

Improved Specifications

Genesys™

Programmable DC Power Supplies 3.3kW in 2U Built in RS-232 & RS-485 Interface Advanced Parallel Operation Optional Interface: L^{XI} Compliant LAN IEEE488.2 SCPI (GPIB) Multi-Drop Isolated Analog Programming



Genesys™ Family GENH 750W Half Rack GEN1U 750/1500/2400W Full Rack GEN2U 3.3/5kW





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

- **LX** Compliant LAN
- LabView[®] and LabWindows[®] drivers
- Five Year Warranty

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

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
 Remote Mode
- Preview Settings

- Foldback Mode
 - ck 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 1.Rated output	-									S	pecificat	ions in blu	ie are in	nrovec
voltage(*1) 2.Rated Output Current(*2)	GEN	8-400	10-330	15-220 2	20-165 3	0-110	40-85	60-55	80-42			200-16.5 3		
3.Rated Output Power 1.1 CONSTANT	, •	8	10	15	20	30	40	60	80	100	150	200	300	600
VOLTAGE MODE 1.Max.line regulation (A	400	330	220	165	110	85 3400	55	42	33	22 3300	16.5	11	5.5
regulation (0.015% of rated Vo+5mV)(*7)		3200	3300 3	3300 3.5	3300 4	3300 5	5400 6	3300 8	3360 10	3300 12	17	3300 22	3300 32	3300 62
3.Ripple and noise p-p 20MHz (*8) 4.Ripple	mV	6.2	6.5	7.25	8	9.5	Ť	14	17	20	27.5	35	50	95
. <u>m.s 5Hz~1MHz 5.Remote sense</u> compensation/wire <u>6.Temp. coefficient</u>		55	55	55 7	55	55	55	60	70	100	100	275	300	350
Temp. stability 8.Warm-up drift 9.Up-prog.	mV v	8	8	2	7	5			20 5	25 5	<u>20</u> 5	70 5	80 5	80 5
esponse time, Ó~Vo Rated (*9)	v	2	2	2	2									
		FODDA	°C of rot	ad auto	utvoltar	to follow	ing 20 n	ainutaa						
	PPINI/ C	50PPM/									ctant lin	e, load & t	omn	
						voltage+							emp.	
	mS			8	0				1:	50		20	0	250
0.Down-prog response Full-load (*9)	mS	20		100			160				300			500
me No-load (*10)	mS	500	600	700	800	900	1000	1100		1500		3000	3500	4000
1.Transient response time	mS	Time for	r output	voltage	to recove	er withir	n 0.5% of	its rated	l output	for a loa	d chang	e 10-90%	of rated	output
		set-poir	nt: 10-10	0%, loca	l sense. I	less thar	n 1mSec	for mod	lels up to	and inc	luding	00V. 2ms	ec for m	odels a
.2 CONSTANT CURRENT MODE	m۸	12	35	24	105	12	10.5	75	62	5.2	4.2	2 65	21	26
Max.line regulation (0.01% of rated lo+2mA) Max.load regulation (0.02% of rated lo+5mA Ripple r m s 5Hz-1MHz. (*12))(*61A	42 85	35 71	24 49	18.5 38	13 27	10.5 22	7.5 16	6.2 13.4	5.3 11.6	4.2 9.4	3.65 8.3	3.1 7.2	2.6 6.1
Max.load regulation (0.02% of rated lo+5mA	^h *h	1000	650	400	300	250	150	70	60	50	20	30	15	8
						urrent o					ange.			
.Temp. coefficient	PPM/°C	70PPM/	°C from	rated ou	itput cur	rent, fol	lowing 3	0 minut	es warm	-up.				
.Temp. stability		0.01% 0	f rated I	out over	8hrs. int	erval fol	lowing 3	80minut	es warm	-up. Cor	istant lir	e, load &	tempera	ture.
.Warm-up drift		8V~20V	models	Less that	an ±0.5%	6 of rate	d output	current	over 30	minutes	followi	ng power	On.	
.3 PROTECTIVE FUNCTIONS		30Y760	oy mod	als: Less	than ±0.	.25% of r	ated ou	tput cur	rent ove	r 30 min	utes foll	owing po	wer On.	
. OCP		Output	shut do	wn wher	n power :	supply c	hange fi	rom CV t	o CC. Us	er selec	table.			
. OCP Foldback		Inverter	shut-do	wn, mai	าual rese	t by AC	input re	cycle or	by OUT I	button o	o <mark>r by co</mark> r	nmunicat	ion port	comma
. OVP type														
I. OVP trip point 5. Output Under Voltage Limit		0.5~10V	0.5~12\	1~18V	1~24V	2~36V	2~44V	5~66V	5~88V	5~110V	5~165V	5~220V	5~330V	5~660V
. Over Temp. Protection						nication	port. Pre	events fr	om adju	sting Vo	ut belov	v limit.		
.4 ANALOG PROGRAMMING AND MONITOI	RING	User sel	ectable	, latched	or non-	latched.								
.Vout Voltage Programming		0~100%	o, 0∼5V c	or 0~10V	, user se	lect. Acc	uracy an	d lineari	ity:±0.5%	6 of rate	d Vout.			
2. lout Voltage Programming (*13)						lect. Acc						1		
.Vout Resistor Programming Lout Resistor Programming (*13)		0~100%	$0 \sim 5/10$	Kohm fi	ull scale,	user sele user sele	ect.,Accu	racy and	linearit	y: ±1% C	of rated	lout		
.On/Off control (rear panel)		By elect	rical. Vo	ltage: 0~	-0.6V/2~	15V,or d	lrv conta	ct .user	selectab	le logic.	orrated	iout.		
.Output Current monitor (*13)		0~5V or	°0~10V,	Accurac	:y:±1%,ι	user sele	ctable.							
Output Voltage monitor						ser selec								
. Power Supply OK signal						ohm ser			1+200.20)/ mavi	mum cin	k current:	10m A	
0. Enable/Disable		Drv con	tact. Op	en:off . S	hort: on	. Max. vo	oltage at	Enable/	Disable	in: 6V.	inum sin	k current.	TUTIA	
1. Local/Remote analog control		By elect	rical sig	hal or Or	en/Shor	rt: 0~0.6	√ or shor	t: Remo	te. 2~15	V or ope	n: Local.			
2. Local/Remote analog control Indicator		Open re	allector	lacal: O	free the second	te: On N	laximun	valtage	- 30V m	aximin	, sink cu	table).	ηA	
.5 FRONT PANEL		OVP/UV	'L manua	al adjust	by Volt.	Adjust e	ncoder.	course u		ajastint				
		On/Off,	Output	on/off, R	le-start n	nodes (a	uto, safe					o to local	control	
						current)		encoder.	Numbe	r of addi	esses:31		control.	
						rt, safe n 800,960							control.	
.Control functions						000,000		200						
						% of rate	ed outpu	it Voltag						
		Current	: 4 digits	, Accura	cy: 0.2%	of rated	ed outpu	it Voltag	±1 count	t.	Panelli	ock, CVCC		
		Current	: 4 digits	, Accura	cy: 0.2%	of rated	ed outpu	it Voltag	±1 count	t.	Panel Lo	ock, CVCC		
Display		Current	: 4 digits	, Accura	cy: 0.2%	of rated	ed outpu	it Voltag	±1 count	t.	Panel Lo	ock, CVCC		
		Current	: 4 digits	, Accura	cy: 0.2%	of rated	ed outpu	it Voltag	±1 count	t.	Panel Lo	ock, CVCC		
Indications	5 Series	Current: Voltage,	: 4 digits , Curren	, Accura t, Alarm,	cý: 0.2% Fine, Pro	of rated eview, Fo	ed output output oldback,	it Voltag current : Local, C	±1 count Output O	t.	Panel Lo	ock, CVCC		
Indications .6 Interface Specifications for the GENESYS		Current: Voltage, with RS	: 4 digits , Curren 5-232/RS	, Accura t, Alarm, 5-485 Or	cý: 0.2% Fine, Pre	of rated eview, Fo al GPIB/I	ed output output oldback,	t Voltag current : Local, C	±1 count output O stalled	t. n, Front			•	600
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit)	5 Series V mV	Current: Voltage,	: 4 digits , Curren	, Accura t, Alarm,	cý: 0.2% Fine, Pro	of rated eview, Fo	ed output output oldback,	it Voltag current : Local, C	±1 count Output O	t.	Panel Lo 150 3	200 4		<u>600</u> 12
Indications .6 Interface Specifications for the GENESYS .Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated)	V	Current: Voltage, with RS	: 4 digits ; Curren 5-232/RS 10	, Accura t, Alarm, - 485 Or 15	cý: 0.2% Fine, Pre Optiona 20	of rated eview, Fo al GPIB/I 30	ed output output oldback, LAN Inte 40	tt Voltag current : Local, C erface In 60	±1 count output O stalled 80	t. n, Front 100	150	200		
Indications .6 Interface Specifications for the GENESYS .8 Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) ccuracy (0.05% of Vo Rated) (*14)	V mV	with RS 0.16	: 4 digits , Curren ;-232/RS 10 0.2	, Accura t, Alarm, 5- 485 Or 15 0.3	Cy: 0.2% Fine, Pre Optiona 20 0.4	of rated eview, Fo al GPIB/I 30 0.6	ed output output oldback, LAN Inte 40 0.8	t Voltag current : Local, C erface In 60 1.2	estalled	t. n, Front 100 2	150 3	200 4	- - - - - - - - - - - - - - - - - - -	12
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) ccuracy (0.05% of Vo Rated) (*14) . Remote Current Programming (16 bit) esolution (0.002% of Io Rated)	V mV mV	with RS 0.16	: 4 digits , Curren :-232/RS 10 0.2 5	, Accura t, Alarm, - 485 Or 15 0.3 8	Cý: 0.2% Fine, Pre Optiona 20 0.4 10	of rated eview, Fe al GPIB/I 30 0.6 15	ed output output oldback, LAN Inte 40 0.8 20	erface In 60 1.2 30	stalled	t. n, Front 100 2 50	150 3 75	200 4 100	300 6 150	12 300
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) .ccuracy (U.US% of Vo Rated) (*14) . Remote Current Programming (16 bit) esolution (0.002% of Io Rated)	V mV mV	with RS 0.16	: 4 digits , Curren ;-232/RS 10 0.2	, Accura t, Alarm, 5- 485 Or 15 0.3	Cy: 0.2% Fine, Pre Optiona 20 0.4	of rated eview, Fo al GPIB/I 30 0.6	ed output output oldback, LAN Inte 40 0.8	t Voltag current : Local, C erface In 60 1.2	estalled	t. n, Front 100 2	150 3	200 4	- - - - - - - - - - - - - - - - - - -	12
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) .ccuracy (0.05% of Vo Rated) (*14) . Remote Current Programming (16 bit) esolution (0.002% of Io Rated) .ccuracy (0.2% of Io Rated + 0.1% of Io Actual (. Readback Voltage	V mV mV	with RS 0.16 4	: 4 diğits , Curren 5-232/RS 10 0.2 5 6.6	, Accura t, Alarm, -485 Or 15 0.3 8 4.4	Cý: 0.2% Fine, Pre Optiona 20 0.4 10 3.3	of rated eview, Fe al GPIB/I 30 0.6 15 2.2	ed output output oldback, LAN Inte 40 0.8 20 1.7	erface In 60 1.2 30	stalled 80 1.6 40 0.84	t. n, Front 100 2 50 0.66	150 3 75 0.44	200 4 100 0.33	300 6 150 0.22	12 300 0.11
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) ccuracy (0.05% of Vo Rated) (*14) . Remote Current Programming (16 bit) esolution (0.002% of Io Rated) . Readback Voltage esolution (% of Vo Rated)	V mV mV	Current: Voltage, with RS 8 0.16 4 (*1200	-232/RS -232/RS 10 0.2 5 6.6 990	, Accura t, Alarm, - 485 Or 15 0.3 8 4.4 660	Cy: 0.2% Fine, Pro Optiona 20 0.4 10 3.3 495	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330	ed output output oldback, AN Inte 40 0.8 20 1.7 255	it Voltag current : Local, C erface In 60 1.2 30 1.1 165	±1 count butput 0 stalled 80 1.6 40 0.84 126	t. n, Front 100 2 50 0.66 99	150 3 75 0.44 66	200 4 100 0.33 49.5	300 6 150 0.22 33	12 300 0.11 16.5
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) esolution (0.002% of Vo Rated) .ccuracy (0.05% of Vo Rated) (*14) . Remote Current Programming (16 bit) esolution (0.002% of Io Rated) .ccuracy (0.2% of Io Rated + 0.1% of Io Actual (. Readback Voltage esolution (% of Vo Rated) esolution (% eadback Voltage)	V mV mV	with RS 0.16 4	: 4 diğits , Curren 5-232/RS 10 0.2 5 6.6	, Accura t, Alarm, -485 Or 15 0.3 8 4.4	Cy: 0.2% Fine, Pro 0,4 10 3.3 495	of rated eview, Fe al GPIB/I 30 0.6 15 2.2	ed output output oldback, LAN Inte 40 0.8 20 1.7	erface In 60 1.2 30	stalled 80 1.6 40 0.84	t. n, Front 100 2 50 0.66	150 3 75 0.44	200 4 100 0.33	300 6 150 0.22	12 300 0.11
Indications .6 Interface Specifications for the GENESYS . Remote Voltage Programming (16 bit) tesolution (0.002% of Vo Rated) . Remote Current Programming (16 bit) tesolution (0.002% of Io Rated) . Readback Voltage tesolution (8.60 A Bated) tesolution (8.6	V mV mV DutpAt) %	Current: Voltage, with RS 0.16 4 (*1200 0.002	: 4 diğits ; Curren ;-232/RS 10 0.2 5 6.6 990 0.011	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007	Cy: 0.2% Fine, Pro Optiona 20 0.4 10 3.3 495	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330 0.004	ed output output oldback, LAN Inte 40 0.8 20 1.7 255 0.003	it Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002	±1 count butput O stalled 80 1.6 40 0.84 126 0.002	t. n, Front 100 2 50 0.66 99	150 3 75 0.44 66	200 4 100 0.33 49.5	300 6 150 0.22 33	12 300 0.11 16.5 0.002
Indications .6 Interface Specifications for the GENESYS .Remote Voltage Programming (16 bit) resolution (0.002% of Vo Rated) .ccuracy (0.05% of Vo Rated) (*14) .Remote Current Programming (16 bit) resolution (0.002% of Io Rated) .ccuracy (0.2% of Io Rated + 0.1% of Io Actual (.Readback Voltage resolution (Readback Voltage) .ccuracy (0.05% of Vo Rated) .ccuracy (0.05% of Vo Rated) .Readback Current	V mV mV DuthAt) % mV	Current: Voltage, with RS 8 0.16 4 (*1200 0.002 0.16	: 4 diğits ; Curren :-232/RS 10 0.2 5 6.6 990 0.011 1.10	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05	Cy: 0.2% Fine, Pro Optiona 20 0.4 10 3.3 495 0.006 1.20	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330 0.004 1.20	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20	tt Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002 1.20	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60	t. n, Front 100 2 50 0.66 99 0.011 11.00	150 3 75 0.44 66 0.007 10.50	200 4 100 0.33 49.5 0.006 12.00	300 6 150 0.22 33 0.004 12.00	12 300 0.11 16.5 0.002 12.00
2.Display 3.Indications 1.6 Interface Specifications for the GENESYS 1.6 Interface Specifications for the GENESYS 1.8 mote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.002% of Vo Rated) Accuracy (0.002% of Io Rated) Accuracy (0.2% of Io Rated +0.1% of Io Actual 3. Readback Voltage Resolution (% of Vo Rated) Accuracy (0.05% of Vo Rated) Accuracy (0.05% of Vo Rated) 4. Readback Current Readback Current Resolution (% of Io Rated)	V mV mV Dutpatt) % mV mV	Current: Voltage, with RS 8 0.16 4 (*1200 0.002 0.16 4	: 4 diğits ; Curren 5-232/RS 10 0.2 5 6.6 990 0.011 1.10 5	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05 8	Cy: 0.2% Fine, Pro 0ptiona 20 0.4 10 3.3 495 0.006 1.20 10	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330 0.004 1.20 15	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20 20	tt Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002 1.20 30	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60 40	t. n, Front 100 2 50 0.66 99 0.011 11.00 50	150 3 75 0.44 66 0.007 10.50 75	200 4 100 0.33 49.5 0.006 12.00 100	300 6 150 0.22 33 0.004 12.00 150	12 300 0.11 16.5 0.002 12.00 300
Buildications B	V mV mV DuthAt) % mV	Current: Voltage, with RS 8 0.16 4 (*1200 0.002 0.16	: 4 diğits ; Curren :-232/RS 10 0.2 5 6.6 990 0.011 1.10	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05	Cy: 0.2% Fine, Pro Optiona 20 0.4 10 3.3 495 0.006 1.20	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330 0.004 1.20	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20	erface In 60 1.2 30 1.1 165 0.002 1.20	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60	t. n, Front 100 2 50 0.66 99 0.011 11.00	150 3 75 0.44 66 0.007 10.50	200 4 100 0.33 49.5 0.006 12.00	300 6 150 0.22 33 0.004 12.00	12 300 0.11 16.5 0.002 12.00
Indications Indic	V mV mV Dutpatt) % mV %	Current: Voltage, s with RS 8 0.16 4 (*1200 0.002 0.16 4 0.002 0.16 4	-232/RS -232/RS 10 0.2 5 6.6 990 0.011 1.10 5 0.004	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05 8 0.005	Cy: 0.2% Fine, Pro Optiona 20 0.4 10 3.3 495 0.006 1.20 10 0.007	of rated eview, Fo al GPIB/I 30 0.6 15 2.2 330 0.004 1.20 15 0.01	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20 20 0.002	tt Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002 1.20 30 0.002	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60 40 0.002 1.60 40	t. n, Front 100 2 50 0.66 99 0.011 11.00 50 0.004	150 3 75 0.44 66 0.007 10.50 75 0.005	200 4 100 0.33 49.5 0.006 12.00 100 0.007	300 6 150 0.22 33 0.004 12.00 150 0.01	12 300 0.11 16.5 0.002 12.00 300
Buildications B	V mV mV DulfAt) % mV mV % MA	Current: Voltage with RS 8 0.16 4 (*18 (*18 0.002 0.16 4 0.002 0.16 4 0.002 0.16 4	:4 diğits ; Curren :-232/RS 10 0.2 5 6.6 990 0.011 1.10 5 0.004 13.20	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05 8 0.005 11.00	Cyr. 0.296 Fine, Pro 0ptiona 20 0.4 10 3.3 495 0.006 1.20 10 0.007 11.55	of rated eview, Fa al GPIB/I 30 0.6 15 2.2 330 0.004 1.20 15 0.004 1.20 15	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20 20 0.002 1.70	tt Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002 1.20 30 0.002 1.10	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60 40 0.003 1.26	100 2 50 0.66 99 0.011 11.00 50 0.004 1.32	150 3 75 0.44 66 0.007 10.50 75 0.005 1.10	200 4 100 0.33 49.5 0.006 12.00 100 0.007 1.16	300 6 150 0.22 33 0.004 12.00 150 0.01 0.11	12 300 0.11 16.5 0.002 12.00 300 0.002 0.11
B-Indications I.6 Interface Specifications for the GENESYS I. Remote Voltage Programming (16 bit) Vesolution (0.002% of Vo Rated) Vecuracy (0.05% of Vo Rated) (*14) Vesolution (0.002% of Io Rated) Vecuracy (0.2% of Io Rated) Vecuracy (0.2% of Io Rated) Vecuracy (0.2% of Vo Rated) Vecuracy (0.05% of Vo Rated)	V mV mV DulfAt) % mV mV % MA	Current: Voltage with RS 8 0.16 4 (*18 (*18 0.002 0.16 4 0.002 0.16 4 0.002 0.16 4	:4 diğits ; Curren :-232/RS 10 0.2 5 6.6 990 0.011 1.10 5 0.004 13.20	, Accura t, Alarm, -485 Or 15 0.3 8 4.4 660 0.007 1.05 8 0.005 11.00	Cyr. 0.296 Fine, Pro 0ptiona 20 0.4 10 3.3 495 0.006 1.20 10 0.007 11.55	of rated eview, Fa al GPIB/I 30 0.6 15 2.2 330 0.004 1.20 15 0.004 1.20 15	ed output output oldback, 40 0.8 20 1.7 255 0.003 1.20 20 0.002 1.70	tt Voltag current : Local, C erface In 60 1.2 30 1.1 165 0.002 1.20 30 0.002 1.10	±1 count butput O stalled 80 1.6 40 0.84 126 0.002 1.60 40 0.003 1.26	100 2 50 0.66 99 0.011 11.00 50 0.004 1.32	150 3 75 0.44 66 0.007 10.50 75 0.005 1.10	200 4 100 0.33 49.5 0.006 12.00 100 0.007 1.16	300 6 150 0.22 33 0.004 12.00 150 0.01 0.11	12 300 0.11 16.5 0.002 12.00 300 0.002 0.11

*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. 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.

*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.
*14: Measured at the sensing point.



General Specifications Genesys™ 3.3kW

2.1 INPUT CHARACTERISTICS	GEN						40-85	60-55	80-42	100-33	150-22	200-16.	5 300-11	600-5.5
have to all the set (free set)		Single Pl												
. Input voltage/freq. (*3)	VAC	3-Phase, 208V models: 170~265Vac, 47~63Hz 3-Phase, 400V models: 342~460Vac, 47~63Hz												
						· · · · · · · · · · · · · · · · · · ·								
. Maximum Single Phase,230V mode		24	24	24	24	23	24	23	23.5	23	23	23	23	23
nput current3-Phase, 208V models; t 100% load 3-Phase, 400V models:	A	14.5	14.5	14.5	14.5	14	14.5	13.6	14	13.7	13.7	13.7	13.8	13.9 7.0
		7.2	7.2	7.2	7.2	7.0	7.2	6.8	7.0	6.8	6.8	6.8	6.9	
Power Factor (Typ)							<u> </u>		hase mo					
Efficiency (*4)	%	82	83	83	83	86	86	88	88	88	87	87	87	87
Inrush Current (*5)	A	Single-P					ss than 5	50A						
. Hold-up time (Typ)		3-Phase					/	(fe 2 Dhe	4001/				
.2 POWER SUPPLY CONFIGURATION	mS	Tomsec	for Singi	e-Phase	and 3-pr	lase 208	/ models	, omsec	for 3-Pha	se 400v	nodels. I	rated ou	tput pow	er.
. Parallel Operation		Lin to 4	ا م به ا				-							
2. Series Operation		Up to 4 i						Aav to Ch	assis gro	und				
2.3 ENVIRONMENTAL CONDITIONS		Up to 21	dentical	units. wi	th extern	lai diode	S. 600V IV	lax to Cr	lassis gro	una				
. Operating temp		0 5000	1000/ 1	1										
2. Storage temp		0~50°C, -20~85°(ad.										
3. Operating humidity				condon	cin a)									
1. Storage humidity		20~90% 10~95%												
5. Vibration						ic fixed	to the vil	arating	urfaco					
. Shock							inpacked		unace.					
7. Altitude									00m abc	WA 2000	n Altorn	ativoly o	lorato ma	avimum
. Annuale		by 1°C/1								VC 2000	ii, Ateri	acrecity, C	crute me	axinum
. RoHS Compliance							lirective.							
.4 EMC		compile	5 WICH (1	- require			ceuve.							
Applicable Standards:														
.ESD		1564000			0101									
.Fast transients		IEC1000		Air-discl		conta								
Surge immunity		disch4												
.Conducted immunity		1KV lin		ne, 2KV 3V IEC										
Radiated immunity		IEC1000	.,			,								
Magnetic field immunity		EN61000 EN55022	,	1A/m		1000-4-1 VCCI-		_						
3.Voltage dips		EN55022					٦.							
9.Conducted emission		LINJJU22	, FUU þ	Jart IJ-A	, vcci-A.									
10. Radiated emission														
.5 SAFETY														
Applicable standards:		111 600-	1.663		C0050 -	IFC 6067	0.1.51.5	0050 1						
		UL 6095												
								unicatior	n/control	interfac	es (RS23	2/485, IE	EE, Isolat	ed Anal
		Remote												
2.Interface classification		Models	with 60\	/ Vout 4	00V: Out	put is H	azardou	s, comm	unication	/control	interfac	es: RS232	2/485, IEI	EE, Isola
		Analog,	LAN,											
		Remote	Brogram	ing and	Monitor	ing (pins	1-3, pin	s14-16) a	are SELV,	Sense, R	emote P	rogramm	ing and	Monitor
		pins 21-2												
						Output	s Hazaro	lous, all	commu	nication	control	interface	s (RS237	2/485. IF
		Isolated			0000.	Sarpar		abus, di	commu	incution/	control	menace	5 (113232	., 1 03, 16
		LAN, Ser	ise, Rem	ote Proa	rammino	and Mo	nitoring) are Haz	ardous.					
									DC 1mir	n, Input	-comm	unicatio	n/contr	ol (SEL
.Withstand voltage							(,			.,				(
		4242VD	C 1min,	,										
		Input-Gr	ound: 28	328VDC 1	min,									
		60V <v0< td=""><td>ıt 100V r</td><td>nodels: I</td><td>nput-Ou</td><td>tout (Hat</td><td>ardous).</td><td>2600VD</td><td>C 1min, lr</td><td>nput-con</td><td>municat</td><td>ion/cont</td><td>rol (SFLV</td><td>):</td></v0<>	ıt 100V r	nodels: I	nput-Ou	tout (Hat	ardous).	2600VD	C 1min, lr	nput-con	municat	ion/cont	rol (SFLV):
Insulation resistance		4242/00	1.min		Hazardo		· 1000//	1 min	, Output	(Hazard	us)-Grou	ind: 120		,. min Inr
.6 MECHANICAL CONSTRUCTION		Gfðánd:	2828VD	C1mm.	i iazdi u0	us/-JELV	. 190071		, output		Jusj-0101	inu. 120		nin, inp
. Cooling		19946a K	9416994	(mpflels	Hoputa P	NEPULAH	AHOPS)ie35579141	e€obreinb	₩ Bifebita CA	nenaunia	stig:Var	BIBIE	Veed.
2. Dimensions (WxHxD)		4224228DK	m.nhin88	tazardov	sl Därtpu	t (cortud i	mication	control	(&Edd0rs11	HADAY CIDES, 1	etbári),			
3. Weight		Qukput(lazardo	us)-Grou	nd: 2670	VDC 1mi	n, Input-	Ground:	2828VDC	1min. M	ore than	100Moh	m at 25°0	C , 70% ľ
1. AC Input connector (with Protective	Cover)								0,16 serie F-10,16 s					
5. Output connectors														
2.7 RELIABILITY SPECS		8V to 10	UV mode	ls: Bus-b	ars (hole	Ø 10.5m	m). 150\	' to 600V	models:	wire clan	np conne	ctor, Pho	penix P/N	: FRONT
Warranty	thout no	tico												
Warranty I specifications subject to change wit	thout no	tice. 5 years.												



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 Interfa

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
- Program Current Measure Current
- Current Foldback shutdown
- Isolated Analog Programming

• Error and Status Messages

Four Channels to Program and Monitor Voltage and Cullsolation allows operation with floating references in he Choose between programming with Voltage or Curren Connection via removable terminal block: Phoenix MC • Voltage Programming, user-selectable 0-5V or 0-10V s	arsh electrical environments. t. 1,5/8-ST-3.81.
 Power supply Voltage and Current Programming Ac Power supply Voltage and Current Monitoring Accu Current Programming with 4-20mA signal. Power supply Voltage and Current Programming Accu Power supply Voltage and Current Monitoring Accu 	ccuracy $\pm 1\%$ racy $\pm 1.5\%$ P/N: IS420 ccuracy $\pm 1\%$
LAN Interface	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

• TCP / UDP Socket Programming



P/N: IEEE



Power Supply Identification / Accessories How to order

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

Models 3.3kW

Model	Output Voltage VDC	Output Current (A)	Outpu t 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

Factory option P/N

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

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 EIA/TIA-568A (RJ-
P/N	GEN/485-9	GEN/232-9	45) 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

Output Voltage VDC	Output Current (A)	Outpu t Power (W)
0~60V	0~55	3300
0~80V	0~42	3360
0~100V	0~33	3300
0~150V	0~22	3300
50~200V	0~16.5	3300
0~300V	0~11	3300
0~600V	0~5.5	3300
	VDC 0~60V 0~80V 0~100V 0~150V 0~200V 0~300V	Voltage VDC Current (A) 0~60V 0~55 0~80V 0~42 0~100V 0~33 0~150V 0~22 0~200V 0~16.5 0~300V 0~11

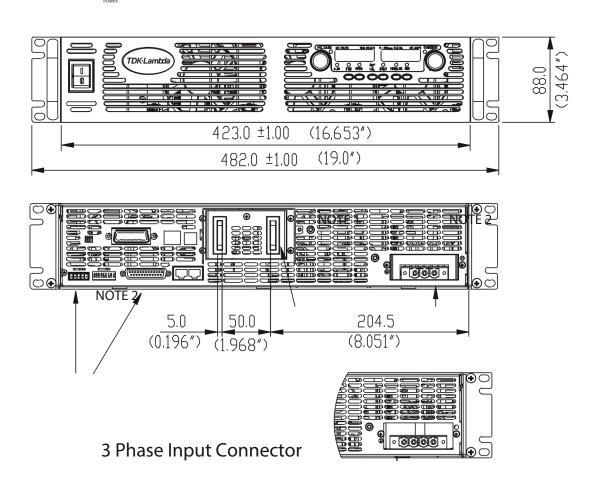
IEEE IS510 IS420 LAN

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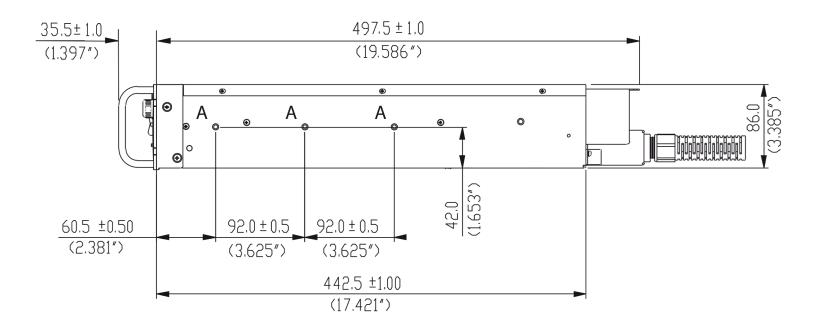
TDK·Lambda -

Outline Drawing Genesys[™] 3.3kW Units





TDK·Lambda



NOTE

Bus bars for 8V to 100V models (shown)
 Wire clamp connector for 150V to 600V models
 Plug connectors included with the power supply
 Chassis slides mounting holes #10-32 marked "A"
 GENERAL DEVICES P/N: C-300-S-116 or equivalent

3.3kW | **GENESYS™** | **9**



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