

# UP0653S-()() SERIES

## 65 Watt Open Frame Switchers

- ◆ Small Size 3"X 5" Footprint
- ◆ Universal Input 90 to 264 VAC
- ◆ EMI Meets FCC/CISPR 22 Class B
- ◆ MTBF 160Khrs



### SPECIFICATIONS

All specifications are typical at nominal line, full load and 25°C unless otherwise noted.

### INPUT SPECIFICATIONS

Input Voltage Range ..... 90-264VAC  
Input Frequency ..... 47-63 Hz  
Inrush Current ..... 40A max.(Cold Start)  
Line Regulation<sup>1</sup> ..... ±0.5%

### GENERAL SPECIFICATIONS

Hold-up Time ..... 16mS typ.  
Efficiency ..... 75% typ.  
Leakage Current ..... 3mA max.  
Short Circuit Protection ..... Continuous  
Overvoltage Protection ..... 5VDC output only  
Overload Protection ..... 120-200% of rated value  
Total Output Power :  
    Convection Cooling ..... 55W max.  
    Forced Air Cooling ..... 65W @ 20CFM

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range ..... 0°C to 70°C  
Derating 50°C to 70°C ..... 2%/°C  
Temperature Coefficient ..... ±0.02%/°C  
Storage Temperature Range ..... -40°C to +85°C  
Humidity, Non-Condensing ..... 0 to 95% RH  
EMI ..... Meets FCC/CISPR 22 Class B Specification

### NOTES:

1. Measured from 90 to 264 VAC.



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## OUTPUT SPECIFICATIONS

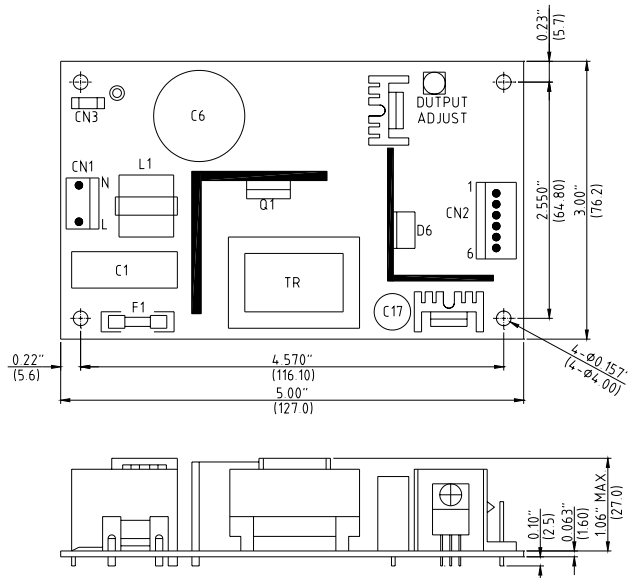
Model Number	Output Voltage <sup>1</sup> (Volts)	Output Current <sup>2</sup> (Amps)			Peak <sup>4</sup> (Amps)	Ripple <sup>5</sup> P-P (mV)	Load Regulation <sup>6</sup>		Cross <sup>7</sup> Regulation
		Min.	Rated <sup>3</sup>	Max. <sup>3</sup>			Load Change		
							30-60%	60-100%	
UP0653S-01	+5	0.0	5.0	6.0	9	50	±1%	±1%	--
	+12	0.0	2.0	2.5	3.75	120	±3%	±3%	±5.0%
	-12	0.0	0.5	0.5	1	120	±1%	±1%	±1.0%
UP0653S-02	+5	0.0	5.0	6.0	9	50	±1%	±1%	--
	+12	0.0	2.0	2.5	3.75	120	±3%	±3%	±5.0%
	-5	0.0	0.5	0.5	1	50	±1%	±1%	±1.0%
UP0653S-03	+5	0.0	5.0	6.0	9	50	±1%	±1%	--
	+15	0.0	1.6	2.0	3	150	±3%	±3%	±5.0%
	-15	0.0	0.5	0.5	1	150	±1%	±1%	±1.0%
UP0653S-04	+5	0.0	5.0	6.0	9	50	±1%	±1%	--
	+24	0.0	1.0	1.25	1.9	240	±3%	±3%	±5.0%
	-12	0.0	0.5	0.5	1	120	±1%	±1%	±1.0%

## NOTES

- The 5V output voltage is set to ±1%, with all the outputs at rated load.
- The +12V output on all models will accept pulse load currents up to 5A, for disk drive applications. The +24V will accept pulse load currents up to 2.5A. Period must be less than 500 mS at a 10% duty cycle. The average current must be less than the maximum current.
- Natural convection cooling, 55W max.. Force air, 20CFM at 1 atmosphere, 65W max..
- Peak output current lasting less than one minute with duty factor less than 5%. During peak loading total peak power must not exceed 80W, and the output voltage may exceed regulation limits.
- Add a 0.1uF ceramic capacitor and a 39uF E.L. capacitor to the output cable. Peak to peak and RMS metering equipment shall have a 20 MHz response with probes and cables maintaining frequency response from 200 Hz to 100MHz bandwidth. Output ripple and spikes are measured directly at the output terminals of the power supply without the use of the probe ground clip.
- Load regulation is measured at 115VAC or 230VAC input, while the output being measured is loaded 60% of rated load and varied +40/-30% of rated load. All other outputs at rated load.
- Cross regulation is measured at the outputs as following: +5V at 6A, +12V at 2.5A, +15V at 2A or +24V at 1.25A, -5V at 0.5A or -12V at 0.5A, -15V at 0.5A, then varying the +5V output load current from 3A to 6A note the effects of load and cross regulation are not cumulative, and may actually act to cancel each other in an operating system environment.

## PHYSICAL SPECIFICATIONS

Weight:265g.



CN1 input connector				
Molex 09-65-2038 with second and fourth pin removed				
Pin	Input voltage			
L&N	90-264 VAC			
Molex mating connector				
Molex 5195 series housing with 5194 series crimp terminals				
CN2 output connector Molex pin 09-65-2068				
Model				
Pin	UP0653S-01	UP0653S-02	UP0653S-03	UP0653S-04
1	+12V	+12V	+15V	+24V
2	+5V	+5V	+5V	+5V
3				
4	Common	Common	Common	Common
5	-12V	-5V	-15V	-12V
6				
Molex mating connector				
Molex 5195 series housing with 5194 series crimp terminals				
CN3 input ground tab, tab size 4.8*0.5(mm)				
With receptacle for 4.8*0.5(mm) tab				

### NOTES:

- All dimensions in inches (mm).
- Tolerance .XX=±0.05, .XXX=±0.020



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