

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



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:

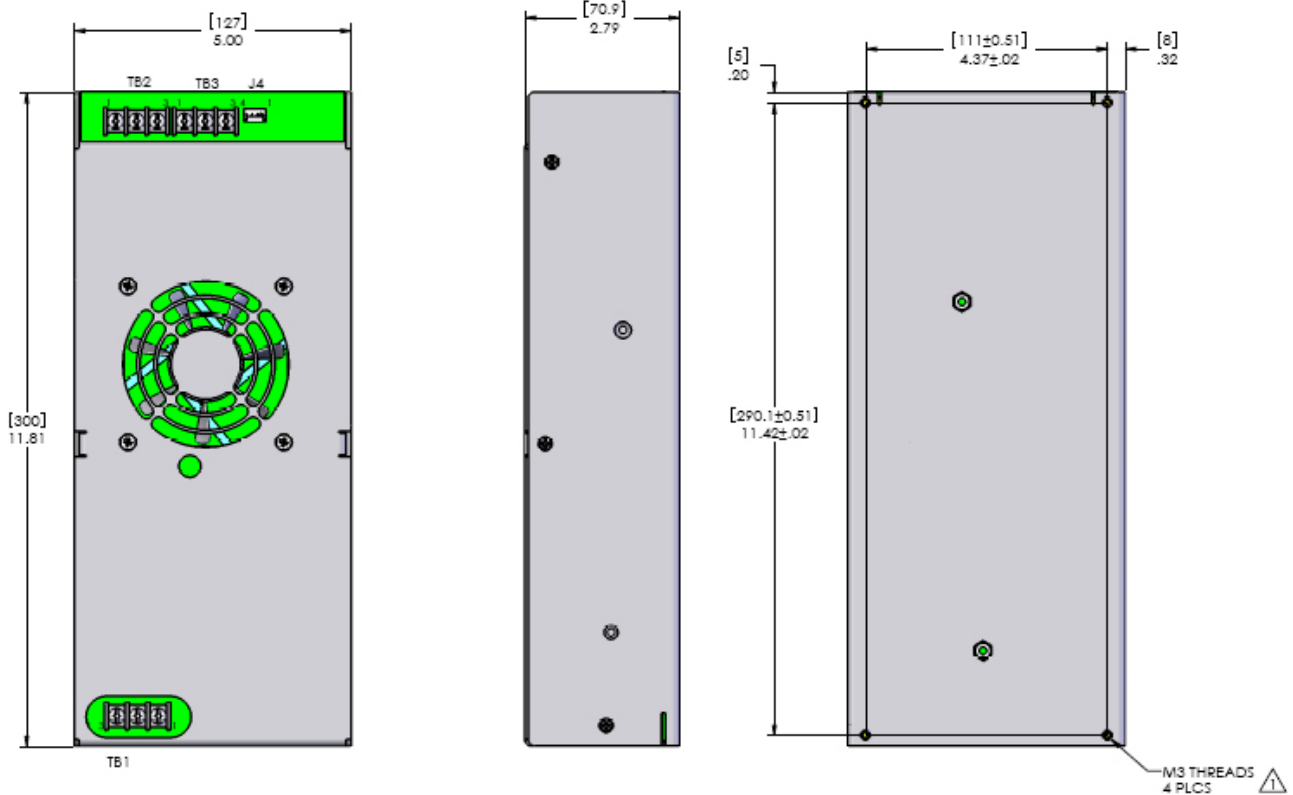
Input	Normal		Single Fault	
	Typical	Maximum	Typical	Maximum
120VAC @ 60Hz	55uA	75uA	96uA	120uA
264VAC @ 60Hz	140uA	160uA	255uA	300uA

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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)



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