

**Improved
Specifications**

Genesis™

Programmable DC Power Supplies

5kW in 2U

Built in RS-232 & RS-485 Interface

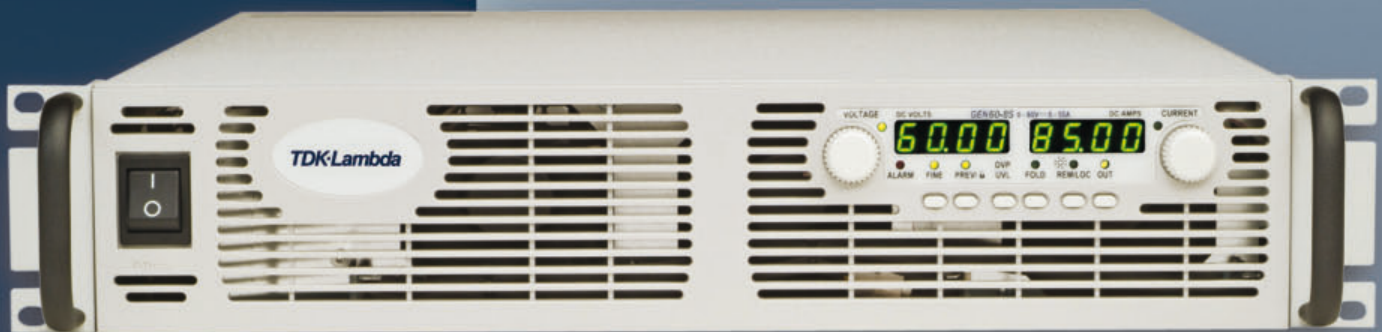
Advanced Parallel Operation

Optional Interface:

LXI Compliant LAN

IEEE488.2 SCPI (GPIB) Multi-drop

Isolated Analog Programming



Genesis™ Family

GENH 750W Half Rack

GEN1U 750/1500/2400W Full Rack

GEN2U 3.3/5kW








Schulz Electronic
Professional Power Supplies

Schulz-Electronic GmbH
Dr.-Rudolf-Eberle-Straße 2
D-76534 Baden-Baden
Fon + 49.7223.9636.0
Fax + 49.7223.9636.90
vertrieb@schulz-electronic.de
www.schulz-electronic.de

The Genesys™ family of programmable power supplies sets a new standard for flexible, reliable, AC/DC power systems in OEM, Industrial and Laboratory applications.

Features include:

- High Power Density 5kW in 2U
 - Wide Range of popular worldwide AC inputs, 3 ϕ (208VAC, 400VAC)
 - Active Power Factor Correction (Three-Phase AC Input)
 - Output Voltage up to 600V, Current up to 600A
 - Built-in RS-232/RS-485 Interface Standard
 - Global Commands for Serial RS-232/RS-485 Interface
 - Auto-Re-Start / Safe-Start: user selectable
 - Last-Setting Memory
 - High Resolution 16 bit ADCs & DACs
 - Low Ripple & Noise
 - Front Panel Lock selectable from Front Panel or Software
 - Reliable Encoders for Voltage and Current Adjustment
 - Constant Voltage/Constant Current auto-crossover
 - Parallel Operation with Active Current Sharing; up to four identical units.
 - Advanced Parallel Master / Slave. Total Current is Programmed and Measured via the Master.
 - Independent Remote ON/OFF and Remote Enable/Disable
 - External Analog Programming and Monitoring (user selectable 0-5V & 0-10V)
 - Reliable Modular and SMT Design
 - 19" Rack Mount capability for ATE and OEM applications
 - Optional Interfaces
 - Isolated Analog Programming and Monitoring Interface (0-5V/0-10V & 4-20mA)
 - IEEE 488.2 SCPI (GPIB) Multi-Drop
 -  Compliant LAN
 - LabView® and LabWindows® drivers
 - Five Year Warranty
- Worldwide Safety Agency Approvals;    

Applications

Genesys™ power supplies have been designed to meet the demands of a wide variety of applications.

Test & Measurement systems, Component Device Testing.

Semiconductor Processing & Burn-In, Aerospace & Satellite Testing, Medical Imaging, Green Technology. System Designers will appreciate new, standard, remote programming features such as Global commands. Also, new high-speed status monitoring is available for the RS-485 bus.

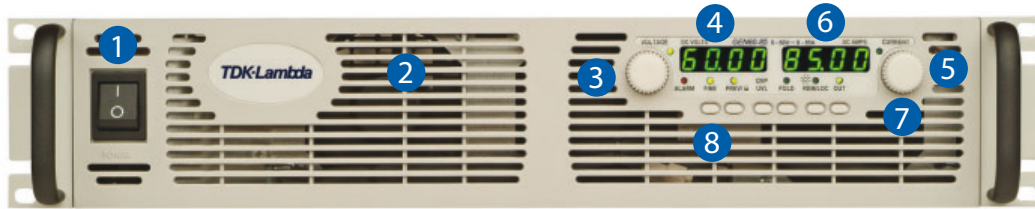
Test Systems using the IEEE-488 bus may achieve significant cost savings by incorporating the Optional IEEE Multi-Drop Interface for a Master and up to 30 RS-485 Multi-Drop Slaves.

Higher power systems can be configured with up to four 5kW modules. Each module is 2U with zero space between them (zero stack).

Flexible configuration is provided by the complete Genesys™ Family: 1U 750W Half-Rack, 1U 750W, 1500W and 2400W Full-Rack. All are identical in Front Panel, Rear Panel Analog, and all Digital Interface Commands.

OEM Designers have a wide variety of Inputs and Outputs from which to select depending on application and location.

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/Safe Re-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: 230VAC Single Phase (shown), 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.

General Specifications Genesys™ 5kW

2.1 INPUT CHARACTERISTICS		GEN	8-600	10-500	16-310	20-250	30-170	40-125	60-85	80-65	100-50	150-34	200-25	300-17	400-13	500-10	600-8.5	
1. Input voltage/freq. (*3)		VAC	3-Phase, 208V models: 170~265Vac, 47~63Hz 3-Phase, 400V models: 342~460Vac, 47~63Hz															
2. Maximum Input current at 100% load	3-Phase, 208V models:	A	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	3-Phase, 400V models:	A	10.5	11	11	12	11	11	11	11	11	11	11	11	11	11	11	
3. Power Factor (Typ)		3-Phase models: 0.94@208/380Vac, rated output power.																
4. Efficiency (*4)		%	83	84	84	86	86	88	88	88	88	88	88	88	88	88	88	
5. Inrush Current (*5)		A	3-Phase 208V models: Less than 50A 3-Phase 400V models: Less than 20A															
2.2 POWER SUPPLY CONFIGURATION																		
1. Parallel Operation		Up to 4 identical units in master/slave mode																
2. Series Operation		Up to 2 identical units. with external diodes. 600V Max to Chassis ground																
2.3 ENVIRONMENTAL CONDITIONS																		
1. Operating temp		0~50°C, 100% load.																
2. Storage temp		-20~85°C																
3. Operating humidity		20~90% RH (non-condensing).																
4. Storage humidity		10~95% RH (non-condensing).																
5. Vibration		MIL-810F, method 514.5, The EUT is fixed to the vibrating surface.																
6. Shock		Less than 20G, half sine, 11mSec. Unit is unpacked.																
7. Altitude		Operating: 10000ft (3000m). Derate output current by 2%/100m above 2000m, Alternatively, derate maximum ambient temp. by 1°C/100m above 2000m. Non operating: 40000ft (12000m).																
8. RoHS Compliance		Complies with the requirements of RoHS directive.																
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. Magnetic field immunity		EN61000-4-8, 1A/m																
8. Voltage dips		EN61000-4-11																
9. Conducted emission		EN55022A, FCC part 15-A, VCCI-A.																
10. Radiated emission		EN55022A, FCC part 15-A, VCCI-A.																
2.5 SAFETY																		
1. Applicable standards:		UL 60950-1, CSA 22.2 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 Programming 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 100V models: Input-Output (Hazardous): 2600VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Output(Hazardous)-SELV: 1900VDC 1min, Output(Hazardous)-Ground: 1200VDC 1min, Input-Ground: 2828VDC 1min. 100V< Vout 600V models: Input-Output(Hazardous): 3550VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Hazardous. Output-communication/control(SELV): 4242VDC 1min, Output(Hazardous)-Ground: 2670VDC 1min, Input-Ground: 2828VDC 1min.																
3. 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: 423mm, H: 88mm, D: 442.5mm (excluding connectors, encoders, handles, etc.)																
3. Weight		13 kg.																
4. AC Input connector (with Protective Cover)		Single Phase, 230V models, Power Combicon PC 6-16/3-GF-10,16 series, with Strain relief. 3-Phase, 208V & 400V models, Power Combicon PC 6-16/4-GF-10,16 series, with Strain relief.																
5. Output connectors		8V to 100V models: Bus-bars (hole Ø 10.5mm). 150V to 600V models: wire clamp connector, Phoenix P/N: FRONT-4-H-7.62																
2.7 RELIABILITY SPECS																		
1. Warranty		5 years.																

All specifications subject to change without notice.

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 Multi-Drop Interface

- 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

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 ±1%
Power supply Voltage and Current Monitoring Accuracy ±1.5%
- Current Programming with 4-20mA signal.
Power supply Voltage and Current Programming Accuracy ±1%
Power supply Voltage and Current Monitoring Accuracy ±1.5%

P/N: IS510

P/N: IS420

LAN Interface  Compliant to Class C

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

P/N: LAN

Power Supply Identification / Accessories How to order

GEN	8	-	600	-	-
Series	Output Voltage	Output Current	Factory Options:	Factory AC Input Options:	
Name	(0~8V)	(0~600A)	Option: IEEE IS510 IS420 LAN	3P208 (Three Phase 170~265VAC) 3P400 (Three Phase 342~460VAC)	

Models 5kW

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 8-600	0~8V	0~600	4800
GEN 10-500	0~10V	0~500	5000
GEN 16-310	0~16V	0~310	4960
GEN 20-250	0~20V	0~250	5000
GEN 30-170	0~30V	0~170	5100
GEN 40-125	0~40V	0~125	5000

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 60-85	0~60V	0~85	5100
GEN 80-65	0~80V	0~65	5200
GEN 100-50	0~100V	0~50	5000
GEN 150-34	0~150V	0~34	5100
GEN 200-25	0~200V	0~25	5000
GEN 300-17	0~300V	0~17	5100
GEN 400-13	0~400V	0~13	5200
GEN 500-10	0~500V	0~10	5000
GEN 600-8.5	0~600V	0~8.5	5100

Factory option

Factory option	P/N
RS-232/RS-485 Interface built-in Standard	-
GPIB Interface	IEEE
Voltage Programming Isolated Analog Interface	IS510
Current Programming Isolated Analog Interface	IS420
LAN Interface (Complies with LXI Class C)	LAN

Accessories

1. Serial Communication cable

RS-232/RS-485 cable is used to connect the power supply to the Host PC.

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.

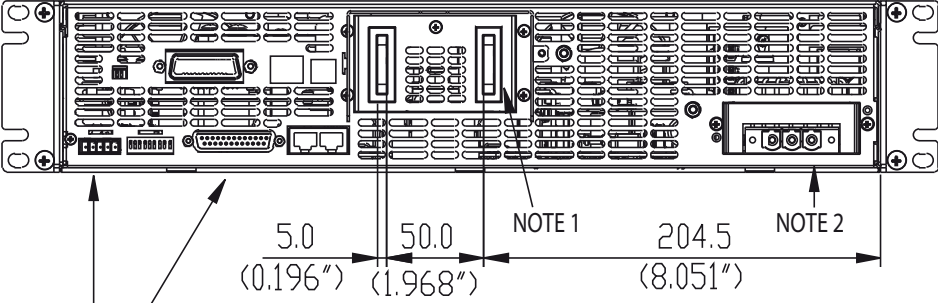
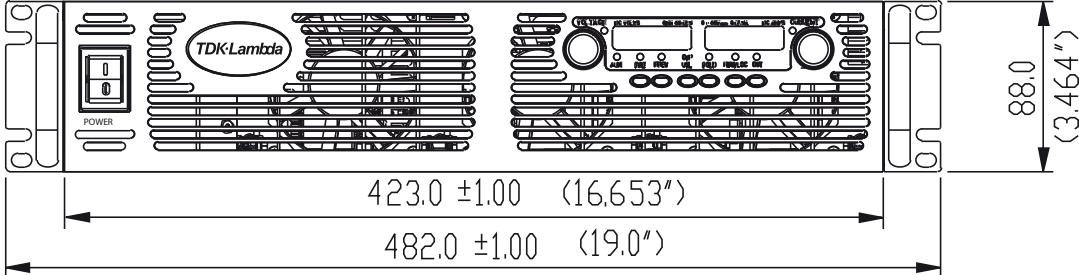
Mode	Power Supply Connector	Communication Cable	P/N
RS-485	EIA/TIA-568A (RJ-45)	Shield Ground L=50cm	GEN/RJ45

* Included with power supply



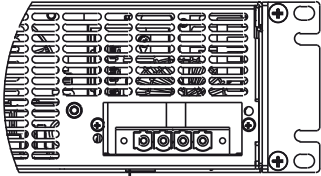
Also available, Genesys™
1U Half Rack 750W
1U full Rack 750W/1500W/2400W
2U full Rack 3300W

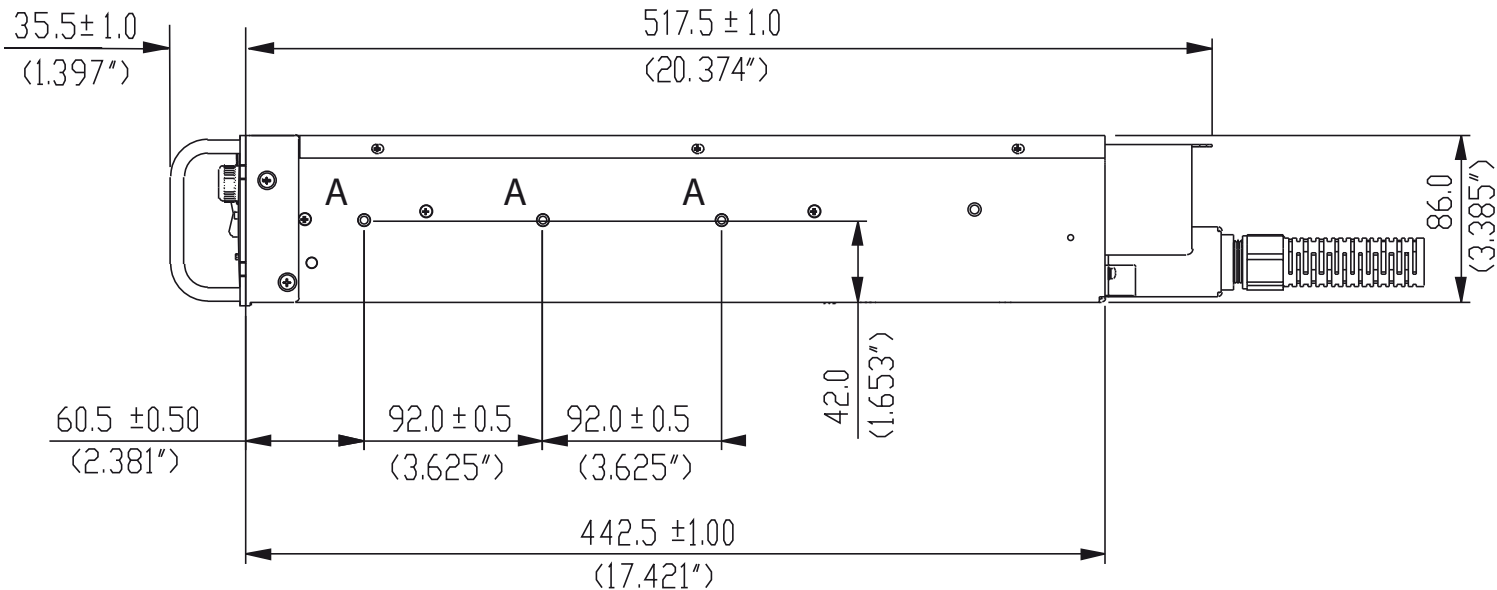
Outline Drawing Genesys™ 5kW Units



NOTE 2

3 Phase Input Connector





NOTE

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

Your contact:



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Schulz-Electronic GmbH
Dr.-Rudolf-Eberle-Straße 2
D-76534 Baden-Baden
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Fax + 49.7223.9636.90
vertrieb@schulz-electronic.de
www.schulz-electronic.de



TDK-Lambda EMEA
www.emea.tdk-lambda.com