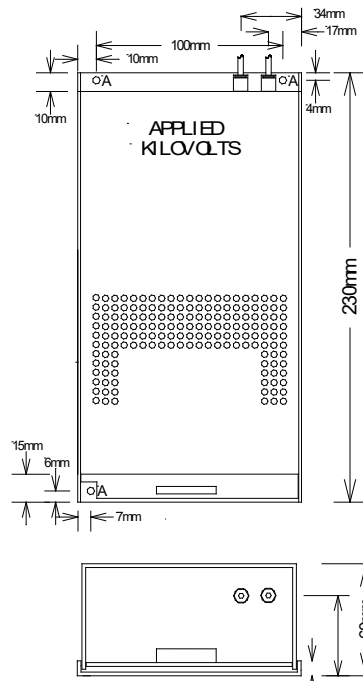
## MECHANICAL SPECIFICATION

Mountings:	3 off M4 clearance holes - see outline drawing
Input & Control:	Molex 0.2" 10Way connector (24V power, control and monitor are all at Ground potential.)
Outputs:	FF005, & FF015 - two off unscreened leads 1000mm +100/-0mm long FF030 - two off TV30 unscreened leads 1000mm +100/-0mm long Cable length measured from edge of unit base plate

## ENVIRONMENTAL SPECIFICATION

Temperature, operating:	0°C to +50°C	Humidity (RH) <31°C non-condensing:	80% maximum non-condensing
Temperature, storage:	0°C to +80°C	Humidity (RH) >30°C non-condensing:	Decrease linearly to 50% at 40°C
Altitude, operating:	Up to 2,000m	Altitude, storage:	Up to 18,000m

The unit is to be supplied from a current limited supply providing 24V dc, impulse limited to overvoltage Category I (of IEC60364-4-443).  
For use in an environment of pollution degree 2.



## PIN ASSIGNMENTS

1	nc	6	Control link: See diagram
2	+24V dc input	7	Current control i/p <sup>1</sup>
3	Current monitor o/p	8	TTL inhibit (H= Inhibit)
4	Control link: See diagram	9	Signal ground
5	Control link: See diagram	10	Supply 0V

Note1: Control voltage must be between -0.5V & 10.2V  
The Molex pins are part no 8500108 & the 10 pin socket 10011104.

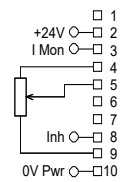
### INTERNAL POTENTIOMETER

□ 1	
+24V	□ 2
I Mon	□ 3
□ 4	
□ 5	
□ 6	
□ 7	
Inh	□ 8
0V signal	□ 9
0V Pwr	□ 10

### EXTERNAL 0 to 10V

□ 1	
+24V	□ 2
I Mon	□ 3
□ 4	
□ 5	
□ 6	
0 - 10V Control	□ 7
Inh	□ 8
0V signal	□ 9
0V Pwr	□ 10

### EXTERNAL POTENTIOMETER



## PART NUMBER SELECTION

SERIES CODE:	FF		
O/P ISOLATION kV	DC	OPTIONS CODE	CODE
005 = 5kV	D= Dc	AA= no options	060
015 = 15kV			079
030 = 30kV			104

Example: FF030DAA104 = 30kV isolated Floating Filament Module.

We manufacture a large number of customised OEM versions and would be pleased to discuss your application with you.

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