



FEATURES

- +12V to +48V, Output Voltage Range
- 0.9 to 0.95 Power Factor
- No Load Power Consumption < 500 mW
- CEC, Energy Star, ERP& EISA Efficiency Level V Compliant



INPUT & OUTPUT SPECIFICATIONS

Input Voltage ..... 90 to 264 VAC  
 Input Frequency ..... 47 to 63 Hz  
 Input Current ..... 2.5A (rms) max. @ 90 VAC;  
 1.0A (rms) max. @ 264 VAC  
 No Load Power Consumption ..<0.5W  
 Output Voltage & Current ..... See table  
 Output Voltage Regulation ..... ±5% max.  
 Ripple and Noise ..... See table  
 Short-Circuit Protection ..... Yes, Auto recovery  
 Overload Protection ..... Yes, Auto recovery  
 Overvoltage Protection ..... Latch & shutdown, AC recycle

GENERAL SPECIFICATIONS

Switching Frequency ..... 50 to 125 KHz  
 Efficiency ..... 87% minimum at average load,  
 115 VAC/230 VAC input  
 Power Factor ..... >0.95 @ 115 VAC, >0.90 @  
 230 VAC at full load  
 Hold-up Time ..... >10 ms typical at full load,  
 115 VAC input  
 Inrush Current ..... 65A peak @ 115 VAC,  
 130A peak @ 230 VAC,  
 cold start @ 25°C  
 Withstand Voltage ..... 4000 Vac from input to output  
 1500 Vac from input to ground  
 500 Vac from output to ground  
 MTBF ..... >100,000 hours at full load  
 and 25°C ambient  
 temperature

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature ..... 0°C to +60°C ambient  
 Derating ..... Derate from 100% at 40°C  
 linearly to 50% at 60°C  
 Storage Temperature ..... -10°C to +80°C  
 Operating Humidity ..... 0% to 90%

STANDARDS & COMPLIANCES

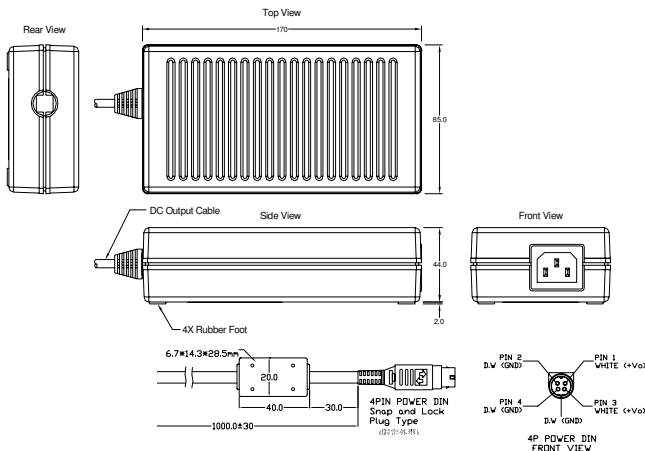
EMC Standards ..... FCC Part 18/ EN55011, Class B  
 ..... EN60601-1-2, CE  
 Safety Standards ..... EN 60601-1, IEC 60601-1,  
 CSA C22.2 No. 601.1-M90  
 Agency Approvals ..... UL, cUL, TUV, CB, CE (LVD)  
 Other Compliances ..... CEC, Energy Star, ERP & EISA  
 efficiency level V, RoHS

MODELS LIST

Product No.	Output Voltage	Max. Output Current	Ripple & Noise (Vp-p)*	Max. Output Power
TMA165-12	12V	13.33A	120mV	160W
TMA165-15	15V	10.67A	150mV	160W
TMA165-19	19V	8.42A	190mV	160W
TMA165-24	24V	6.88A	240mV	165W
TMA165-28	28V	5.89A	280mV	165W
TMA165-36	36V	4.58A	360mV	165W
TMA165-48	48V	3.44A	480mV	165W

\*Measured at output within 20 MHz bandwidth, at rated line voltage and output load range, and with a 10 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS



OUTPUT CONNECTOR	
PIN	FUNCTION
1	+V
2	RETURN
3	+V
4	RETURN
SHELL	RETURN & AC GROUND

Notes:

1. Dimensions in mm
2. Tolerance: ±0.5mm
3. Output cable: 1,050 mm; AWM 2464 #16 AWG / 3C + shielding, UL80°C 300V VW-1
4. Mating connector: Kycon P/N KPJX-4S-S or equivalent