

GEN5KW SERIES

Laboratory Power Supplies: 5KW



Features

- High Power Density 5KW in 2U
- 3 phase input 208VAC or 415VAC
- Power Factor Correction
- Output voltage up to 600V, current up to 600A
- Built-in RS232 / RS-485 Interface Standard
- Last Setting Memory: Front Panel Lockout
- Advanced Parallel reports, with up to four units
- Reliable Encoders for Voltage & Current adjustment
- Optional Interfaces :
 - Isolated Analog Programming & Monitoring
 - IEEE Multi-Drop –SCPI, USB interface
 - Labview & LabWindows drivers

Specifications:

Input Voltage (3 phase)	208VAC (170 ~ 265) Code: 3P208 415VAC (342 ~ 460) Code: 3P400	Line Regulation	Model dependent refer to manual
No of Phases	Wye or Delta, 4 wire 3phase and one protective earth.	Load Regulation	Model dependent refer to manual
Input Frequency	47 ~ 63Hz	Safety	UL/CUL60960-1, EN60950-1, Units with IEMD or ISOL option are recognized up to 400V output, CE marked 208 & 400V models
Input Current	208VAC models: 15A 415VAC models: 7.5A	Cooling	Fan driven, airflow front to rear, supplemental vents on side. Suitable for zero stacking top or bottom.
Efficiency	Model dependent , typically 88%	Input Connectors	Power Combicon PC 6 series with strain relief
Power Factor	0.94	Output Connectors	Up to & including 100V: Bus-bars 150-600V Phoenix clamp connector
Leakage Current	3.5mA (EN60950)	Overload Protection	Constant Current with auto recovery
Input Protection	208V: Circuit Breaker 400V: Line Fuse	Foldback Protection	Output shutdown, manual reset by front panel OUT button, response time <1sec
Phase Imbalance	<5% on three phase input	Overvoltage Protection	Inverter shut-down, manual reset by ON/OFF recycle or by OUT button. OVP programming accuracy 5% full scale.
Parallel Operation	Up to four units may be connected in Master / Slave with "Single Wire" connection, refer to manual for further details.	Over Temperature Protection	If internal temperature exceeds safe levels. Latched in Safe Mode, Unlatched in Auto Mode.
Series Operation	YES, with external diodes	Phase Loss	Phase loss protection
Operating Temp.	0°C to +50°C at full load	Remote Analog Controls & Signals	Refer to manual
Operating Humidity	20 ~ 80% RH Non-condensing	Digital Programming & Readback	Refer to manual
Vibration & Shock	MIL-810F method 514.5 Less than 20G, ½ sine, 11mSec.	Dimensions	2U x 19in Rack mounting, slides or rear support required. 482 x 537 x 88mm (without connectors)
Altitude	Operating: Up to 3000m	Weight	16kg
Audible Noise	65dBA at full load, measured 1m from front panel		
ESD	EN61000-4-2		
Fast Transients	EN61000-4-4		
Surge Immunity	EN61000-4-5		
Conducted Immunity	EN61000-4-6		
Radiated Immunity	EN61000-4-3		
Conducted Emission	EN55011 Lev A		
Radiated Emission	EN55011 Lev A		

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Model	Output		Power W
	V	A	
GEN8-600	0 – 8V	0 – 600A	4800W
GEN10-500	0 – 10V	0 – 500A	5000W
GEN16-310	0 – 16V	0 – 310A	5000W
GEN20-250	0 – 20V	0 – 250A	5000W
GEN30-170	0 – 30V	0 – 170A	5000W
GEN40-125	0 – 40V	0 – 125A	5000W
GEN60-85	0 – 60V	0 – 85A	5100W

Model	Output		Power W
	V	A	
GEN80-65	0 – 80V	0 – 65A	5200W
GEN100-50	0 – 100V	0 – 50A	5000W
GEN150-34	0 – 150V	0 – 34A	5100W
GEN200-25	0 – 200V	0 – 25A	5000W
GEN300-17	0 – 300V	0 – 17A	5100W
GEN400-13	0 – 400V	0 – 13A	5200W
GEN500-10	0 – 500V	0 – 10A	5000W
GEN600-8.5	0 – 600V	0 – 8.5A	5100W

Accessories: RS-232/RS-485 cable is used to connect the power supply to host PC

Mode	RS-485	RS-232	RS-232
PC Connector Communication Cable Power Supply Connector	DB-9F Shield Ground L=2m EIA/TIA-568A (RJ-45)	DB-9F Shield Ground L=2m EIA/TIA-568A (RJ-45)	DB-25F Shield Ground L=2m EIA/TIA- 568A (RJ-45)
P/N:	GEN485-9	GEN232-9	GEN232-25

Input AC voltage Codes / Options

3phase 208VAC) - **3P208**
3phase 400VAC) (Australian Standard) - **3P400**

Programming Codes / Options

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

Front Panel Controls

Vout / Iout manual adjust by separate encoders, Fine and Coarse selectable.
OVP/ UVL manual adjust by Voltage Adjust encoder, Front Panel Lock / Unlock
Address selection by Voltage Adjust encoder. No of addresses:31
AC ON / OFF, Output ON */ OFF, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go to Local
RS232/485 and IEEE488.2 selection by IEEE enable switch and DIP switch
Baudrate selection by Current adjust encoder.
Parallel Master Slave: Hx, where x = Slaves 0 up to four.

Front Panel Display

Vout: 4 Digits, Accuracy: 0.5% +/- 1 Count
Iout: 4 Digits, Accuracy: 0.5% +/- 1 Count
Voltmeter is user selectable to read either local voltage (at power supply) or remote voltage (at the load).
ADDR., OVP/UVL , V/A , FOLD, REM ./LOCAL, OUT ON/OFF, LFP/UFP, CC/CV : GREEN LED's. ALRM
(OVP,OTP,FOLD,AC FAIL): RED LED

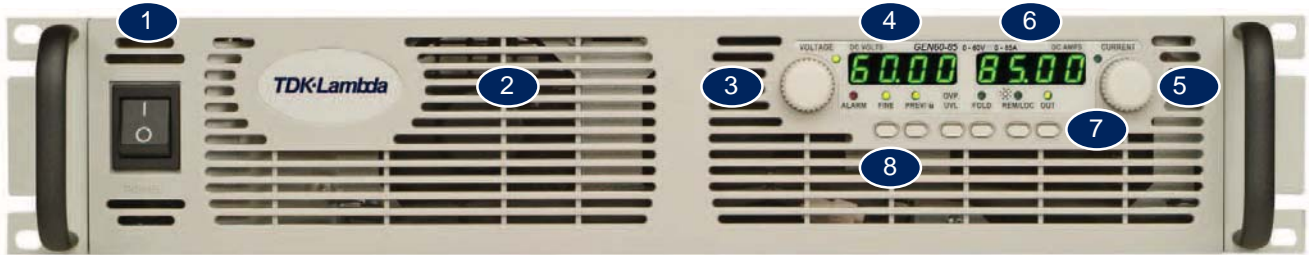
Remote Analog & Controls

Vout voltage programming 0-1 00%, 0-5V or 0-1 0V, user selectable. Accuracy & Linearity +/-1% of Rated Vo.
Iout voltage programming 0-1 00%, 0-5V or 0-1 0V, user selectable. Accuracy & Linearity +/-1% of Rated Io.
Vout resistor programming 0-100%, 0-5/10kohm full scale, user selectable. Accuracy & Linearity +/-1% of Rated Vo.
Iout resistor programming 0-100%, 0-5/10kohm full scale, user selectable. Accuracy & Linearity +/-1% of Rated Io.
On/Off control (rear panel) By Voltage: 0.6V = Disable, 2-1 5V = enable (default) or dry contact, user selectable logic
Output current monitor 0-5V or 0-1 0V , accuracy:1 % , user selectable
Output voltage monitor 0-5V or 0-1 0V , accuracy:1 % , user selectable
Power supply OK signal Yes. TTL high-OK, 0V (500ohm impedance)-Fail
CV/CC signal CV: TTL high (4-5V) source: 10mA, CC: TTL low (0-04V):10mA
Enable/Disable Dry contact. Open: Off , Short: On. Max. voltage at Enable/Disable Contacts 6V
Remote/Local selection Selects Remote or Local operation by Voltage: 0-0.6V/2-1 5V, <0.6V = Local 2-1 5V = Remote
Remote/Local signal Signals operating mode in use.

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Front Panel Description



1. ON/OFF Switch
2. Air Intake allows zero stacking for maximum system flexibility and power density.
3. Reliable encoder controls Output Voltage, Address, OVP and UVL settings.
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 Baud rate. Displays total current in Parallel Master/Slave Mode
7. Function/Status LEDs:
 - Alarm
 - Foldback Mode
 - Fine Control
 - Remote Mode
 - Preview Settings
 - 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 Lock
 - Parallel Master/Slave
 - Set OVP and UVL Limits
 - Set Current Foldback Protection
 - Go to Local Mode and select Address and Baud rate
 - Output ON/OFF and Auto-Re-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 (shown) for up to 100V Output; wire clamp connector for Outputs >100V.
7. Exit air assures reliable operation when zero stacked.
8. Input: 208 & 400VAC Three Phase, 50/60 Hz
AC Input Connector: PHOENIX CONTACT Power Combicon PC 6/... Series with strain relief.
9. Optional Interface Position for IEEE 488.2 SCPI (shown) or Isolated Analog Interface or LAN Interface.

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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.

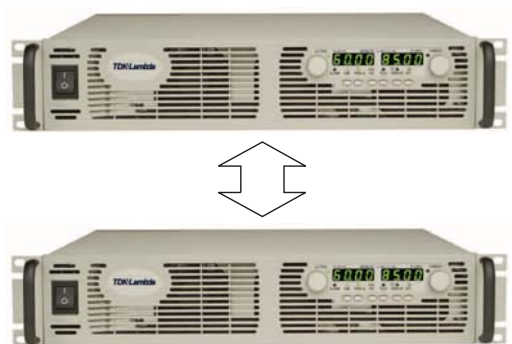
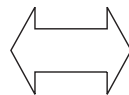


Series operation

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



Programming Options (Factory installed)

Digital Programming via IEEE Interface

- IEEE 488.2 SCPI Compliant
- Program Voltage
- Measure Voltage
- Over Voltage setting and shutdown
- Error and Status Messages
- **New! Multi-Drop**
 - Allows IEEE Master to control up to 31 slaves over RS-485 daisy-chain
 - Only the Master needs be equipped with IEEE Interface
- Program Current
- Measure Current
- Current Foldback shutdown

P/N: IEEE

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.
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.
Power supply Voltage and Current Programming Accuracy $\pm 1\%$
Power supply Voltage and Current Monitoring Accuracy $\pm 1.5\%$

P/N: IS510

P/N: IS420

LAN Interface

LXI Compliant to Class C

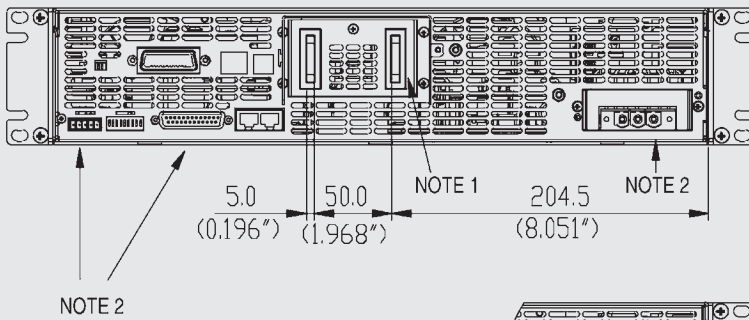
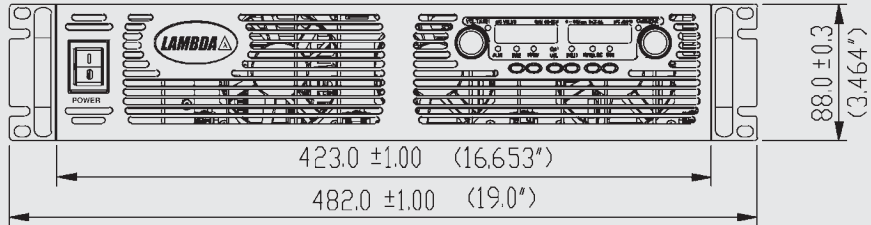
P/N: LAN

- 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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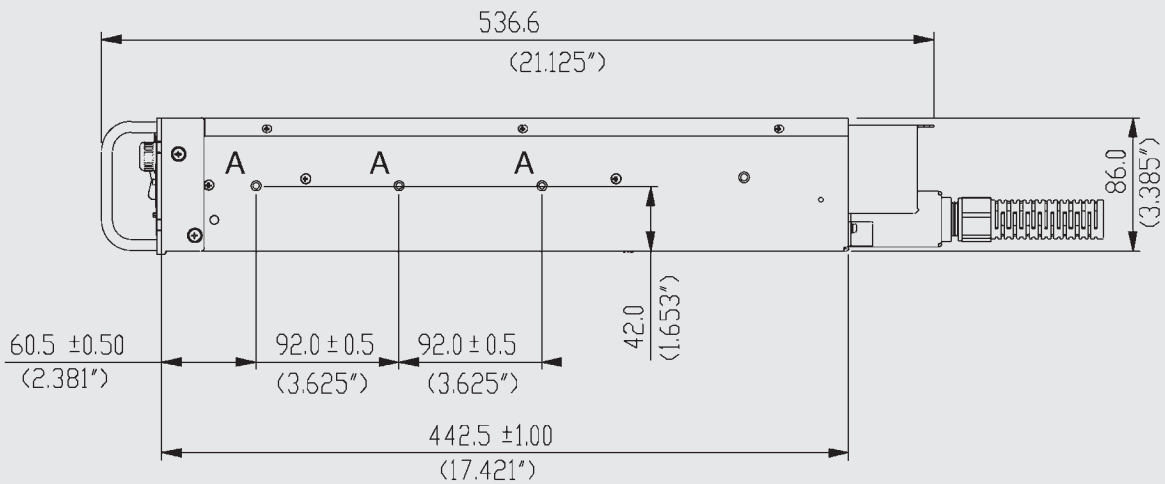
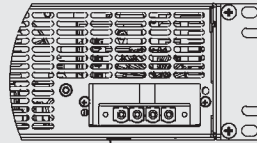
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Outline Drawing Genesys™ 3.3 kW/5 kW Units



NOTE 2

3 Phase Input Connector



1. Bus bars for 8 V to 100 V models (shown)
Wire clamp connector for 150 V to 600 V 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