



**Input voltage**  
115 - 230 V  
(90 ÷ 264 Vac)

**Input current**  
2,5 A Max

**Input frequency**  
50-60 Hz  
(47÷63 Hz)

**Efficiency**  
85% (typ. @Pout=nominal)

**Switching operating frequency**  
60KHz typ.

**Power factor**  
=> 0,9

**Input protections**

- Fuses for Input Overcurrent Protection
- EMI filter
- Inrush Current Limitation
- Input Undervoltage Protection

**Leakage current to GND**  
< 3,5mA-rms at 250 Vac, 50 Hz

**See table for**

- Output voltages and currents
- Line and load regulation
- Output ripple and noise
- Capacitive loading

**Output protections**

- Short circuit protection
- Overload protection
- Overtemperature protection

**Hold up time**  
> 16 ms

**Rise Time**  
0,2 ÷ 20 ms

**Start up time**  
< 500 ms

**Output power**  
Max 140W

**Output signals**

- PWR\_OK is a "power good" = high when all outputs are OK. (Logic Level high = 2,4 ÷ 5V)
- PWR\_OK Delay = 0,2 ÷ 20 ms
- PWR\_OK Rise Time < 10ms
- AC loss to PWR\_OK > 16ms

**Inhibit input**

- PS\_ON# is an active low. (when the signal is pulled to TTL low, the outputs is on expect +5 VSB which is always enable whenever the AC power is present.)

**Operating temperature**  
0 ÷ +70 °C

**Temperature power derating**  
2%/°C (50÷70°C)

**Storage temperature**  
-20° ÷ +80° C

## FEATURES

**Humidity**  
Operating : 20÷90% RH,  
Non-condensing  
Storage : 10÷95% RH, Non-condensing

**Cooling**  
External ventilation required.

**Dielectric withstand voltage**

- Input - Output = comply with EN 60950-1
- Input - P.E. = comply with EN 60950-1
- Output - P.E. = comply with EN 60950-1

**Isolation**

- Input - P.E. > 200 MOhm
- Output - P.E. > 200 MOhm

**Connections**

- AC inlet = Standard inlet socket 10A/250V, UL/CSA/VDE approved (IEC 320 Type)
- JA = Molex 15-24-4048, 4 pins female connector
- JB = Tyco 2-106527-0, 20 pins female connector
- JC = Tyco 2-106527-4, 4 pins female connector

**MTBF**

- (MIL-HDBK-217F) 150,000 hours of continuous operation at 55° C, maximum-output load and nominal AC input voltage.

**Comply with:**

**Conducted emissions**

- EN 61204-3 - EN 55011

**Radiated emissions**

- EN 61204-3 - EN 55022

**Limits for harmonic current emission**

- EN 61204-3 - EN 61000-3-2 - class A

**Voltage fluctuation and flicker**

- EN 61204-3 - EN 61000-3-3

**Radio frequency amplitude modulated electromagnetic field**

- EN 61204-3 - EN 61000-4-3

**Power frequency magnetic field immunity**

- EN 61204-3 - EN 61000-4-8

**Electrostatic discharge immunity**

- EN 61204-3 - EN 61000-4-2 - level 4

**Conducted immunity**

- EN 61204-3 - EN 61000-4-6

**Electric fast transient immunity**

- EN 61204-3 - EN 61000-4-4

**Surge Immunity**

- EN 61204-3 - EN 61000-4-5

**Voltage dips and immunity**

- EN 61204-3 - EN 61000-4-11

**Safety**

- EN 60950-1
- UL 60950-1 ed. 2006
- CAN/CSA-C22,2N° 60950-1-03
- ROHS
- CE

**U.S.A. and CANADA**

- FCC part 15 class B

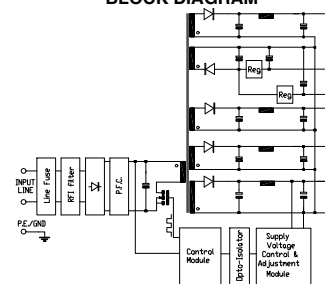
## FEATURES TABLE

| OUT    | Vout Volts | Iout Nominal Ampere | Imin Ampere | Imax * Ampere | Line reg. % | Load reg. Io 20÷100% | Ripple & Noise (0÷20MHz) mVpp | Capacitive Load (uF) |
|--------|------------|---------------------|-------------|---------------|-------------|----------------------|-------------------------------|----------------------|
| A (sw) | +3.3       | 8                   | 0           | 8             | ±0.5        | ±5%                  | 50                            | 5000                 |
| B (sw) | +5         | 14                  | 0           | 14            | ±0.5        | ±5%                  | 50                            | 6000                 |
| C (sw) | +12        | 2.7                 | 0           | 7.5           | ±0.5        | ±5%                  | 120                           | 2000                 |
| D (sr) | -5         | 0.3                 | 0           | 0.3           | ±0.5        | ±10%                 | 100                           | 350                  |
| E (sr) | -12        | 0.8                 | 0           | 0.8           | ±0.5        | ±10%                 | 120                           | 350                  |
| F (sw) | +5VSB      | 1.5                 | 0           | 1.5           | ±0.5        | ±5%                  | 50                            | 2000                 |

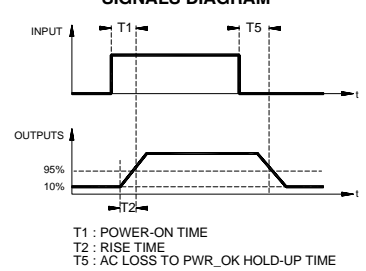
\* I max output values can be reached only if total output power is less than the declared Max value.



## BLOCK DIAGRAM



## SIGNALS DIAGRAM



## DIMENSIONS AND CONNECTIONS

