**Sparkle Power Inc.**
A Leading Power Supply Manufacturer Website:
www.sparklepower.com



# FSP600-50ERN

## (80PLUS Silver, RoHS Compliant)

### 600 Watts ATX12V 2.3 Switching Power Supply

**Meet 2013 ErP**

**Support C6/C7 idle states for Haswell CPU**

## Features

- Complied with ATX12V 2.3 standard
- Active Power Factor Correction (PFC) meet EN61000-3-2
- High efficiency and reliability
- Compatible with European Union Directive 2002/95/EC (Restriction on Hazardous Substances).
- Remote ON/OFF function
- Internal 12V DC fan included
- Noise Killer (thermal fan speed control function)
- Low noise and ripple
- Output over voltage, short circuit, and over current protection
- 100% Hi-pot, ATE, and burn-in tested
- Re-settable power shut down
- Complies with FCC part 15 subpart J class B 115Vac operation, and CISPR 22 class B at 230Vac operation
- Approved by CUL/UL60950-1, TUV EN60950-1,CB 60950-1 report, FCC,EMC, CE

## Specification

- **Temperature Range:** Operating: +0°C ~ +40°C on full load
  Storage & Shipping: -40°C ~ +70°C
- **Humidity**: 5-85% on operating, 5-95% on storage
- **Dielectric Withstand:** Primary to frame ground 1800$V_{AC}$ for 1 second
- **Efficiency: 85%** minimum, typical up to **88%**
- **Rise time:** Less than 20ms
- **Hold-up Time:** 17ms minimum: at 115V/60Hz (80% Load)
- **Power Good Signal:** Power on delay time 100 ~ 500ms, off delay 1ms minimum (TTL and CMOS compatible)
- **Leakage Current:** Less than 3.5mA at 264Vac, 50Hz
- **MTBF:** 100,000 hours on maximum load at +25°C
- **Dimensions (LxWxH):**140x150x86mm / 5.5x5.9x3.4inch

## Input Characteristics

**Input Range:** 90 ~ 264Vac, Full Range Input
**Frequency:** 47 ~ 63Hz
**Input Current:** Max 9A @ 115Vac, 4.5A @ 230Vac
**Inrush Current:** No damage.

## Output Characteristics

| | MINIMUM LOAD | NORMAL LOAD | MAXIMUM LOAD | LOAD REG. | LINE REG. | RIPPLE & NOISE |
|---|---|---|---|---|---|---|
| +3.3V | 0.2A | 10A | 24/3A | ±5% | ±1% | 50mV P-P |
| +5V | 1A | 10A | 10/24A | ±5% | ±1% | 50mV P-P |
| +12V | 0.05A | 22A | 46A | ±5% | ±1% | 120mV P-P |
| -12V | 0A | 0.25A | 0.3A | ±10% | ±2% | 200mV P-P |
| +5Vsb | 0A | 1A | 3A | ±5% | ±1% | 50mV P-P |

+5Vsb peak current is 3.5A(less then 0.5S).

Supports C6/C7 idle states for Haswell CPU(+12V min. load 0.05A)

*+3,3V & +5V total output not exceed 130W.
When +5V is loaded to 24A, then +3.3V maximum load is 3A
When +3.3V is loaded to 24A, then +5V maximum load is 10A


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