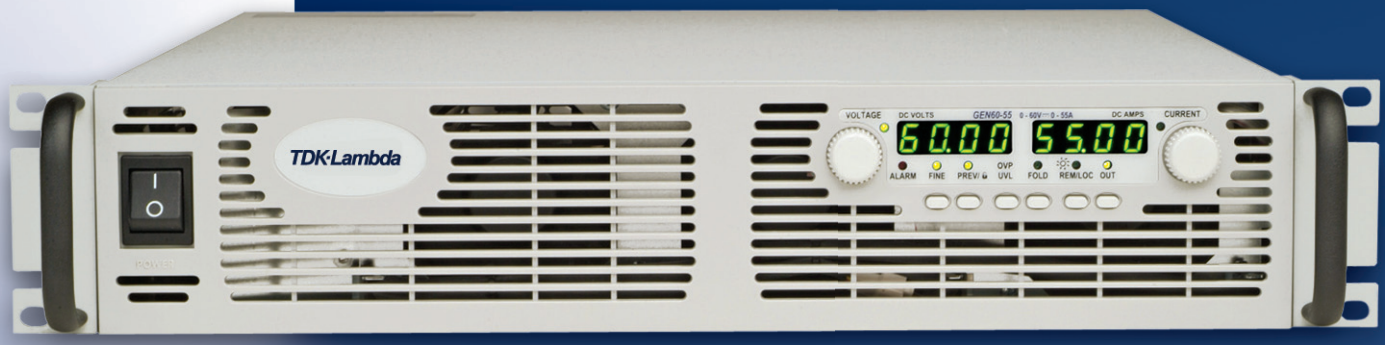
Genesys™

Programmable DC Power Supplies
3.3kW 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



TDK·Lambda

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 3.3kW in 2U
- Wide Range of popular worldwide AC inputs, 1ø (230VAC) & 3ø (208VAC, 400VAC)
- Active Power Factor Correction (Single-Phase & Three-Phase AC Input)
- Output Voltage up to 600V, Current up to 400A
- 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
  LXI Compliant LAN
- LabView® and LabWindows® drivers
- Five Year Warranty

Worldwide Safety Agency Approvals; CE Mark for LVD and EMC Regulation

c UL us LISTED TÜV Rheinland geprüfte Sicherheit CE

Applications

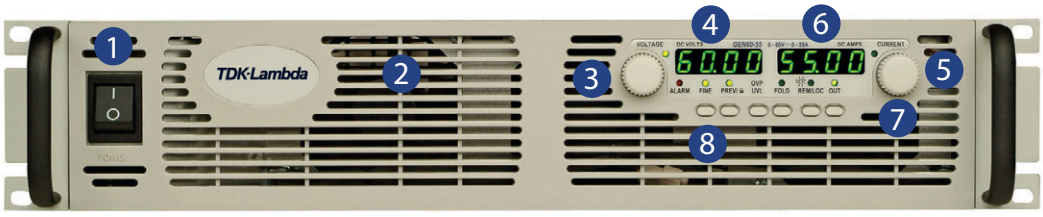
Genesys™ power supplies have been designed to meet the demands of a wide variety of applications.
Test & Measurement systems, Component Device Testing.
Semiconductor Processing & Burn-In, Aerospace & Satellite Testing, Medical Imaging, Green Technology.
System Designers will appreciate new, standard, 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 3.3kW 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



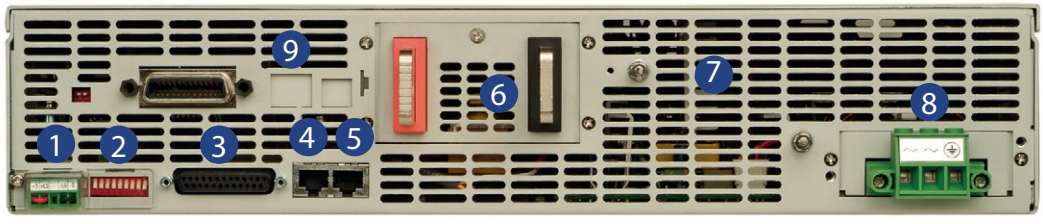
1. ON/OFF Switch
2. Air Intake allows zero stacking for maximum system flexibility and power density.
3. Reliable encoder controls Output Voltage, Address, OVP and UVL settings.
4. Volt Display shows Output Voltage and directly displays OVP, UVL and Address settings.
5. Reliable encoder controls Output 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
- 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 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: 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.

Genesys ™ 3.3kW Specifications

1.0 MODEL

MODEL	GEN	8-400	10-330	15-220	20-165	30-110	40-85	60-55	80-42	100-33	150-22	200-16.5	300-11	600-5.5
1.Rated output voltage(*1)	V	8	10	15	20	30	40	60	80	100	150	200	300	600
2.Rated Output Current(*2)	A	400	330	220	165	110	85	55	42	33	22	16.5	11	5.5
3.Rated Output Power	W	3200	3300	3300	3300	3300	3400	3300	3360	3300	3300	3300	3300	3300
1.1 CONSTANT VOLTAGE MODE														
1.Max.line regulation (0.01% of rated Vo+ 2mV)(*6)	mV	2.8	3	3.5	4	5	6	8	10	12	17	22	32	62
2.Max load regulation (0.015% of rated Vo+5mV)(*7)	mV	6.2	6.5	7.25	8	9.5	11	14	17	20	27.5	35	50	95
3.Ripple and noise p-p 20MHz (*8)	mV	60	60	60	60	60	60	60	80	100	100	275	300	500
4.Ripple r.m.s 5Hz~1MHz	mV	8	8	8	8	8	8	8	25	25	25	75	100	120
5.Remote sense compensation/wire	V	2	2	2	2	5	5	5	5	5	5	5	5	5
6.Temp. coefficient	PPM/°C	100PPM/°C of rated output voltage,following 30 minutes warm-up												
7.Temp. stability		0.05% of rated Vout over 8hrs interval following 30 minutes warm-up. Constant line, load & temp.												
8.Warm-up drift		Less than 0.05% of rated output voltage+2mV over 30 minutes following power On.												
9.Up-prog. response time, 0~Vo Rated (*9)	mS	80						150				200		250
10.Down-prog response time Full-load (*9)	mS	20	100			160			300					500
10.Down-prog response time No-load (*10)	mS	500	600	700	800	900	1000	1100	1200	1500	2000	3000	3500	4000
11.Transient response time	mS	Time for output voltage to recover within 0.5% of its rated output for a load change 10-90% of rated output current. Output set-point: 10-100%, local sense. Less than 1mSec for models up to and including 100V. 2msec for models above 100V												
1.2 CONSTANT CURRENT MODE														
1.Max.line regulation (0.01% of rated Io+ 2mA)(*6)	mA	42	35	24	18.5	13	10.5	7.5	6.2	5.3	4.2	3.65	3.1	2.6
2.Max.load regulation (0.02% of rated Io+5mA)(*11)	mA	85	71	49	38	27	22	16	13.4	11.6	9.4	8.3	7.2	6.1
3.Ripple r.m.s 5Hz~1MHz . (*12)	mA	1300	1200	880	660	300	200	100	80	70	60	40	20	10
4.Load regulation thermal drift		Less than 0.1% of rated output current over 30 minutes following load change.												
5.Temp. coefficient	PPM/°C	100PPM/°C from rated output current, following 30 minutes warm-up.												
6.Temp. stability		0.05% of rated Iout over 8hrs. interval following 30minutes warm-up. Constant line, load & temperature.												
7.Warm-up drift		8V~20V models: Less than ±0.5% of rated output current over 30 minutes following power On.												
		30V~600V models: Less than ±0.25% of rated output current over 30 minutes following power On.												

1.3 PROTECTIVE FUNCTIONS

1. OCP	0~105% Constant Current
2. OCP Foldback	Output shut down when power supply change from CV to CC. User selectable.
3. OVP type	Inverter shut-down, manual reset by AC input recycle or by OUT button or by communication port command.
4. OVP trip point	0.5~10V | 0.5~12V | 1~18V | 1~24V | 2~36V | 2~44V | 5~66V | 5~88V | 5~110V | 5~165V | 5~220V | 5~330V | 5~660V
5. Output Under Voltage Limit	Preset by front panel or communication port. Prevents from adjusting Vout below limit.
6. Over Temp. Protection	User selectable , latched or non-latched.

1.4 ANALOG PROGRAMMING AND MONITORING

1.Vout Voltage Programming	0~100%, 0~5V or 0~10V, user select. Accuracy and linearity:±0.5% of rated Vout.
2.Iout Voltage Programming (*13)	0~100%, 0~5V or 0~10V, user select. Accuracy and linearity:±1% of rated Iout.
3.Vout Resistor Programming	0~100%, 0~5/10Kohm full scale,user select.,Accuracy and linearity: ±1% of rated Vout.
4.Iout Resistor Programming (*13)	0~100%, 0~5/10Kohm full scale,user select. Accuracy and linearity:±1.5% of rated Iout.
5.On/Off control (rear panel)	By electrical. Voltage: 0~0.6V/2~15V,or dry contact ,user selectable logic.
6.Output Current monitor (*13)	0~5V or 0~10V , Accuracy:±1% , user selectable.
7.Output Voltage monitor	0~5V or 0~10V ,Accuracy:±1% ,user selectable.
8.Power Supply OK signal	TTL high (4~5V) -OK, 0V-Fail 500ohm series resistance.
9. CV/CC Indicator	Open collector, CC mode: On, CV mode: Off, Maximum voltage: 30V, maximum sink current: 10mA
10. Enable/Disable	Dry contact. Open:off , Short: on. Max. voltage at Enable/Disable in: 6V.
11. Local/Remote analog control	By electrical signal or Open/Short: 0~0.6V or short: Remote, 2~15V or open: Local.
12. Local/Remote analog control Indicator	Open collector, Local: Off, Remote: On. Maximum voltage: 30V, maximum sink current: 10mA.

1.5 FRONT PANEL

1.Control functions	Vout/ Iout manual adjust by separate encoders (coarse and fine adjustment selectable).
	OVP/UVL manual adjust by Volt. Adjust encoder.
	On/Off, Output on/off, Re-start modes (auto, safe), Foldback control (CV to CC), Go to local control.
	Address selection by Voltage (or current) adjust encoder. Number of addresses:31.
	Re-start modes (automatic restart, safe mode).
	Baud rate selection: 1200,2400,4800,9600 and 19,200.
2.Display	Voltage: 4 digits , Accuracy: 0.5% of rated output Voltage ±1 count.
	Current: 4 digits, Accuracy: 0.5% of rated output current ±1 count.
3.Indications	Voltage, Current, Alarm, Fine, Preview, Foldback, Local, Output On, Front Panel Lock, CVCC.

1.6 Interface Specifications for the GENESYS Series with RS-232/RS-485 Or Optional GPIB/LAN Interface Installed

1. Remote Voltage Programming (16 bit)	V	8	10	15	20	30	40	60	80	100	150	200	300	600
Resolution (0.012% of Vo Rated)	mV	0.96	1.2	1.8	2.40	3.60	4.80	7.2	9.6	12	18	24	36	72
Accuracy (0.05%Vo Rated+0.05% of Vo Actual Output)	mV	8	10	15	20	30	40	60	80	100	150	200	300	600
2. Remote Current Programming (16 bit)														
Resolution (0.012% of Io Rated)	mA	48	39.6	26.4	19.8	13.2	10.2	6.6	5.0	4.0	2.6	2.0	1.3	0.7
Accuracy (0.2% of Io Rated+0.1% of Io Actual Output) (*13)	mA	1200	990	660	495	330	255	165	126	99	66	49.5	33	16.5
3. Readback Voltage														
Resolution (0.012% of Vo Rated)	mV	0.96	1.2	1.8	2.40	3.60	4.80	7.2	9.6	12	18	24	36	72
Accuracy (0.1%Vo Rated+0.1% of Vo Actual Output)	mV	16	20	30	40	60	80	120	160	200	300	400	600	1200
4. Readback Current														
Resolution (0.012% of Io Rated)	mA	48	39.6	26.4	19.8	13.2	10.2	6.6	5.0	4.0	2.6	2.0	1.3	0.7
Accuracy (0.3% of Io Rated+0.1% of Io Actual Output) (*13)	mA	1600	1320	880	660	440	340	220	168	132	88	66	44	22
5. OVP/UVL Programming														
Resolution (0.1% of Vo Rated)	mV	8	10	15	20	30	40	60	80	100	150	200	300	600
Accuracy (1% of Vo Rated)	mV	80	100	150	200	300	400	600	800	1000	1500	2000	3000	6000

*1: Minimum voltage is guaranteed to maximum 0.2% of rated output voltage.
*2: Minimum current is guaranteed to maximum 0.4% of rated output current.
*3: For cases where conformance to various safety standards (UL, IEC, etc›) is required, to be described as 190-240Vac (50/60Hz) for single phase and 3-Phase 208V models, and 380~415Vac (50/60Hz) for 3-Phase 400V models.
*4: Single-Phase and 3-Phase 208V models: At 208Vac input voltage, 3-Phase 400V: At 380Vac input voltage. With rated output power.
*5: Not including EMI filter inrush current, less than 0.2mSec.
*6: Single-Phase and 3-Phase 208V models: 170~265Vac, constant load. 3-Phase 400V models: 342~460Vac, constant load.
*7: From No-Load to Full-Load, constant input voltage. Maximum drop in Remote Sense.
*8: For 8V~300V models: Measured with JEITA RC-9131A (1:1) probe.
For 600V model: Measured with 10:1 probe.
*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated, resistive load.
*10:From 90% to 10% of Rated Output Voltage.
*11: For load voltage change, equal to the unit voltage rating, constant input voltage.
*12: For 8V~15V models the ripple is measured from 2V to rated output voltage and rated output current. For other models, the ripple is measured at 10~100% of rated output voltage and rated output current.
*13: The Constant Current programming readback and monitoring accuracy does not include the warm-up and Load regulation thermal drift.

General Specifications Genesys™ 3.3kW

2.1 INPUT CHARACTERISTICS		GEN	8-400	10-330	15-220	20-165	30-110	40-85	60-55	80-42	100-33	150-22	200-16.5	300-11	600-5.5
1. Input voltage/freq. (*3)		VAC	Single Phase,230V models: 170~265Vac, 47~63Hz												
			3-Phase, 208V models: 170~265Vac, 47~63Hz												
			3-Phase, 400V models: 342~460Vac, 47~63Hz												
2. Maximum Input current at 100% load	Single Phase,230V models:	A	24	24	24	24	24	24	23	23	23	23	23	23	23
	3-Phase, 208V models:		15	15	15	15	15	15	14.5	14.5	14.5	14.5	14.5	14.5	14.5
	3-Phase, 400V models:		7.5	7.5	7.5	7.5	7.5	7.5	7	7	7	7	7	7	7
3. Power Factor (Typ)			Single Phase models: 0.99@230Vac, rated output power. 3-Phase models: 0.94@208/380Vac, rated output power.												
4. Efficiency (*4)		%	82	83	83	83	86	86	88	88	88	87	87	87	87
5. Inrush Current (*5)		A	Single-Phase and 3-Phase 208V models: Less than 50A												
			3-Phase 400V models: Less than 20A												
6. Hold-up time (Typ)		mS	10mSec for Single-Phase and 3-phase 208V models, 6mSec for 3-Phase 400V models. Rated output power.												

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.

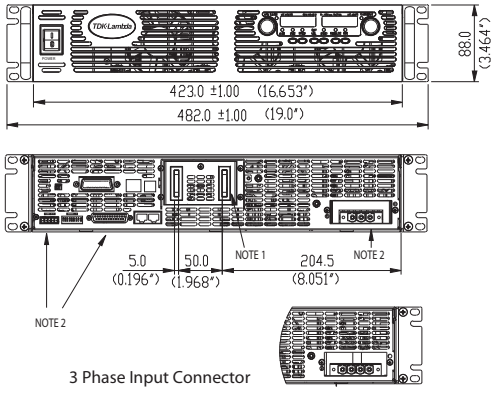
2.5 SAFETY	
1.Applicable standards:	CE Mark, UL60950,EN60950 listed. Vout≤40V:Output is SELV , IEEE/Isolated analog are SELV.
	40<Vout≤400V: Output is hazardous, IEEE/Isolated analog are SELV.
	400<Vout≤600V:Output is hazardous, IEEE/Isolated analog are not SELV.
2.Withstand voltage	Vout≤40V models :Input-Outputs (SELV): 4242VDC 1min, Input-Ground: 2828VDC 1min.
	40<Vout≤100V models: Input-Haz. Output: 2600VDC 1min, Input-SELV: 4242VDC 1min.
	Hazardous Output.-SELV: 1900VDC 1min, Hazardous Output-Ground:1200VDC 1min. Input-Ground: 2828VDC 1min.
	100<Vout≤600V models: Input-Haz. Output: 4000VDC 1min, Input-SELV: 4242VDC 1min.
	Hazardous Output.-SELV: 3550VDC 1min. Hazardous Output-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

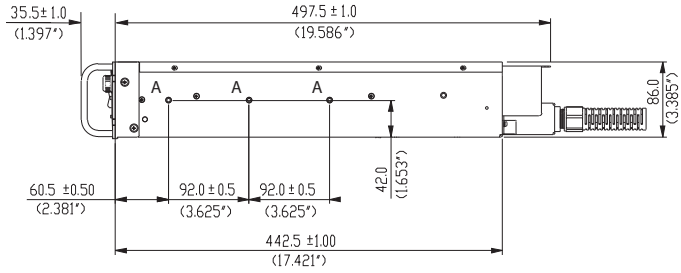
2.7 RELIABILITY SPECS	
1. Warranty	5 years.

All specifications subject to change without notice.

Outline Drawing Genesys™ 3.3kW Units



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

Genesys™ Power Parallel and Series Configurations

Parallel operation - Master/Slave:

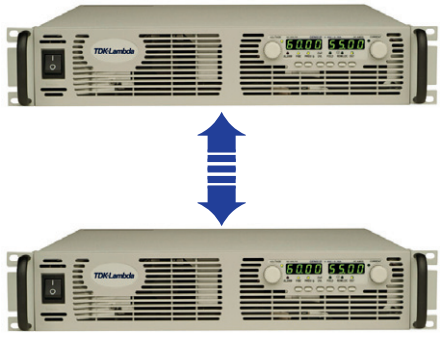
Active current sharing allows up to four identical units to be connected in an auto-parallel configuration for four times the output power. In Advanced Parallel Master/Slave Mode, total current is programmed and reported by the Master, Up to four supplies act as one.

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 **P/N: IEEE**

- 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
- **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

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 ±1%
  Power supply Voltage and Current Monitoring Accuracy ±1.5%
- Current Programming with 4-20mA signal. **P/N: IS420**
  Power supply Voltage and Current Programming Accuracy ±1%
  Power supply Voltage and Current Monitoring Accuracy ±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
- TCP / UDP Socket Programming
- VISA & SCPI Compatible
- LAN Fault Indicators
- Auto-detects LAN Cross-over Cable
- Fast Startup

Power Supply Identification / Accessories How to order

GEN	8 -	400 -		-
			Factory Options:	Factory AC Input Options:
Series Name	Output Voltage (0~8V	Output Current (0~400A)	Option: IEEE IS510 IS420 LAN	1P230 (Single Phase 170~265VAC) 3P208 (Three Phase 170~265VAC) 3P400 (Three Phase 342~460VAC)

Models 3.3kW

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 8-400	0~8V	0~400	3200
GEN 10-330	0~10V	0~330	3300
GEN 15-220	0~15V	0~220	3300
GEN 20-165	0~20V	0~165	3300
GEN 30-110	0~30V	0~110	3300
GEN 40-85	0~40V	0~85	3400

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 60-55	0~60V	0~55	3300
GEN 80-42	0~80V	0~42	3360
GEN 100-33	0~100V	0~33	3300
GEN 150-22	0~150V	0~22	3300
GEN 200-16.5	0~200V	0~16.5	3300
GEN 300-11	0~300V	0~11	3300
GEN 600-5.5	0~600V	0~5.5	3300

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 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	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 5000W

GLOBAL NETWORK

TDK·Lambda

NORTH AMERICA

TDK-Lambda Americas Inc
405 Essex Rd. Neptune, NJ 07753
Tel: +1-732-922-9300 Fax: +1-732-922-1441
E-mail: sales@us.tdk-lambda.com
www.us.tdk-lambda.com/hp

UK

TDK-Lambda UK Ltd.
Kingsley Avenue Ilfracombe, Devon
EX 34 8ES United Kingdom
Tel: +44-1271-856666 Fax: +44-1271-864894
E-mail: powersolutions@emea.tdk-lambda.com
www.uk.tdk-lambda.com

FRANCE

TDK-Lambda France SAS
ZAC des Delaches
BP 1077 - Gometz le Chatel
91940 LES ULIS
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
E-mail: france@fr.tdk-lambda.com
www.fr.tdk-lambda.com

GERMANY

TDK-Lambda Germany GmbH
Karl-Bold-Str.40,
D-77855 Achern, Germany
Tel: +49-7841-666-0 Fax: +49-7841-500-0
E-mail: info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com

AUSTRIA

TDK-Lambda Austria Sales Office
Aredstrasse 22,
A - 2544 Leobersdorf, Austria
Tel: +43-2256-65584 Fax: +43-2256-64512
E-mail: info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com

ITALY

TDK-Lambda Italy
Via dei Lavoratori 128/130
IT20092 Cinisello Balsamo, Milano, Italy
Tel: +39-02-6129-3863 Fax: +39-02-6129-0900
E-mail: info.italia@lambda-europe.com
www.it.tdk-lambda.com

ISRAEL

Nemic Lambda Ltd.
Sales Office: Kibbutz Givat Hashlosha Tel-Aviv 48800, Israel
Tel: +972-3-9024-333 Fax: +972-3-9024-777
Plant: POB 500 Karmiel Industrial Zone 21651, Israel
Tel: +972-4-9887-491 Fax: +972- 4-9583-347
www.nemic.co.il E-mail: info@nemic.co.il

JAPAN

TDK-Lambda Corporation,
1-13-1 Nihonbashi,
Chuo-ku, Tokyo 103-0027, Japan
Tel: +81 3 3447 4693
Fax: +81 3 3447 4750
www.tdk-lambda.com

CHINA

Shanghai Branch of Wuxi TDK-Lambda Electronic Co. Ltd.
28F, Xingyuan Technology Building No.418, Guiping Road,
Shanghai, China 200233
Tel: +86-21-6485-0777 Fax: +86-21-6485-0666
www.tdk-lambda.com.cn

Beijing Branch of Wuxi TDK-Lambda Electronic Co. Ltd.
Room 12B11-12B12, Unit 7 DACHENG SQUARE, No.28
Xuanwumenxi Street, Xuanwu District Beijing, 100053, CHINA
Tel: +86-10-6310-4872 Fax: +86-10-6310-4874
www.tdk-lambda.com.cn

TDK-Lambda Corporation, Hong Kong Office
Room. 8, 27/F, Mega Trade Center
1 Mei Wan St. Tsuen Wan, N.T. Hong Kong
Tel: +852-2420-6693 Fax: +852-2420-3362
www.tdk-lambda.com.cn

KOREA

TDK-Lambda Corporation Seoul Office
6F Songok Bldg. 4-1 Soonae-Dong
Pundang-Gu, Songnam-Shi Kyonggi-Do, 463-020 Korea
Tel: +82-31-717-7051 +82-31-726-9137
www.tdk-lambda.com

SINGAPORE

TDK-Lambda Singapore Pte.Ltd.
Blk 1008 Toa Payoh North # 07-01/03
Singapore 318996
Tel: +65-6251-7211 Fax: +65-6250-9171
www.tdk-lambda.com.sg

INDIA

TDK-Lambda Bangalore Office
3302, 12th 'A' Main, Hal 2nd Stage
Bangalore, Karnataka, 560 008 India
Tel: +91-80-64503815 Fax: +91-80-25263148
www.tdk-lambda.com.sg

MALAYSIA

TDK-Lambda (M) Sdn. Bhd.
Suite 4.3, Level 4, Menara Merais, No.1, Jalan 19/3, Section 19/3,
46300 Petaling Jaya, Selangor Darul Ehsan Malaysia
Tel: +60-3-7957-8800 Fax: +60-3-7958-2400
www.tdk-lambda.com

TDK

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

Innovating Reliable Power

AD0710-H