

# GEN750-1500W SERIES

Laboratory Power Supplies: 750 ~ 1500W



## Features

- High Power Density 750 / 1500W in 1U Rack
- Wide range input: 85 ~ 264Vac, with Power Factor Correction
- Output voltage up to 600V, current up to 200A
- Built-in RS232 / RS-485 Interface Standard
- Last Setting Memory: Front Panel Lockout
- Parallel Master / Slave Parallel operation, with up to four units. Total current is measured by master.
- Reliable Encoders for Voltage & Current adjustment
- Optional Interfaces :
  - LXI Compliant LAN
  - Isolated Analog Programming & Monitoring Interface
  - IEEE Multi-Drop –SCPI, USB interface
  - Labview & LabWindows drivers

Model 750W	Output		Power W
	V	A	
GEN6-100	0-6V	0-100A	600W
GEN8-90	0-8V	0-90A	720W
GEN12.5-60	0-12.5V	0-60A	750W
GEN20-38	0-20V	0-38A	750W
GEN30-25	0-30V	0-25A	750W
GEN40-19	0-40V	0-19A	750W
GEN60-12.5	0-60V	0-12.5A	750W
GEN80-9.5	0-80V	0-9.5A	750W
GEN100-7.5	0-100V	0-7.5A	750W
GEN150-5	0-150V	0-5A	750W
GEN300-2.5	0-300V	0-2.5A	750W
GEN600-1.3	0-600V	0-1.3A	750W

Model 1500W	Output		Power W
	V	A	
GEN6-200	0-6V	0-200A	1200W
GEN8-180	0-8V	0-180A	1440W
GEN12.5-120	0-12.5V	0-120A	1500W
GEN20-76	0-20V	0-76A	1500W
GEN30-50	0-30V	0-50A	1500W
GEN40-38	0-40V	0-38A	1500W
GEN50-30	0-50V	0-30A	1500W
GEN60-25	0-60V	0-25A	1500W
GEN80-19	0-80V	0-19A	1500W
GEN100-15	0-100V	0-15A	1500W
GEN150-10	0-150V	0-10A	1500W
GEN300-5	0-300V	0-5A	1500W
GEN600-2.6	0-600V	0-2.6A	1500W

## How to order:

### GEN 30 25 - IEE

Series Name	Output Voltage	Output Current	Options
			IEEE
			IS510
			IS420
			LAN

## Programming Options:

RS232 / RS-485 Interface built-in ( Standard )  
 GPIB ( Multi-Drop Master Interface ) – **IEEE**  
 Voltage Programming Isolated Analog Interface – **IS510**  
 Current Programming Isolated Analog Interface – **IS420**  
 LAN Interface ( complies with LXI Class C ) – **LAN**

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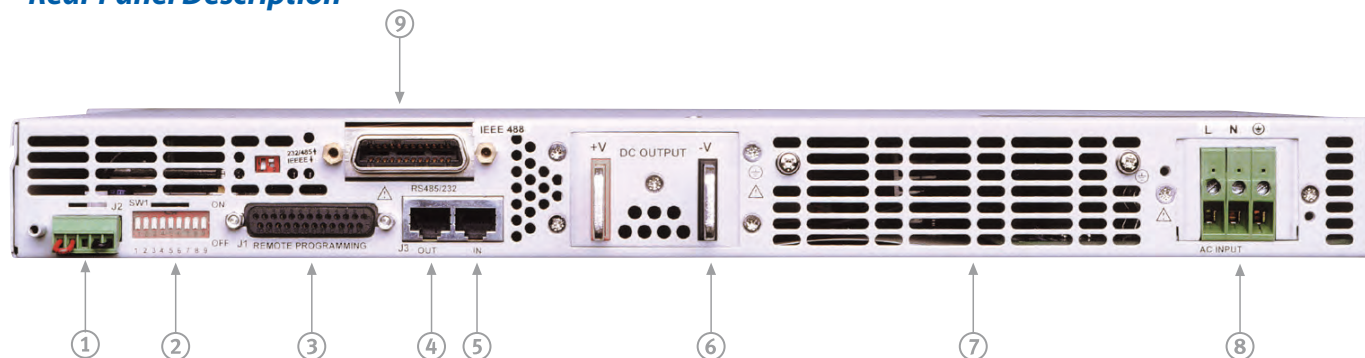
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## Front Panel Description



1. AC ON/OFF Switch
2. Air Intake allows zero stacking for maximum system flexibility and power density.
3. Reliable encoder controls Output Voltage and sets Address.
4. Volt Display shows Output Voltage and directly displays OVP, UVL and Address settings.
5. Reliable encoder controls Output Current, sets baudrate and Advanced Parallel mode.
6. Current Display shows Output Current and displays baudrate.
7. Function/Status LEDs:
  - Alarm
  - Fine Control
  - Preview Settings
  - Foldback Mode
  - Remote Mode
  - Output On
8. Pushbuttons allow flexible user configuration
  - Coarse and Fine adjustment of Output Voltage/Current and Advanced Parallel Master or Slave
  - Preview settings and set Voltage/Current with Output OFF, Front Panel Lockout
  - Set OVP and UVL Limits
  - Set Current Foldback
  - Local/Remote Mode and select Address and Baudrate
  - Output ON/OFF and Auto-Start/Safe-Start Mode

## Rear Panel Description



1. Remote/Local Output Voltage Sense Connections.
2. DIP Switches select 0-5V or 0-10V Programming and other functions.
3. DB25 (Female) connector allows (Non-isolated) Analog Program and Monitor and other functions.
4. RS-485 OUT to other Genesys™ Power Supplies.
5. RS-232/RS-485 IN Remote Serial Programming.
6. Output Connections: Rugged busbars for up to 60V Output; wire clamp connector for Outputs >60V.
7. Exit air assures reliable operation when zero stacked.
8. Wide-Range Input 85-265VAC continuous, 47/63Hz with Active Power Factor Correction (0.99 typical).  
AC Input Connector: 750W (IEC320), 1500W (screw terminal-shown).
9. Optional Interface Position for IEEE 488.2 SCPI (shown) or Isolated Analog Interface or LAN Interface.



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## General Specifications Genesys™ 750W/1500W

### 2.1 INPUT CHARACTERISTICS

1. Input voltage/freq. (*1)	85~265Vac continuous, 47~63Hz, single phase
2. Power Factor	0.99 @100/200Vac, rated output power.
3. EN61000-3-2,3 compliance	Complies with EN61000-3-2 class A and EN61000-3-3 at 20~100% output power.
4. Input current 100/200Vac	750W :10.5A / 5A, 1500W :21A / 11A
5. Inrush current 100/200Vac	750W :Less than 25A, 1500W :Less than 50A
6. Hold-up time	More than 20mS, 100Vac, at 100% load.

### 2.2 POWER SUPPLY CONFIGURATION

1. Parallel Operation	Up to 4 units in master/slave mode with single wire current balance connection
2. Series Operation	Up to 2 units. with external diodes. 600V Max to Chassis ground

### 2.3 ENVIRONMENTAL CONDITIONS

1. Operating temp	0~50°C, 100% load.
2. Storage temp	-20~70°C
3. Operating humidity	30~90% RH (non-condensing).
4. Storage humidity	10~95% RH (non-condensing).
5. Vibration	MIL-810E, method 514.4, test cond. I-3.3.1. The EUT is fixed to the vibrating surface.
6. Shock	Less than 20G, half sine, 11mSec. Unit is unpacked.
7. Altitude	Operating: 10000ft (3000m), Derat output current by 2%/100m above 2000m, Non operating: 40000ft (12000m).

### 2.4 EMC

1. Applicable Standards:	
2. ESD	IEC1000-4-2. Air-disch. -8KV, contact disch. -4KV
3. Fast transients	IEC1000-4-4. 2KV
4. Surge immunity	IEC1000-4-5. 1KV line to line, 2KV line to ground
5. Conducted immunity	IEC1000-4-6. 3V
6. Radiated immunity	IEC1000-4-3. 3V/m
7. Conducted emission	EN55022B, FCC part 15J-B, VCCI-B.
8. Radiated emission	EN55022A, FCC part 15-A, VCCI-A.
9. Voltage dips	EN61000-4-11
10. Conducted emission	EN55022B, FCC part 15-B, VCCI-B.
11. Radiated emission	EN55022A, FCC part 15-A, VCCI-A.

### 2.5 SAFETY

1. Applicable standards:	UL 60950-1, CSA22.2 No.60950-1, IEC 60950-1, EN 60950-1
2. Interface classification	Models with Vout 50V: Output is SELV, all communication/control interfaces (RS232/485, IEEE, Isolated Analog, LAN, Sense, Remote Programming and Monitoring) are SELV. Models with 60V Vout 400V: Output is Hazardous, communication/control interfaces: RS232/485, IEEE, Isolated Analog, LAN, Remote Programing and Monitoring (pins 1-3, pins14-16) are SELV, Sense, Remote Programming and Monitoring (pins 8-13, pins 21-25) are Hazardous. Models with 400V Vout 600V: Output is Hazardous, all communication/control interfaces (RS232/485, IEEE, Isolated Analog, LAN, Sense, Remote Programming and Monitoring) are Hazardous.
3. Withstand voltage	Vout 50V models : Input-Output (SELV): 4242VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Input-Ground: 2828VDC 1min, 60V Vout 150V models: Input-Output (Hazardous): 3425VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Output(Hazardous)-SELV: 2307VDC 1min, Output(Hazardous)-Ground: 1414VDC 1min, Input-Ground: 2828VDC 1min. 300V Vout 600V models: Input-Output(Hazardous): 3490VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Hazardous. Output-communication/control(SELV): 4242VDC 1min, Output(Hazardous)-Ground: 2738VDC 1min, Input-Ground: 2828VDC 1min.
4. Insulation resistance	More than 100Mohm at 25°C, 70% RH.

### 2.6 MECHANICAL CONSTRUCTION

1. Cooling	Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed.
2. Dimensions (WxHxD)	W: 422.8mm, H: 43.6mm, D: 432.8mm (excluding connectors, encoders, handles, etc.)
3. Weight	750W: 7Kg (15 Lbs) 1500W: 8.5Kg (18 Lbs)
4. AC Input connector	750W: IEC320 AC Inlet. 1500W: Screw terminal block, Phoenix P/N: FRONT-4-H-7.62, with strain relief
5. Output connectors	6V to 60V models: Bus-bars (hole Ø 8.5mm). 80V to 600V models: wire clamp connector, Phoenix P/N: FRONT-4-H-7.62

### 2.7 RELIABILITY SPECS

1. Warranty	5 years.
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\*1: For cases where conformance to various safety standards (UL, IEC etc.) is required, to be described as 100-240Vac (50/60Hz).  
All specifications subject to change without notice.

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## Genesys™ Power Parallel and Series Configurations

### Parallel operation - Master/Slave:

Active current sharing allows up to four identical units to be connected in an auto-parallel configuration for four times the output power. In Advanced Parallel Master/Slave Mode, total current is programmed and reported by the Master, Up to four supplies act as one.

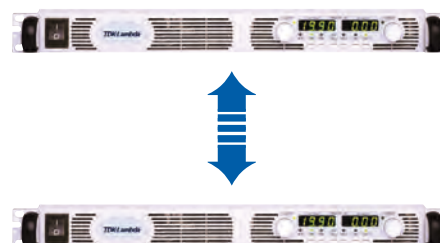


### Series operation

Up to two units may be connected in series to increase the output voltage or to provide bipolar output. (Max 600V to Chassis Ground).

### Remote Programming via RS-232 & RS-485 Interface

Standard Serial Interface allows chain control of up to 31 power supplies on the same bus with built-in RS-232 & RS-485 Interface.



## Programming Options (Factory installed)

### Digital Programming via IEEE Multi-Drop Interface

P/N: IEEE

- Allows IEEE Master to control up to 30 slaves over RS-485 daisy-chain
- Only the Master needs be equipped with IEEE Interface
- IEEE 488.2 SCPI Compliant
- Program Voltage
- Measure Voltage
- Over Voltage setting and shutdown
- Error and Status Messages
- Program Current
- Measure Current
- Current Foldback shutdown

### Isolated Analog Programming

Four Channels to Program and Monitor Voltage and Current. Isolation allows operation with floating references in harsh electrical environments. Choose between programming with Voltage or Current. Connection via removable terminal block: Phoenix MC1,5/8-ST-3.81.

- Voltage Programming, user-selectable 0-5V or 0-10V signal. P/N: IS510  
Power supply Voltage and Current Programming Accuracy  $\pm 1\%$   
Power supply Voltage and Current Monitoring Accuracy  $\pm 1.5\%$
- Current Programming with 4-20mA signal. P/N: IS420  
Power supply Voltage and Current Programming Accuracy  $\pm 1\%$   
Power supply Voltage and Current Monitoring Accuracy  $\pm 1.5\%$

### LAN Interface

**LXI** Compliant to Class C

P/N: LAN

- Meets all LXI-C Requirements
- Address Viewable on Front Panel
- Fixed and Dynamic Addressing
- Compatible with most standard Networks
- VISA & SCPI Compatible
- LAN Fault Indicators
- Auto-detects LAN Cross-over Cable
- Fast Startup

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## Power Supply Identification / Accessories How to order

<b>GEN</b>	<b>600</b>	-	<b>2.6</b>	-	-
Factory Options					
Series Name	Output Voltage (0~600V)	Output Current (0~2.6A)	Option: IEEE IS510 IS420 LAN		

## Models 750/1500W

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN6-100	0~6V	0~100	600
GEN6-200		0~200	1200
GEN8-90	0~8V	0~90	720
GEN8-180		0~180	1440
GEN12.5-60	0~12.5V	0~60	750
GEN12.5-120		0~120	1500
GEN20-38	0~20V	0~38	760
GEN20-76		0~76	1520
GEN30-25	0~30V	0~25	750
GEN30-50		0~50	1500
GEN40-19	0~40V	0~19	760
GEN40-38		0~38	1520

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN50-30	0~50V	0~30	1500
GEN60-12.5	0~60V	0~12.5	750
GEN60-25		0~25	1500
GEN80-9.5	0~80V	0~9.5	760
GEN80-19		0~19	1520
GEN100-7.5	0~100V	0~7.5	750
GEN100-15		0~15	1500
GEN150-5	0~150V	0~5	750
GEN150-10		0~10	1500
GEN300-2.5	0~300V	0~2.5	750
GEN300-5		0~5	1500
GEN600-1.3	0~600V	0~1.3	780
GEN600-2.6		0~2.6	1560






## Factory option

RS-232/RS-485 Interface built-in Standard  
 GPIB Interface  
 Voltage Programming Isolated Analog Interface  
 Current Programming Isolated Analog Interface  
 LAN Interface (Complies with **LV** Class C)

## P/N

-  
 IEEE  
 IS510  
 IS420  
 LAN

## AC Cords sets (750W only)

Region	Europe	United Kingdom	Japan	Middle East	North America
Output Power AC Cords Wall Plug Power Supply Connector	750W 10A/250Vac L=2m INT'L 7/VII IEC320-C13 	750W 10A/250Vac L=2m BS1363 IEC320-C13 	750W 13A/125Vac L=2m IEC320-C13 	750W 10A/250Vac L=2m SI-32 IEC320-C13 	750W 13A/125Vac L=2m NEMA 5-15P IEC320-C13 
Part Number	P/N: GEN/E	P/N: GEN/GB	P/N: GEN/J	P/N: GEN/I	P/N : GEN/U

## Accessories

### 1. Communication cable

RS-232/RS-485 Cable is used to connect the power supply to the PC Controller.

Mode	RS-485	RS-232	RS-232
PC Connector	DB-9F	DB-9F	DB-25F
Communication Cable	Shield Ground L=2m	Shield Ground L=2m	Shield Ground L=2m
Power Supply Connector	EIA/TIA-568A (RJ-45)	EIA/TIA-568A (RJ-45)	EIA/TIA-568A (RJ-45)
P/N	GEN/485-9	GEN/232-9	GEN/232-25

### 2. Serial link cable\*

Daisy-chain up to 31 Genesys™ power supplies.

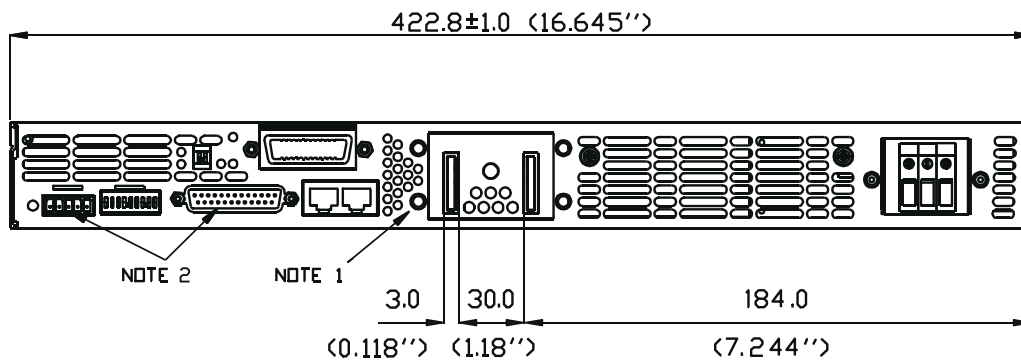
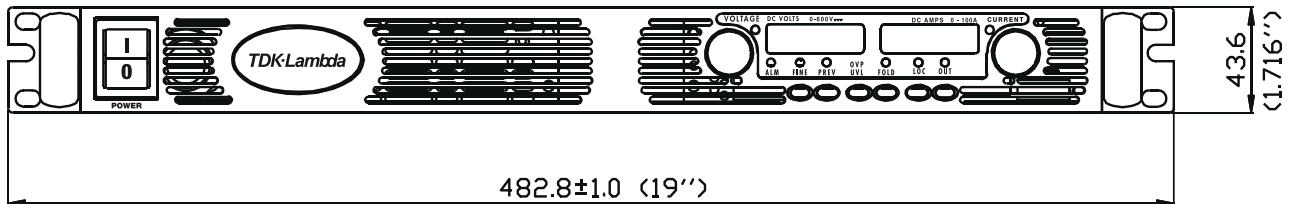
Mode	Power Supply Connector	Communication Cable	P/N
RS-485	EIA/TIA-568A (RJ-45)	Shield Ground L=50cm	GEN/RJ45

\* Included with power supply

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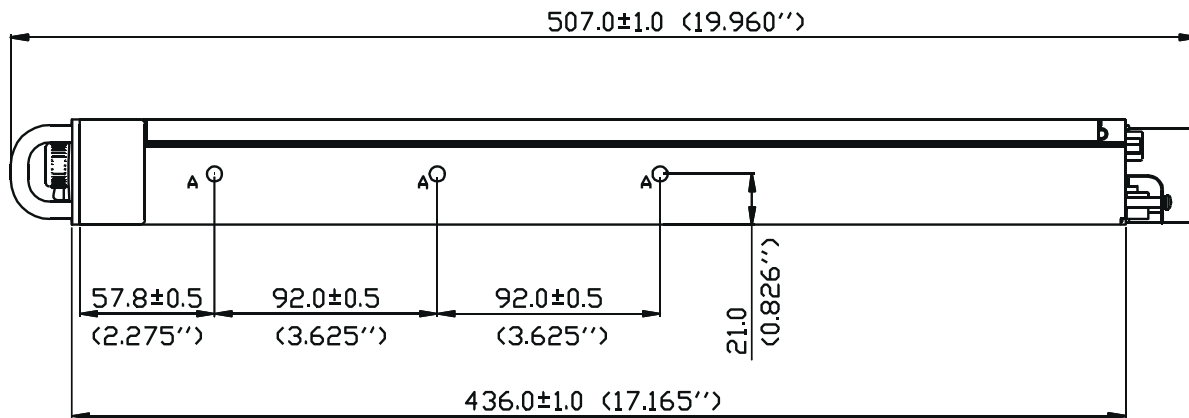
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## Outline Drawing Genesys™ 750W/1500W Units



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## NOTE

1. Bus bars for 6v to 60v models (shown)  
Wire clamp connector for 80V to 600V models
2. Plug connectors included with the power supply
3. Chassis slides mounting holes #10-32 marked "A"  
GENERAL DEVICES P/N: C-300-S-116 or equivalent