



- **REMOTE OUTPUT POLARITY REVERSIBILITY VIA TTL SIGNAL CONTROL**
- **ULTRA LOW RIPPLE AND NOISE**
- **SMALL FOOTPRINT OEM MODULAR PACKAGING**
- **ENCAPSULATED FOR RELIABLE, LONG TERM CORONA FREE OPERATION**
- **CE COMPLIANT**

The TOF3000 offers critical specifications like ultra low ripple and noise, excellent temperature coefficient; a stable, repeatable and accurate output, along with remote output polarity reversing capability. These superior specifications result in improved mass spectrometer resolution. Unique high voltage packaging and surface mount fabrication techniques, coupled with Spellman's proprietary encapsulation technology provide this unit in an attractive sized OEM package.

Featuring a 0-30kV @ 400 μ A output with remote polarity reversing capability and dimensions of 3"H x 5"W x 12 5/8"L, the TOF3000 is a small, cost-effective high voltage power supply with technology that sets the standard for the future of Mass Spectrometry applications.

TYPICAL APPLICATIONS

Mass Spectrometry

SPECIFICATIONS

Input Voltage:

+24 Vdc, +5%, -2%

Input Current:

2 amps maximum

Output Voltage:

0 to 30kV

Output Current:

0 to 400 microamperes

Polarity:

Positive or Negative with respect to ground, reversible via TTL signal

Voltage Regulation:

Line: 0.001% for input change of 1 volt
Load: 0.001% for 100 μ A to full load change

Current Regulation:

Line: 0.05% for +5% to -2% input change
Load: 0.1% for 0 to maximum output voltage

Ripple:

\leq 70mV peak to peak

Stability:

0.01% per hour, 0.02% per 8 hours after 1.0 hour warm up period

Temperature Coefficient:

100ppm per degree C (improved capabilities upon request)

Environmental:

Temperature Range:
Operating: 0°C to 50°C
Storage: -20°C to 65°C
Humidity:
10% to 90% RH, non-condensing

Control Interface

Voltage Program Input:

0 to +10Vdc corresponds to 0 to \pm 30kV, $Z_{in} \geq 1$ megohm

Program Accuracy:

\pm 0.15% at 15KV, with overall accuracy of \pm 0.25% of maximum output

TTL Polarity Reversal:

High = positive polarity
Low = negative polarity

Voltage Monitor:

0 to 10Vdc corresponds to 0 to 30KV, $Z_{out} = 4.7$ Kohm

Current Monitor:

0 to 10Vdc corresponds to 0 to 400uA, $Z_{out} = 4.7$ Kohm

Cooling:

Convection cooled

Dimensions:

3"H X 5"W X 12.625"D (70.62mm x 127mm x 321.7mm)

Weight:

9.5 pounds (4.31kg)

Interface Connector:

15 pin male D connector

Output Connector:

Alden B102, which accepts Alden B200 cable plug

Regulatory Approvals:

Compliant to 2004/108/EC, The EMC Directive and 2006/95/EC, The Low Voltage Directive.

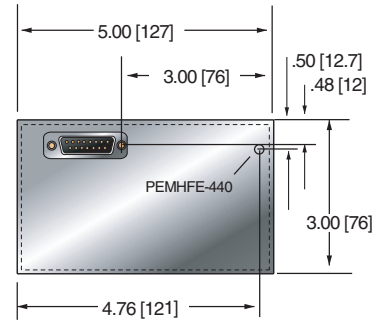
JB1 INTERFACE CONNECTOR

| PIN | SIGNAL | SIGNAL PARAMETERS |
|-----|-----------------------------|---|
| 1 | Spare | n/c |
| 2 | Voltage Program | 0 to 10V=0 to 100% Rated Output |
| 3 | Spare | n/c |
| 4 | Spare | n/c |
| 5 | Voltage Monitor | 0 to 10V=0 to 100% Rated Output |
| 6 | TTL Polarity Control Signal | Hi=Positive Polarity, Low=Negative Polarity |
| 7 | Signal Ground | Signal Ground |
| 8 | Power Ground | Power Ground |
| 9 | Spare | n/c |
| 10 | Spare | n/c |
| 11 | Spare | n/c |
| 12 | TTL HV Enable | Hi=Inhibit, Low=Enable |
| 13 | Current Monitor | 0 to 10V=0 to 100% Rated Output |
| 14 | Spare | n/c |
| 15 | +24Vdc | +24Vdc |

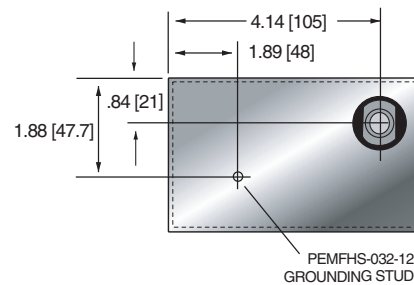


DIMENSIONS: in.[mm]

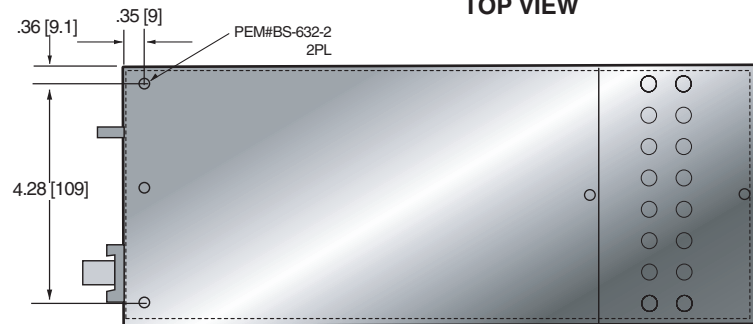
FRONT VIEW



BACK VIEW



TOP VIEW



BOTTOM VIEW

