

# FP250 SERIES

## 250 Watt Switched Mode Power Supply



### Features:

- High reliability
- Low profile - High density format
- Optional thermally controlled fan operation with choice of top or side cooling
- Thermal protection as standard
- Up to five outputs available
- 500Vdc maximum output voltage
- Conforms to International safety regulations
- Power trading between outputs
- Front panel for 19" rack mount



Low profile: 212.5 x 116 x 43mm

### Description:

The FP250 series offers 250W of power with active PFC to meet the requirements of IEC/EN61000-3-2 D. Available with up to 5 outputs. Features include universal mains input for international use, low profile (<1U) and choice of either Molex or screw terminal connection. Options include mains powerfail, output remote sense, inhibit / enable control and ORing diode for N+1. Constant current version optional with external control to suit.

### Specification:

#### Input

Input voltage : 90-264Vac  
Frequency range : 47-63Hz  
Earth leakage : 2.5mA typical @ 264Vac  
Inrush current : <30A @ peak input volts  
Power Factor : 0.98 typical @ 230Vac  
Input current: 3.5A @ 90Vac  
Hold up time : 20ms from 240V @ full load  
Input fuse: F5AHRC

#### Output

Output voltage : As required within 5 – 500Vdc range  
Output current : 40A maximum available  
Voltage adjustment : +/- 5% (V1)+/- 2% (V3)  
Initial setting : 0.5%  
Load /cross regulation : <1% single o/p;(2.5% V1,3,4) ( 8% V5 ).  
Line regulation : <0.5%, 90-264Vac/ 180-264Vac  
Ripple and noise: 0.2%RMS, 1% peak DC - 30MHz  
Transient deviation : 5% for 50% load variation  
Transient time : 2mS  
Over voltage protection : 115 - 125% of V1  
Over current protection : All outputs  
Output power : 250 Watts fan cooled  
Derating : 2.5% /°C above 50°C  
Temperature coefficient : 0.02%/°C (V1)0.05%(V2-V5)  
Shock and vibration : Meets MIL STD810F

#### Options

Molex or 5mm screw terminal connections  
Mains powerfail signal  
Output OK signal  
Inhibit / Enable signal  
ORing diode for N+1  
Isolated outputs available  
Current share for parallel use  
400W peak power for high surge applications

#### Output ratings

Up to five outputs available  
Output voltages up to 500Vdc  
Max 40A current

#### General

Efficiency: 80% typical  
MTBF: >100,000 hrs to MIL217E @ 25°C  
Dielectric strength:  
4.25Kvdc input to Output  
2.25Kvdc input to Earth  
500Vdc output to Earth  
Connections: 0.375" Beau screw terminals,  
5mm screw or Molex 0.156" as required.  
(Custom loom optional)

#### Environmental

Operating Temperature:  
-20c to +60°C De-rate at 2.5% /°C above 50°C  
Storage Temperature:  
-25°C to + 85°C  
Operating humidity:  
0 to 95% RH non-condensing

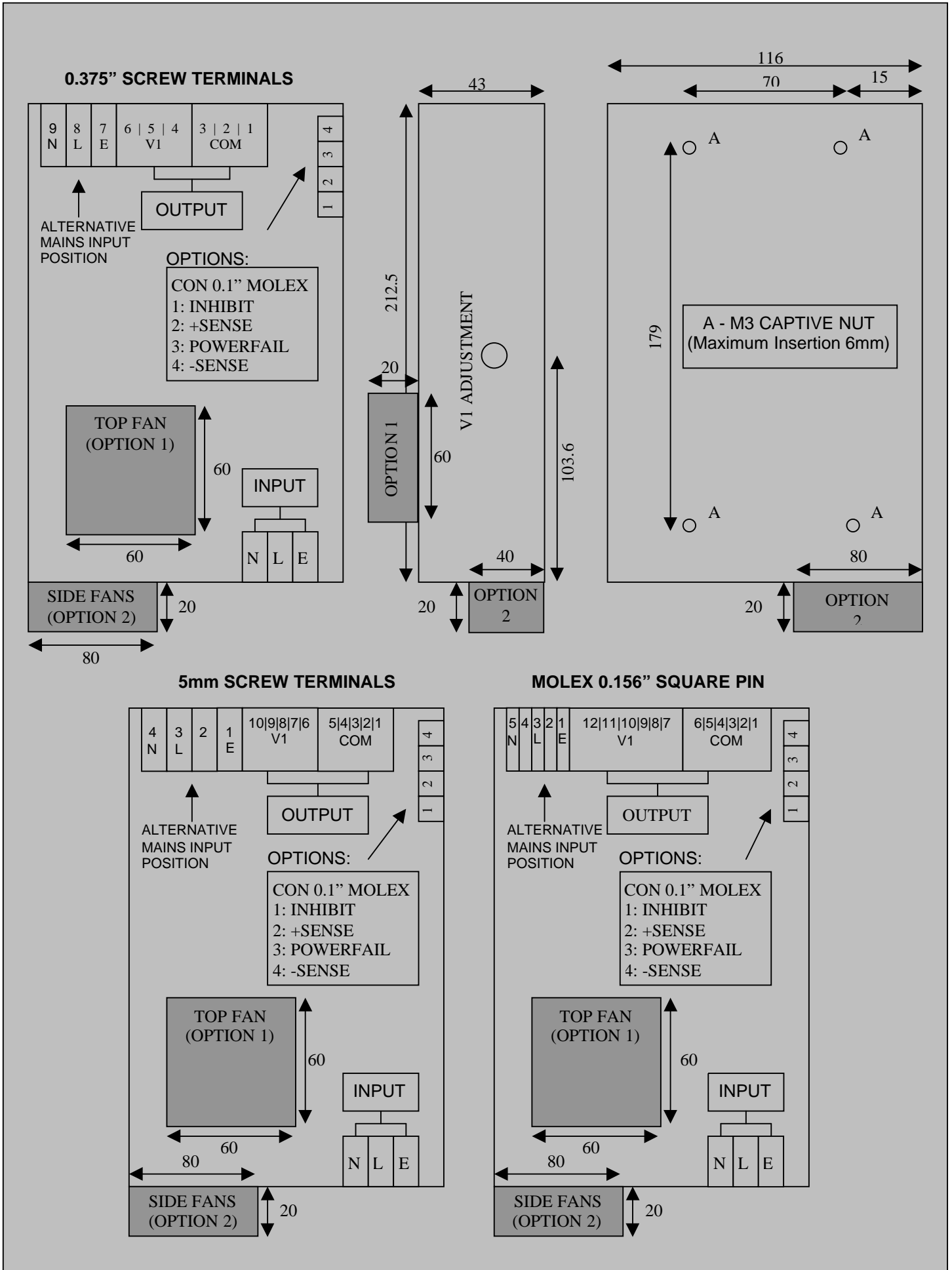
#### Safety & EMC

Isolation, input to earth : 2.5kVdc, >2.5mm  
Isolation, input to output : 4.25KVdc, >6.4mm  
Isolation, output to earth : 500Vdc  
(unless commoned)  
Units designed to meet: EN60950, UL60950,  
CSA 22.2 No. 950 & 234  
Emissions designed to meet: EN55022-B  
(conducted) EN55022-A (radiated)

#### Immunity designed to meet:

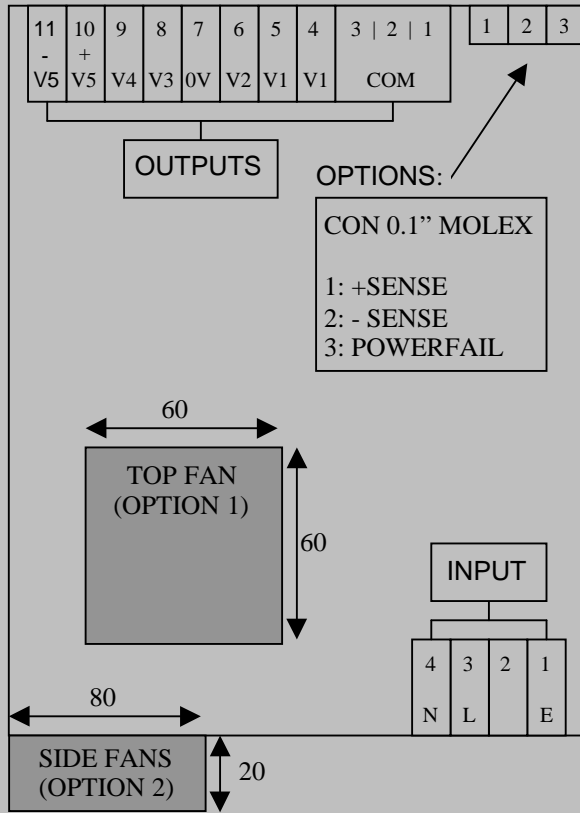
EN61000-4-2 (ESD)  
EN61000-4-3 (RAD)  
EN61000-4-4 (FAST TRANS)  
EN61000-4-5 (SURGE)  
EN61000-4-6 (CONDUCTED)  
EN61000-4-8 (MAGNETIC)  
EN61000-4-11 (VOLTAGE DIPS & FLUCTUATIONS)  
EN61000-3-2 ( MAINS HARMONICS )  
EN61000-3-3 ( VOLTAGE FLUCTUATIONS )

# FP250 Series Single Output Mechanical Details and Connections



# FP250 Series Multiple Output Mechanical Details and Connections

## 5mm SCREW TERMINALS



## MOLEX 0.156" SQUARE PIN

