

# GEM600

600 Watt Single Output Economy Technology Switchers



**Commercial & Medical**

**2 Year Warranty**

- 600W Single Output Power Supply
- Universal Input 90-264 VAC
- Standard: Active PFC, OVP, Power Fail and Inhibit (low)
- Modified and Custom Designs also Available
- Complies with EMI/RFI Regulations
- CE compliant (LVD, EMC, RoHS)



International Safety Standard Approvals



**CONDOR™**

## Specifications

Unless otherwise noted, all parameters are nominal values measured at 120 VAC @25°C and 0-95% relative humidity, non-condensing. For limits at unusual operating conditions, consult factory.

### Output Specifications

Combined Line and Load Voltage Regulation	±1%
Ripple	1% Vp-p max.
Transient Response	500µs max. for 50% load change, slew rate of 0.2A/µs
Protection	cycle-by-cycle current limiting, automatic recovery for overload or short circuit
Voltage adjustable	± 5%

### Input Specifications

AC Input Voltage Range	90-264VAC nominal
Line Frequency	47-63Hz
AC Input Current	9.0A max.
Protection	Input fuse, inrush limited

### Environmental Specifications

Thermal Performance Cooling	Operating Temperature	0° - 50° C with no derating Fan integrated into power supply cover with thermal shutdown
Relative Humidity		5-95% non-condensing
Altitude		0-10,000 feet
Storage Temperature Range		-40° C to +85° C

### General Specifications

Topology	Half Bridge
Efficiency	≥ 80% at full rated load
Certifications	DEMKO-EN60950-1, IEC60950-1, UL/CSA 60950-1 & 60601-1
Hold-up Time	≥20ms at 120V input
Weight	3.75 lbs. (1.70 Kg)
MTBF	208,000 hours
Enclosure Dimensions	11.81L X 5.00W X 2.79H (in), 30.00L X 12.70W X 7.09H (cm)

### EMI / EMC Compliance Performance Requirement RF emissions

### Static Discharge immunity

Radiated RF immunity  
EFT/Burst immunity  
Line Surge immunity

Conducted RF immunity  
Power frequency magnetic field immunity  
Voltage dip immunity  
Line frequency harmonics  
Voltage fluctuations/flicker

### EMC Standard

EN55011/22 radiated Class A, conducted Class B  
FCC Part 15 radiated Class A, conducted Class B  
EN61000-4-2, 6kV Contact Discharge, 8kV Air Discharge  
EN61000-4-3, 3V/m  
EN61000-4-4, 2kV/5kHz  
EN61000-4-5, 1kV Differential, 2kV Common-mode  
EN61000-4-6, 3V  
EN61000-4-8, 3A/m  
EN61000-4-11 - see note 1  
EN61000-3-2, Class A  
EN61000-3-3, Complies (clause 5b)

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Model	Output (V)	Peak Current	Max Power	Peak Power (1)
GEM600-24	24V@25.0A	27.0A	600W	650W
GEM600-28	28V@21.5A	23.5A	600W	650W
GEM600-36	36V@16.7A	18.0A	600W	650W
GEM600-48	48V@12.5A	13.5A	600W	650W

### Note

1. Peak for 1 minute, 10% duty cycle

### EN60601-1-2-2001

Voltage Sags Compliance:

Voltage Test Level Input Voltage	Voltage Dip Input Voltage	Duration Periods	Output Voltage Deviation
100VAC	< 5VAC	10mS	<3.5%
100VAC	40VAC	100mS	<3.5%
100VAC	70VAC	500mS	<3.5%
240VAC	<12VAC	10mS	<3.5%
240VAC	96VAC	100mS	<3.5%
240VAC	168VAC	500mS	<3.5%

Note: During 100mS voltage dip (5 cycles at 40%VAC), AC Power Fail warning may trigger. During low line 100mS voltage dip, reduced loading to 50% is required to meet deviation requirement and regulation.

### Optional Features

Current share and Power good signal

Multiple options available for input and output connectors. See mechanical drawing or consult factory.

### Leakage Current

The leakage current is as follows:

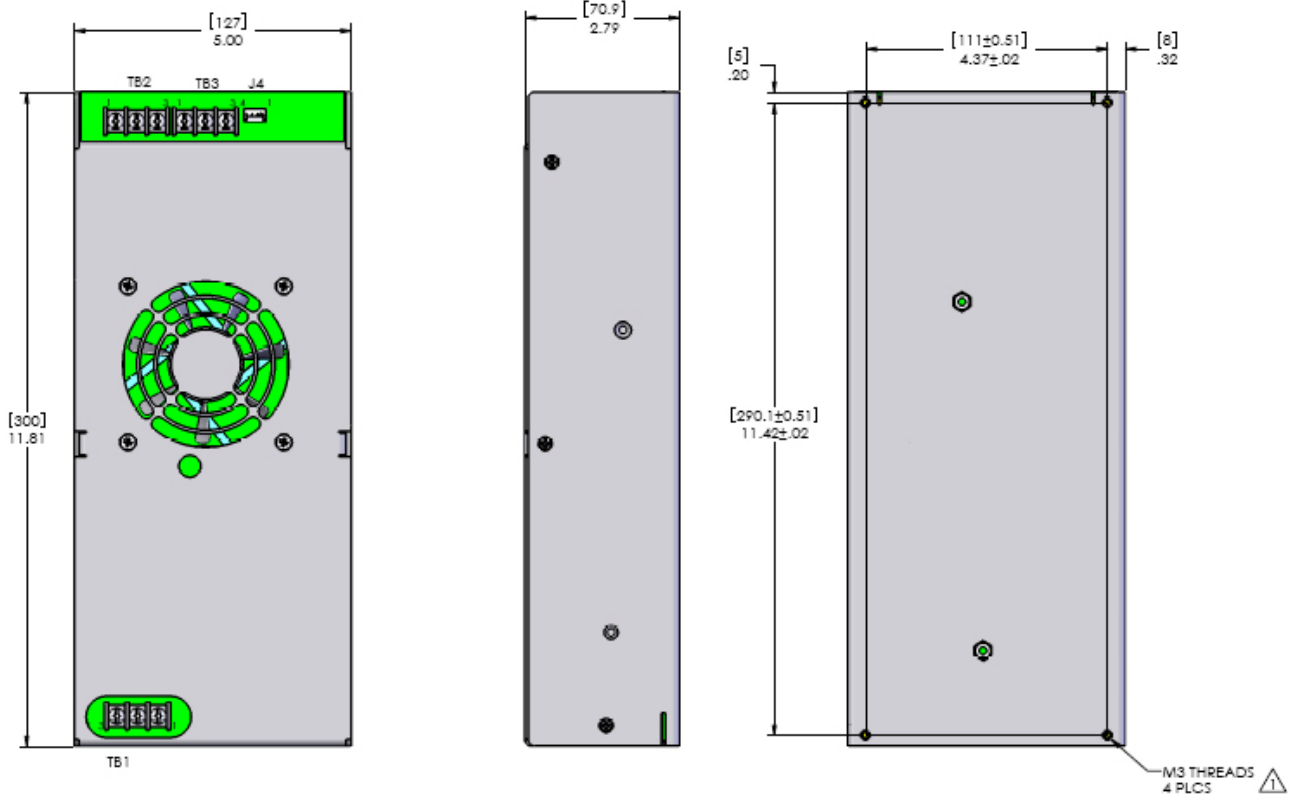
Input	Normal		Single Fault	
	Typical	Maximum	Typical	Maximum
120VAC @ 60Hz	55uA	75uA	96uA	120uA
264VAC @ 60Hz	140uA	160uA	255uA	300uA

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## Mechanical Specifications



### INPUT

TB1 - EBY 6002-03-N-01

PIN 1) AC LINE  
PIN 2) AC NEUTRAL  
PIN 3) GROUND

### OUTPUT

TB2 - EBY 6002-03-N-01

PIN 1) +Vout  
PIN 2) +Vout  
PIN 3) +Vout

TB3 - EBY 6002-03-N-01

PIN 1) -Vout  
PIN 2) -Vout  
PIN 3) -Vout

J4 - AMP 640456-4

PIN 1) POWER GOOD  
PIN 2) POWER FAIL  
PIN 3) N/C  
PIN 4) INHIBIT

GEM600-VV WXY-ZZ G

- ROHS COMPLIANT
- VALUE ADDED CONFIGURATIONS
- OPTIONAL DIODE:  
BLANK - NONE  
D - N+1 OR-ing DIODE
- OUTPUT CONNECTOR:  
A - EBY P/N: 6002-03-N-01  
B - BUSS BARS 10-32UNC X .375 SCREWS  
C - PHOENIX CONTACT P/N: 1998959  
D - PHOENIX CONTACT P/N: 1731721
- INPUT CONNECTOR:  
A - EBY P/N: 6002-03-N-01  
T - PHOENIX CONTACT P/N: 1706785
- OUTPUT VOLTAGE  
24 - 24Vdc @ 25.0A  
28 - 28Vdc @ 21.5A  
36 - 36Vdc @ 16.7A  
48 - 48Vdc @ 12.5A

### Connector Information

Input	3-Terminal, Class I (ground) with screw terminals on 0.375 inch centers (see diagram above)
Output	6-Terminal with screw terminals on 0.375 inch centers (see diagram above)
Signal	0.100 connector (see diagram above)