

# UP0402S-( ) ( ) SERIES

## 40 Watt Open Frame Switchers

- ◆ Small Size
- ◆ Universal Input 90 to 264 VAC
- ◆ Conductive EMI Meets FCC/CISPR 22 Class B
- ◆ MTBF 390Khrs



### 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>..... ± 1%

### GENERAL SPECIFICATIONS

Hold-up Time ..... 16mS typ.  
Efficiency ..... 70% typ.  
Leakage Current ..... 3mA max.  
Short Circuit Protection ..... Continuous  
Overvoltage Protection ..... 5VDC output only  
Continuous Output Power ..... 40W max.  
Hi-pot Isolation: Input / Output ..... 4242 VDC

### 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  
Cooling ..... Free- Air Convection  
EMI Filter (on Board):  
Conducted ..... Meets FCC/CISPR 22 Class B Specification

#### NOTE:

1. Measured from 90 to 264 VAC.

## OUTPUT SPECIFICATIONS

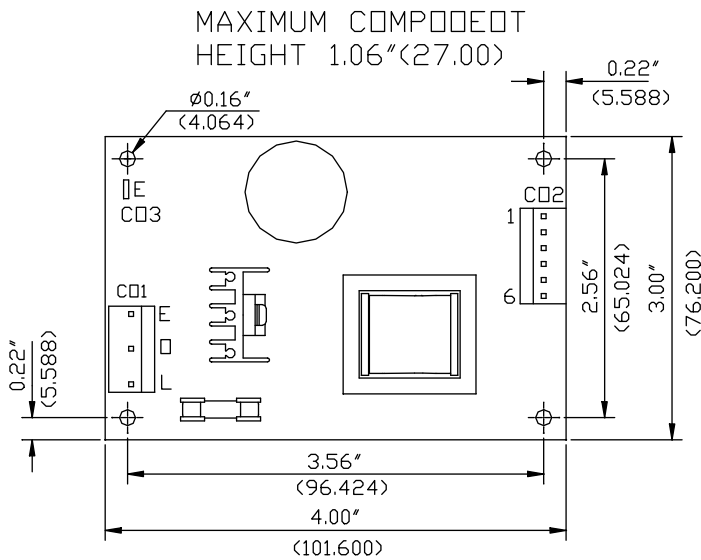
Model Number	Output <sup>1</sup> Voltage (Volts)	Output Current <sup>2</sup> (Amps)			Ripple <sup>4</sup> P-P (mV)	Load Regulation <sup>5</sup>		Cross <sup>6</sup> Regulation
		Min.	Rated	Max.		Load Change		
						30-60%	60-100%	
UP0402S-01	+5	0.0	3	5	100	± 1%	± 1%	--
	+12	0.0	2	3	120	± 3%	± 3%	± 4.0%
UP0402S-02	+5	0.0	3	5	100	± 1%	± 1%	--
	+24	0.0	1	1.5	240	± 3%	± 3%	± 4.0%

### 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 3A, for disk drive applications. The +24V will accept pulse load currents up to 1.5A. Period must be less than 500 mS at a 10% duty cycle. The average current must be less than the maximum current.
- Peak output current lasting less than one minute with duty factor less than 5%. During peak loading voltage may exceed regulation limits.
- Add a 0.1uF ceramic capacitor and a 10uF 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: +12V and +1.5A or +24V at 1A, then varying the +5V output load current from 1.5A to 3A 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: 200g



### NOTE:

- All dimensions in inches (mm).
- Tolerance .xx = ± 0.05  
.xxx = ± 0.020

CN1 input connector Molex 09-65-2058 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	UP0402S-01	UP0402S-02
1	+12V	+24V
2	+5V	+5V
3		
4	Common	Common
5	NC	NC
6		
Molex mating connector Molex 5195 series housing with 5194 series crimp terminals		
CN3(option)input ground tab, tab size 4.8*0.5(mm)		
With receptacle for 4.8*0.5(mm) tab		



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