



Programmable DC Power Supplies 750W/1500W in 1U Built in RS-232 & RS-485 Interface Advanced Parallel Operation

Optional Interface: LXI Compliant LAN IEEE488.2 SCPI (GPIB) Multi-drop Isolated Analog Programming



Genesys™ Family GenH 750W Half Rack Gen1U 750/1500W Full Rack Gen2U 3.3/5kW



The GenesysTM 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: 1500W in 1U
- Wide Range Input (85 265Vac Continuous, single phase, 47/63Hz)
- Active Power Factor Correction (0.99 typical)
- Output Voltage up to 600V, Current up to 200A
- Built-in RS-232/RS-485 Interface Standard
- Last-Setting Memory
- Global Commands for Serial RS-232/RS-485 Interface
- Front Panel Lock selectable from Front Panel or Software
- High Resolution 16 bit ADCs & DACs
- Reliable Encoders for Voltage and Current Adjustment
- Constant Voltage/Constant Current auto-crossover
- · Advanced Parallel reports total current up to four identical units
- 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 Mounted 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 Interface

- LabView<sup>®</sup> and LabWindows<sup>®</sup> drivers
- Five Year Warranty

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



## **Applications**

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

Common controls are shared all Genesys<sup>™</sup> Series.

#### **Test and Measurement**

Last-Setting memory simplifies test design and requires no battery backup. Built-in RS-232/RS-485 gives maximum system flexibility along with 0-5V and 0-10V, selectable analog programming. Wide range of available inputs allows testing of many different devices.

## Semiconductor Burn-in

Safe-Start may be ENABLED to re-start at Output OFF to protect load. Wide range input (85-265Vac) with Active Power Factor correction rides through input transients easily.

## **Component Test**

High power density, zero stacking and single wire parallel operation give maximum system flexibility.

#### Laser Diode

OVP is directly set on Voltage Display, assuring accurate protection settings. Current Limit Fold Back assures load is protected from current surges.

#### **Heater Supplies**

Smooth, reliable encoders enhance front panel control. Remote analog programming is user selectable 0-5V or 0-10V.

## **RF Amplifiers and Magnets**

Robust design assures stable operation under a wide variety of loads. High linearity in voltage and current mode.

## 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
- Foldback ModeRemote Mode
- Fine Control
  Preview Settings
  Remote Mo
  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<sup>™</sup> 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.

## Genesys ™ 750W/1500W Specifications

	1	1									ications					
1. Rated output voltage (*1)	GEN	6-200	<u>8-180</u> 8	12.5-120	20-76 20	<u>30-50</u> 30	<u>40-38</u> 40	50-30 50	<u>60-25</u> 60	80-19 80	100-15 100	150-10 150	<u>300-5</u> 300	<u>600-2.6</u> 600		X
2. Rated Output Current (*2)	Å	200	180	12.5	76	50	38	30	25	19	100	10	5	2.6		X
3. Rated Output Power	W	1200	1440	1500	1520	1500	1520	1500	1500	1520	1500	1500	1500	1560		X
4. Efficiency at 100/200Vac (*3)	%	77/79	78/81	82/85			84/88		84/88			84/88	84/88			X
1. Rated output voltage (*1)	GEN V	6-100 6	<u>8-90</u> 8	12.5-60 12.5	20-38 20	<u>30-25</u> 30	<u>40-19</u> 40		60-12.5 60	80-9.5 80	100-7.5	150-5 150	<u>300-2.5</u> 300	600-1.3 600	X	
2. Rated Output Current (*2)	Å	100	90	60	38	25	19		12.5	9.5	7.5	5	2.5	1.3	X	
3. Rated Output Power	W	600	720	750	760	750	760		750	760	750	750	750	780	Х	
4. Efficiency at 100/200Vac (*3)	%	76/78	77/80	81/84	82/85	82/85	83/87		83/87	83/87	83/87	83/87	83/87	83/87	Х	
1.1 CONSTANT VOLTAGE MODE	mV	26	2.0	22	4	F	6	7	8	10	12	17	22	62	Х	X
1. Max.line regulation (0.01% of Vo+ 2mV)(*4) 2. Max load regulation (0.01% of Vo+2mV )(*5)	mV	2.6 2.6	2.8 2.8	3.3	4	<u>5</u>	6 6	7	8	10	12	17	32 32	62	X	- Â
3. Ripple and noise p-p 20MHz (*9)	mV	60	50	60	60	50	60	40	60	75	75	75	130	300	Х	X
4. Ripple r.m.s 5Hz~1MHz (*9)	mV	8	6	7	7.5	6	7	5 2	7	7	8	8	20	60	X	X
5. Remote sense compensation/line 6. Temp. coefficient	PPM/°C	1 50PPM/	1 ℃ of rat	1 ted outr	1 ut volta	1.5 re follo	2 wing 30		3 Swarm	4	5	5	5	5	X	X
7. Temp. stability	%	0.01% c	of rated	louto	ver 8hrs i					arm-up.	Constar				Х	Х
8. Up-prog. response time, 0~Vo Rated	mS	80mS, N 10	I.L/F.L, r		load			0		150mS,	N.L/F.L,		load	250 250	X	X
9. Down-prog response time full-load 10. Down-prog response time No-load	mS mS	500	600	50 700	800	900		1100	1100	1200		50 2000	2500	4000	X	- Â
11. Transient response time (*8)	mS	Less tha	n 1mSe	c for mo	dels up	to and ir	ncluding	100V. 2	mSec fo	r mode	ls above	100V			Х	X
12. Temp. drift	%	0.01% o	f rated \	/out ove	<u>r 8hrs in</u>	terval fo	llowing	30 minu	utes war	<u>m up. C</u>	onstant	line, loa	<u>d &amp; temp</u>	).	Х	X
1.2 CONSTANT CURRENT MODE		40			5.0		2.0			0.05	0.75			0.40	N N	
1. Max.line regulation (0.01% of Io+ 2mA)(*4) 2. Max.load regulation (0.02% of Io+5mA)(*6)	mA mA	12 25	11 23	8.0	5.8 12.6	<u>4.5</u> 10	3.9 8.8		3.25 7.5	2.95 6.9	2.75	2.5	2.25	2.13 5.26	X	
3. Ripple r.m.s 5Hz~1MHz . (*7)	mA	190	160	110	50	45	30		15	10	10	8	6	4	X	
4. Max.line regulation (0.01% of lo+ 2mA)(*4)	mA	22	20	14	9.6	7.0	5.8	5	4.5	3.9	3.5	3.0	2.5	2.26		X
5. Max.load regulation (0.02% of Io+5mA)(*6) 6. Ripple r.m.s 5Hz~1MHz .(*7)	mA mA	45 350	41 300	29 210	20.2	<u>15</u> 60	12.6 65	11 60	10 60	8.8 40	8.0	7.0	6.0 15	5.52		X
7. Temp. coefficient		70PPM/	°C from	rated o	utput vo	ltage, fo	llowing	30 minu	utes war	m up					Х	X
8. Temp. drift	%	0.01% o	f rated \	<u>/out ove</u>	<u>r 8hrs in</u>	terval fo	llowing	30 minu	utes war	<u>m up. C</u>	onstant				X	Х
9. Warm up drift	%	Less tha	<u>n 0.1% r</u>	ated ou	tput curr	ent ove	r 30 min	followir	ng powe	r on or o	output v	oltage /	current o	hange	Х	X
1.3 PROTECTIVE FUNCTIONS 1. OCP		0~105%	Consta	nt Curro	nt										Х	X
2. OCP Foldback					n power	vlaguz	change	from CV	to CC. L	Jser sele	ctable.				X	X
3. OVP type		Inverter	shut-do	own, ma	nual res	et by AC	input re	ecycle o	r by OU1	l buttor	or by co	mmuni	cation p	ort	Х	X
4. OVP trip point							2~44V	5~57V	5~66V	5~88V	5~110V	5~165V	5~330V	5~660V	X	X
5. Over Temp Protection	~	User sei	ectable	, latched	or non	atched									X	Ā
1.4 ANALOG PROGRAMMING AND MONITORIN 1. Vout Voltage Programming	G	0~100%	0~5V	$r 0 \sim 10$		lect Acc	uracya	nd linea	ritv·⊥/-(	15% of	rated Vo	t			X	X
2. lout Voltage Programming		0~100%	, 0~5V (	or 0~10\	, user se	lect. Acc	curacy a	nd linea	rity: +/-1	% of rat	ted lout.	ut.			X	X
3. Vout Resistor Programming		0~100%	0~5/10	<u>0Kohm f</u>	ull scale,	user sel	ect.,Ácc	uracy ar	<u>nd linear</u>	<u>ity: +/-1</u>	% of rate	ed Vout.			X	X
4. lout Resistor Programming 5. On/Off control (rear panel)					~0.6V/2~						<u>.5% of ra</u> ic	ited loui			X	X
6. Output Current monitor		0~5V or	0~10V,	accurac	y: 1%, us	er selec	table								Х	X
7. Output Voltage monitor		0~5V or	0~10V.	accurac	y: 1%, us	er selec	table								X	X
		TTI hig	$h(4 \sim 5V)$	)-OK 01	-Fail 500	ohm se	rioc roci	stance								
8. Power Supply OK signal 9. CV/CC indicator		TTL hig Open co	h (4~5V) ollector,	) -OK, 0\ CC mod	le: On, C	ohm se / mode:	ries resi Off, Ma	ximum	voltage:	30V, ma	aximum	sink curi	ent: 10n	۱A	X X	X X
9. CV/CC indicator 10. Enable/Disable		TTL hig Open co Dry con	h (4~5V ollector, tact. Op	) -OK, 0\ CC moc ben: off,	l <u>e: On, C'</u> Short: or	ohm se V mode: n. Max. v	ries resi Off, Ma oltage a	ximum v at Enable	e/Disabl	e in: 6V			ent: 10n	۱A	X	X X X
9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control		TTL higl Open co Dry con By elect	h (4~5V) ollector, tact. Op rical sig	) -OK, 0\ CC moc pen: off, nal or O	l <u>e: On, C'</u> Short: or pen/Sho	ohm se / mode: n. Max. v rt: 0~0.	ries resi Off, Ma oltage a 6V or sh	ximum v at Enable ort: Rem	e/Disabl note, 2~1	e in: 6V 5V or o	pen: Loc	al.		۱A	X	X X
9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator		TTL higl Open co Dry con By elect	h (4~5V) ollector, tact. Op rical sig	) -OK, 0\ CC moc pen: off, nal or O	l <u>e: On, C'</u> Short: or pen/Sho	ohm se / mode: n. Max. v rt: 0~0.	ries resi Off, Ma oltage a 6V or sh	ximum v at Enable ort: Rem	e/Disabl note, 2~1	e in: 6V 5V or o		al.		nA	X	X X X
9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control		TTL higl Open co Dry con By elect Open co Vout/lo	h (4~5V) bllector, tact. Op rical sig bllector, ut manu	) -OK, 0\ CC moc pen: off, nal or O Local: C ual adjus	le: On, C Short: or pen/Sho pen, Rei t by sep	ohm se / mode: n. Max. v rt: 0~0.0 note: O arate en	ries resi Off, Ma oltage a 6V or sh n. Maxir coders (	ximum v at Enable ort: Rem num vol	e/Disabl note, 2~1 tage: 30	<u>e in: 6V</u> 15V or o V, maxii	pen: Loc mum sin	al. k curren		nA	X X X X X	X X X X X
9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		TTL higl Open cc Dry con By elect Open cc Vout/lo OVP/UV	h (4~5V) bllector, tact. Op rical sig bllector, ut manu L manu	) -OK, 0V CC moc ben: off, Inal or O Local: C Jual adjus al adjus	le: On, C Short: or pen/Sho pen, Rei t by sep t by Volt.	ohm se V mode: n. Max. v rt: 0~0.4 note: Of arate en Adjust o	ries resi Off, Ma oltage a 6V or sh n. Maxir coders ( encoder	ximum v at Enable ort: Rem num vol	e/Disabl note, 2~1 tage: 30 and fine	e in: 6V 15V or o V, maxin adjustn	pen: Loc mum sin nent sele	al. k curren ectable)	t: 5mA.		X X X X X X	X X X X X X
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9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		TTL higi Open cc Dry con By elect Open cc Vout/lo OVP/UV AC on/c Address RS232/4	n (4~5V ollector, tact. Op rical sig ollector, ut manu <u>L manu</u> ff, Outp selectio 85 and	) -OK, 0V CC moc ben: off, inal or O Local: C ual adjus al adjus but on/o on by Vc IEEE488	le: On, C Short: or pen/Sho pen, Rei t by sep t by Volt. ff, Re-sta oltage (or .2 select	ohm se V mode: n. Max. v rt: 0~0. note: Of arate en Adjust rt mode current ion by IE	ries resi Off, Ma oltage a 6V or sh n. Maxir coders encoder (auto, t) adjust EE enab	ximum v at Enable ort: Rem num vol (coarse a safe), Fo encode ble switc	e/Disabl note, 2~1 tage: 30 and fine oldback	e in: 6V 5V or o V, maxin adjustn control er of ad	pen: Loc mum sin nent sele (CV to CC dresses:	al. k curren ectable) [), Go to	t: 5mA.		X X X X X X X X X X X X	X X X X X X X X X X X
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9. CV/CC indicator     10. Enable/Disable     11. Local/Remote analog control     11. Local/Remote analog control     12. Local/Remote analog control     13. FRONT PANEL     14. Control functions     15. Interface RS-232&RS-485 or Optional GPIB /     Model     1. Remote Voltage Programming (16 bit)     Resolution (0.02% of Ivo Rated)     Accuracy 0.05% vo Rated Output Voltage (*11)     2. Remote Current Programming (16 bit)     Resolution (0.002% of Io Rated)     Accuracy (0.1% of Io Rated+0.1% of Io Actual Output)(*10     Resolution (0.02% of Rated)     Accuracy 0.05% vo Rated     Accuracy 0.05% vo Rated     4. Readback Current     Resolution of Io Rated (*10)     Resolution of Io Rated output	V           mV           mV           mA           mA	TTL higl           Open cc           Dry con           By elect           Open cc           Vout/lo           OVP/UV           AC on/o           AC on/o           R5232/4           Baudrat           Voltage           Current           Voltage           erface           6           0.12           3.0           2.00           4.0           400           11           300           12	n (4-5V) ollector, tat. Op irical sig ollector, ut manu L manu t manu	) -OK, OV CC moc pen: off, nal or O Local: C jal adjus al adjus jut on/o on by VC IEEE488 ion: 120 j. accura t. Alarm 12.5 6.3 1.20 1.125 6.3 1.20 1.125 6.3	le: On, C Short: or pen/Sho pen/Sho pen, Rev it by sep. ty Volt. ff, Re-sta ltage (o. 2 select 0, 2400, . y: 0.05% cy: 0.2% , Fine, Pr 20 0.4 10 0.76 1.52 152 1.20 10 1.14 114 1.52	lohm se / mode:: . Max. v. . Max. v. . Max. v. . Max. v. arate en Adjust. . Max. v. . Max.	ries resi Off, Ma oltage e SV or sh n. Maxir coders 1 encoder s (auto, t adjuste E enat 000 and unt nt 0.4 0.8 20 0.38 38 0.76 76 1.2 20 1.14	ximum vat Enable ort: Rem num vol coarse a safe), Fc encode switc 19,200 50 1.0 25  0.60 60 1.5 25  1.20	e/Disābl hote, 2~1 tage: 30 and fine bldback. r. Numb h and D Output 60 1.2 30 0.25 25 0.50 50 1.2 30 1.2 30	e in: 6V (5V or o V, maxii adjustn control ere of ad P switc 0, Fron 1,6 40 0,19 19 0,38 38 1,60 40 0,019 19 0,38 38 1,60 40 1,60 40 1,60 40 1,60 1,70 1,60 1,70 1,60 1,70 1,70 1,60 1,70 1	Pen: Loc mum sin hent sele (CV to CC dresses: h 100 2.0 50 0.15 15 0.30 30 30 11.0 50	al. k curren ctable) ), Go to 31 Lock 150 3.0 75 0.10 10 0.20 20 10.50 75 1.10	t: 5mA. local co 300 6.0 150 0.05 5.0 0.10 10 12 150 0.13 7.50 0.15	ntrol 600 12.0 300 0.03 2.6 0.05 5.2 12 300 0.12 3.90 0.10	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
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9. CV/CC indicator     10. Enable/Disable     11. Local/Remote analog control     11. Local/Remote analog control     12. Local/Remote analog control     13. FRONT PANEL     1. Control functions     1. Ginterface RS-232&RS-485 or Optional GPIB /     Model     1. Remote Voltage Programming (16 bit)     Resolution (0.02% of Vo Rated)     Accuracy 0.05% Vo Rated Output Voltage (*11)     2. Remote Current Programming (16 bit)     Resolution (0.002% of Io Rated)     Accuracy 0.03% of Io Rated+0.1% of Io Actual Output)(*10     Resolution (0.002% of Io Rated)     Accuracy 0.03% of Io Rated     Accuracy 0.05% Vo Rated     Accuracy 0.05% Vo Rated     Accuracy 0.03% of Io Rated (*10)     Accuracy 0.3% of Io Rated (*10)     Resolution of Io Rated (*10)     Accuracy 0.3% of Io Rated (*10)     Resolution (0.01% of Vo Rated)     Accuracy 0.3% of Io Rated (*10)     Resolution (0.01% of Vo Rated)     Accuracy 0.3% of Io Rated (*10)     Resolution (0.01% of Vo Rated)     Accuracy 0.3% of Io Rated (*10)     Accuracy 0.3% of Io Rated (*10)     Accuracy 0.3% of Io Rated) *1: Minimum voltage is guaranteed to maximum 0.2%	V MV MV MA MA MA MA MV MV MV MV MV MV of Vo Rat	ITTL higl           Open cc           Dry con           By elect           Open cc           Vout/lo           OV/OVP/UV           AC on/o           AC on/o           RS232/4           Baudrat           Voltage           current           Voltage           erface           6           0.12           3.0           2.00           400           11           300           12           600           6           6	n (4-5V) ollector, tur manu L manu L manu L manu B a a celect 4 digits .Curren 8 0.16 4.0 1.80 0.360 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.360 1.80 0.360 1.80 0.360 1.80	) -OK, OV CC moc CC moc pen: off, nal or O Local: C al adjus put on/o on by Vc IEEE488 ion: 120 . accura t. Alarm 12.5 6.3 1.20 1.20 2.40 2.40 2.40 1.125 6.3 1.20 1.125 6.3	le: On, C Short: or pen/Shoc pen/Shoc pen, Rev t by volt. f, Re-sta tby volt. f, Re-sta tby volt. f, Re-sta tby volt. f, Re-sta tage (0, 2 select 0, 2400, c; 0.059 cy: 0.259 cy: 0.296 cy: 0.296 cy: 0.296 cy: 0.296 cy: 0.276 10 0.4 10 0.76 76 1.52 152 152 152 120 10 10 114 114 114 1.52 228 20 200	lohm se / mode: / m	ries resi Off, Ma oltage e SV or sh n. Maxir coders I encoder is (auto, i) adjust is (	ximum vat Enable ort: Rem num vol coarse a safe), Fo safe), Fo saf	e/Disābl note, 2~1 tage: 30 and fine oldback. r. Numb h and D Output 60 1.2 30 1.2 30 0.25 25 0.50 50 1.2 30 1.2 30 1.2 30 60 60 60 60 60 60 60 60 60	e in: 6V (5V or o V, maxii adjustm control ere of ad P switc 0, Fron 1,6 40 0,19 19 0,38 38 1,6 40 0,19 19 0,38 38 1,6 40 0,19 19 0,38 38 1,6 40 0,19 19 0,38 38 1,6 40 0,19 19 0,38 38 1,6 40 0,19 19 0,38 38 0,00 0,00 0,000	Pen: Loc mum sin hent sele (CV to CC dresses: h 100 2.0 50 0.15 15 0.30 30 11.0 50 11.0 50 1.05 45	al. k curren (ctable) (), Go to 31 Lock 150 3.0 75 0.10 10 0.20 20 10.50 75 1.10 30 150 150 150	t: 5mA. local col 300 6.0 150 0.05 5.0 0.10 10 12 150 0.13 7.50 0.15 15 15 300 3000	ntrol 600 12.0 300 0.03 2.6 0.05 5.2 12 300 0.10 7.8 600 6000	X X X X X X X X X X X X X X X X X X X	X       X
9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB / Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05% Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.02% of Io Rated) Accuracy (0.09% Vo Rated Accuracy (0.002% of Io Rated) Accuracy (0.002% of Io Rated) Accuracy (0.002% of Io Rated) Accuracy (0.002% of Io Rated) Accuracy (0.00% of Io Rated Accuracy 0.05% Vo Rated 4. Readback Voltage Resolution of Io Rated Accuracy 0.3% of Io Rated (*10) Resolution of Io Rated (*10) Resolution (0.03% of Io Rated) Accuracy 0.3% of Io Rated (*10) Resolution of Io Rated (*10) Resolution (0.1% of Vo Rated) Accuracy (1% of Vo Rated) Accuracy (1% of Vo Rated) Accuracy (1% of Vo Rated) *1: Minimum voltage is guaranteed to maximum 0.2%	V MV MV MA MA MA MA MV MV MV MV MV MV of Vo Rat	ITTL higl           Open cc           Dry con           By elect           Open cc           Vout/lo           OV/OVP/UV           AC on/o           AC on/o           RS232/4           Baudrat           Voltage           current           Voltage           erface           6           0.12           3.0           2.00           400           11           300           12           600           6           6	n (4-5V) ollector, tur manu L manu L manu L manu B a a celect 4 digits .Curren 8 0.16 4.0 1.80 0.360 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.16 4.0 1.80 0.360 1.80 0.360 1.80 0.360 1.80	) -OK, OV CC moc CC moc pen: off, nal or O Local: C al adjus put on/o on by Vc IEEE488 ion: 120 . accura t. Alarm 12.5 6.3 1.20 1.20 2.40 2.40 2.40 1.125 6.3 1.20 1.125 6.3	le: On, C Short: or pen/Sho	lohm se / mdeg: / mdag: / max.v / mode: / max.v / m	ries resi Off, Ma Oltage : SV or sh n. Maxir encodel encodel encodel is (auto, ) adjust EE enal ison and unt nt oldback 40 0.8 20 0.8 20 0.8 20 0.8 20 0.8 20 0.8 20 0.76 76 76 76 76 76 76 76 76 76 76 76 76 7	ximum 1 at Enable ort: Rem num vol coarse a safe), Fo encode switc 19,200 c, Local, 50 c, Local, 50 1.0 25  0.60 60 1.5 25  1.20 90 50 50 50 court rem 50 50 50 courter	e/Disābl hote, 2~1 tage: 30 and fine bldback - r. Numb h and D Output 60 1.2 30 0.25 25 0.50 50 50 1.2 30 1.25 50 50 50 50 60 60 60 60 60 60 60 60 60 60 60 60 60	e in: 6V (5V or o (5V or	Pen: Loc mum sin hent sele (CV to CC dresses: h 100 2.0 50 0.15 15 0.30 30 11.0 50 30 11.0 50 10.0 1.05 45 100 1.00 hin 0.5%	al. k curren (ctable) ), Go to 31 Lock 150 3.0 75 0.10 10 0.20 10.50 75 1.10 30 150 150 150 150 150 150 150 15	t: 5mA. local con 300 6.0 150 0.05 5.0 0.10 10 12 150 0.13 7.50 0.15 15 15 300 3000 d for a loa	ntrol 600 12.0 300 0.03 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8 600 6000 d chang	X         X           X         X	X X X X X X X X X X X X X X X X X X X
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\*4: 85~132VaC of 1/0~265VaC, constant load.
 \*5: From No-load to Full-load, constant input voltage.
 \*6: For load voltage change, equal to the unit voltage rating, constant input voltage.
 \*7: For 6V models the ripple is measured at 2~6V output voltage and full output current. For other models, the ripple is measured at 10~100% output voltage and full output current.

\*10: The Constant Current programming readback and monitoring accuracy does not include the warm-up and Load regulation thermal drift.
 \*11: Measured at the sense point.

# General Specifications Genesys<sup>™</sup> 750W/1500W

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.
. Input current 100/200Vac	750W:10.5A / 5A, 1500W:21A / 11A
Inrush current 100/200Vac	750W :Less than 25A. 1500W :Less than 50A
. Hold-up time	More than 20mS, 100Vac, at 100% load.
	,
.2 POWER SUPPLY CONFIGURATION	
. Parallel Operation	Up to 4 units in master/slave mode with single wire current balance connection
. Series Operation	Up to 2 units, with external diodes. 600V Max to Chassis ground
· · · · · · · · · · · · · · · · · · ·	
.3 ENVIRONMENTAL CONDITIONS	
Operating temp	0~50°C, 100% load.
. Storage temp	-20~70°C
. Operating humidity	30~90% RH (non-condensing).
. Storage humidity	10~95% RH (non-condensing).
. Vibration	MIL-810E, method 514.4, test cond. I-3.3.1. The EUT is fixed to the vibrating surface.
. Shock	Less than 20G, half sine, 11mSec. Unit is unpacked.
Altitude	Operating: 10000ft (3000m). Derat output current by 2%/100m above 2000m. Non operating: 40000ft (12000m).
.4 EMC	
. Applicable Standards:	
2. ESD	IEC1000-4-2, Air-disch, -8KV, contact disch, -4KV
. Fast transients	IEC1000-4-4.2KV
. Surge immunity	IEC1000-4-5. 1KV line to line, 2KV line to ground
. Conducted immunity	IEC1000-4-6, 3V
. Radiated immunity	IEC1000-4-3, 3V/m
Conducted emission	EN55022B, FCC part 15J-B, VCCI-B.
B. Radiated emission	EN55022A, FCC part 15-b, VCCI-A.
9. Voltage dips	EN30022A, FCC part 15-A, VCCI-A.
10. Conducted emission 11. Radiated emission	EN55022B, FCC part 15-B, VCCI-B. EN55022A, FCC part 15-A, VCCI-A.
	enssuzza, FCC part 15-A, VCCI-A.
2.5 SAFETY	
I.Applicable standards:	UL 60950-1, CSA22.2 No.60950-1, IEC 60950-1, EN 60950-1
	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,
2.Interface classification	Isolated Analog, LAN, Remote Programing and Monitoring (pins 1-3, pins14-16) are SELV, Sense, Remote
	Programming and Monitoring (vins 8-13, nins 71-75) are Harardour
	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, I AN. Sense, Remote Programming and Monitoring) are Hazardous
	Isolated Analog, LAN, Sense, Remote Programming and Monitoring) are Hazardous. 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):
Withstand voltage	4242VDC 1min, Output(Hazardous)-SELV: 2307VDC 1min, Output(Hazardous)-Ground: 1414VDC 1min,
3.Withstand voltage	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.
Insulation resistance	More than 100Mohm at 25°C , 70% RH.
.6 MECHANICAL CONSTRUCTION	
. Cooling	Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed.
. 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)
	750W: IEC320 AC Inlet.
4. AC Input connector	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	
./ RELIADIENT SPECS	

\*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.

# Genesys™ Power Parallel and Series Configurations

## Parallel operation - Master/Slave:

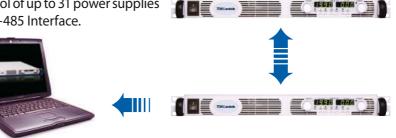
Active current sharing allows up to four identical units to be connected in an auto-parallel configuration for four times the output power. In Advanced Parallel Master/Slave Mode, total current is programmed and reported by the Master, Up to four supplies act as one.

## **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.



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# **Programming Options (Factory installed)**

<ul> <li>Digital Programming via IEEE Multi-Drop</li> <li>Allows IEEE Master to control up to 30 slave</li> <li>Only the Master needs be equipped with IE</li> <li>IEEE 488.2 SCPI Compliant</li> <li>Program Voltage</li> <li>Measure Voltage</li> <li>Over Voltage setting and shutdown</li> <li>Error and Status Messages</li> </ul>	es over RS-485 daisy-chain	P/N: IEEE
<b>Isolated Analog Programming</b> Four Channels to Program and Monitor Voltage a		
Isolation allows operation with floating reference Choose between programming with Voltage or Connection via removable terminal block: Phoer	Current.	its.
<ul> <li>Voltage Programming, user-selectable 0-5\ Power supply Voltage and Current Program Power supply Voltage and Current Monitor</li> </ul>	nming Accuracy ±1%	P/N: IS510
<ul> <li>Current Programming with 4-20mA signal.</li> <li>Power supply Voltage and Current Program</li> <li>Power supply Voltage and Current Monitor</li> </ul>		P/N: IS420
LAN Interface	Compliant to Class C	P/N: LAN
<ul> <li>Meets all LXI-C Requirements</li> <li>Address Viewable on Front Panel</li> <li>Fixed and Dynamic Addressing</li> <li>Compatible with most standard Networks</li> </ul>	<ul> <li>VISA &amp; SCPI Compatible</li> <li>LAN Fault Indicators</li> <li>Auto-detects LAN Cross-ove</li> <li>Fast Startup</li> </ul>	er Cable

## Power Supply Identification / Accessories How to order

GEN	600	- 2.6	-	-
			Factory Options	AC Cable option is 750W only
Series	Output	Output	Option: IEEE	Region: E - Europe
Name	Voltage	Current	IS510	GB - United Kingdom
	(0~600V)	(0~2.6A)	IS420	J - Japan
			LAN	I - Middle East

#### Models 750/1500W

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN6-100	0~6V	0~100	600
GEN6-200	0~6V	0~200	1200
GEN8-90	0.01/	0~90	720
GEN8-180	0~8V	0~180	1440
GEN12.5-60	0 12 51/	0~60	750
GEN12.5-120	0~12.5V	0~120	1500
GEN20-38	0.201/	0~38	760
GEN20-76	0~20V	0~76	1520
GEN30-25	0.201/	0~25	750
GEN30-50	0~30V	0~50	1500
GEN40-19	0 401/	0~19	760
GEN40-38	0~40V	0~38	1520

#### **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 LX Class C)

## AC Cords sets (750W only)

Region	Europe	United Kingdom	Japan	Middle East	North America
Output Power AC Cords Wall Plug Power Supply	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
Connector					
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<sup>™</sup> 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		·	· · · · · · · · · · · · · · · · · · ·

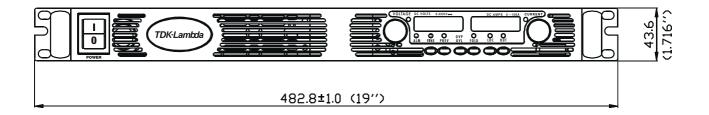
Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN50-30	0~50V	0~30	1500
GEN60-12.5	0 601	0~12.5	750
GEN60-25	0~60V	0~25	1500
GEN80-9.5	0~80V	0~9.5	760
GEN80-19		0~19	1520
GEN100-7.5	0~100V	0~7.5	750
GEN100-15	0~1000	0~15	1500
GEN150-5	0.1501	0~5	750
GEN150-10	0~150V	0~10	1500
GEN300-2.5	0.2001/	0~2.5	750
GEN300-5	0~300V	0~5	1500
GEN600-1.3	0 6001	0~1.3	780
GEN600-2.6	0~600V	0~2.6	1560

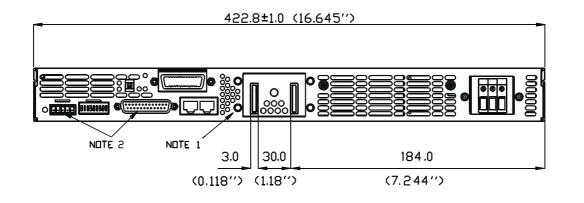
U-North America

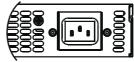
P/N

IEEE IS510 IS420 LAN

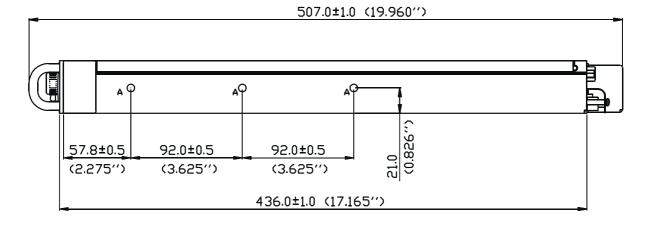
Outline Drawing Genesys<sup>™</sup> 750W/1500W Units







MODEL 750W IEC INLET



## 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

# **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@uk.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 Sales Office France Sas Succursale Italiana Via dei Lavoratori 128/130 IT 20092 Cinisello Balsamo, Milano, Italy Tel: +39-02-6129-3863 Fax: +39-02-6129-0900 E-mail: info.italia@it.tdk-lambda.com www.it.tdk-lambda.com

#### ISRAEL

TDK-Lambda Ltd. Sales Office: Kibbutz Givat Hashlosha Tel-Aviv 4880000, Israel Tel: +972-3-9024-333 Fax: +972-3-9024-777 Plant: 56 Haharoshet St., Karmiel Industrial Zone 2165158, Israel Tel: +972-4-9887-491 Fax: +972- 4-9583-071 www.tdk-lambda.co.il E-mail: info@tdk-lambda.co.il

#### JAPAN

TDK-Lambda Corporation International Sales Divison Nittetsu Bldg. 6F, 1-13-1 Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan Tel: +81-3-5201-7175 Fax: +81-3-5201-7287 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. cn.tdk-lambda.com

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. cn.tdk-lambda.com

Shenzhen Branch of Wuxi TDK-Lambda Electronics Co.Ltd. Room 4302, Excellence Times Square Building, 4068 Yi Tian Road, Futian District, Shenzhen, China 518048 Tel: +86 -755-83588261 Fax: +86 -755-83588260 www. cn.tdk-lambda.com

#### KOREA

TDK-Lambda Corporation Seoul Office 8F Songnam Bldg, 1358-6, Seocho-Dong, Seocho-Gu, Seoul, 137-862 KOREA Tel: +82-2-3473-7051 Fax: +82-2-3472-9137 www.tdk-lambda.co.kr

#### 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 Singapore Pte Ltd (India Branch) No.989, 1st Cross, 2nd Floor, 13th Main, HAL 2nd Stage, Bangalore, Karnataka, India – 560 008 Tel: +91-80-43550 500 Fax: +91-80-43550 501 www.tdk-lambda.com.sg

#### MALAYSIA

TDK-Lambda Malaysia Sdn. Bhd. c/o TDK (Malaysia) Sdn Bhd Lot 709, Nilai Industrial Estate 71800 Nilai Negeri Sembilan, Malaysia Tel: + 60 6-799 1130 Fax: + 60 6 799 3277 www.tdk-lambda.com.my



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