Now with Parallel Master/Slave Total Current Reporting & Optional IEEE Multi-Drop Interface

GenesysTM

Programmable DC Power Supplies 3.3 kW in 2U Built-in RS-232 & RS-485 Interface IEEE488.2 SCPI (GPIB) optional





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
- NEW! 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.
- NEW! 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
- Five Year Warranty
- Optional Isolated Analog Programming and Monitoring Interface (0-5V/0-10V & 4-20mA)
- NEW! Optional Multi-Drop IEEE 488.2 SCPI (GPIB) Interface
- Download LabView® and LabWindows® Drivers also GUI Demonstration Program

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.

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 and 1500W 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 and sets baud rate and Advanced Parallel operation
- 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
 - 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 Interfaces Position for IEEE 488.2 (GPIB) (shown) or Isolated Analog Programing Interface.



Genesys TM 3 3kW Specifications

1.0 MODEL		GEN	8-400	10-330	15-220	20-165	30-110	40-85	60-55	80-42	100-33	150-22	300-11	600-5.
1.Rated output voltage(*1)		V	8	10	15	20	30	40	60	80	100	150	300	600
2.Rated Output Current(*2)		Α	400	330	220	165	110	85	55	42	33	22	11	5.5
3.Rated Output Power		W	3200	3300	3300	3300	3300	3400	3300	3360	3300	3300	3300	3300
.1 CONSTANT VOLTAGE MODE														
1.Max.line regulation (0.01% of rated Vo+		mV	2.8	3	3.5	4	5	6	8	10	12	17	32	62
2.Max load regulation (0.015% of rated Vo		mV	6.2	6.5	7.25	8	9.5	11	14	17	20	27.5	50	95
3.Ripple and noise p-p 20MHz (*8)		mV mV	60	60	60	60	60	60	60	80	80	100	150	500
4.Ripple r.m.s 5Hz~1MHz 5.Remote sense compensation/wire		V	8	2	2	2	<u>8</u> 5	<u>8</u> 5	<u>8</u> 5	<u>8</u> 5	<u>8</u> 5	<u>25</u> 5	35 5	120 5
6.Temp. coefficient	PI	PM/°C					ring 30 min	utes warm	-up					
7.Temp. stability											load & ten	ıp.		
8.Warm-up drift			Less than	0.05% of			2mV over	30 minutes	following p	ower On.				
9.Up-prog. response time, 0~Vo Rated (*9) 10.Down-prog response time Full-load		mS	00 1			0		100		1	150	20		250
10.Down-prog response time Full-load No-load	(- /	mS mS	20 500	600	700	800	900	160 1000	1100	1200	1500	2000	3500	500 4000
11.Transient response time		mS												1 4000
The second second second			current. O	utput set-p	oint: 10-10	00%, local	sense.	OV 2msec	for models	ahove 10	0-90% of ra	arou ourpur		
1.2 CONSTANT CURRENT MODE			LCCC triari	1111000 101	modele d	o to and in	bluding 100	7 V. 2111000	TOT THOUGH	above 10				
1.Max.line regulation (0.01% of rated lo+ 2		mA	42	35	24	18.5	13	10.5	7.5	6.2	5.3	4.2	3.1	2.6
2.Max.load regulation (0.02% of rated lo+5		mA	85	71	49	38	27	22	16	13.4	11.6	9.4	7.2	6.1
3.Ripple r.m.s 5Hz~1MHz . (*12)		mA	1300	660	440	300	250	200	100 ng load cha	120	90	60	50	10
4.Load regulation thermal drift 5.Temp. coefficient	DI	PM/°C					llowing 30			ıııye.				
6.Temp. stability		1 IVI/ U								stant line.	load & tem	perature.		
7.Warm-up drift									0 minutes					
·											ing power (On.		
1.3 PROTECTIVE FUNCTIONS 1. OCP		-	0.1050/	Conctont C	urront									
1. OCP 2. OCP Foldback				Constant C		supply ch	ange from	CV to CC	User selec	able				
3. OVP type											unication p	ort commar	nd.	
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	5~330V	5~660
5. Output Under Voltage Limit							ort. Preve	nts from ac	djusting Vo	t below lir	nit.			
6. Over Temp. Protection			User sele	ctable , lat	ched or no	n-latched.								
1.4 ANALOG PROGRAMMING AND MONI	TORING		0.4000/	0 51/ 2	10\/	l ^		Base to	0.50/ -4 :	ad Marit				
Nout Voltage Programming Inout Voltage Programming (*13)									0.5% of rate 1% of rated					
3.Vout Resistor Programming									earity: ±1%		out			
4.lout Resistor Programming (*13)									arity:±1.5%					
5.On/Off control (rear panel)									table logic.					
6.Output Current monitor (*13)				~10V , Acc										
7.Output Voltage monitor				~10V ,Acc										
8.Power Supply OK signal 9. CV/CC Indicator							eries resist		k ourront: 1	0m A				
10. Enable/Disable							oltage at Er		k current: 1	UIIIA.				
11. Local/Remote analog control									~5V or ope	n: Local.				
12. Local/Remote analog control Indicator									V, maximun		ent: 10mA.			
1.5 FRONT PANEL								-						
1.Control functions			Vout/ Iout	manual ad	djust by se	parate enc	oders (coa	rse and fin	e adjustme	nt selectal	ole).			
			OVP/UVL	. manual a	djust by Vo	lt. Adjust e	ncoder.							
						modes (au	ito, safe). F	-oldback c						
			Addross (and a settle on the	. 11-11/						to local co	ntrol.		
							adjust enc		ber of addr		to local co	ntrol.		
			Re-start r	nodes (aut	omatic res	tart, safe n	adjust enc node).	oder. Num			to local co	ntrol.		
2.Display			Re-start r Baud rate	nodes (aut selection:	omatic res 1200,240	tart, safe n 0,4800,960	adjust end node). 00 and 19,2	oder. Num	ber of addr		to local co	ntrol.		
2.Display			Re-start r Baud rate Voltage: 4	nodes (aut selection: digits, Ac	omatic res 1200,240 ccuracy: 0.	tart, safe n 0,4800,960 5% of rated	adjust enc node).	coder. Num 200. oltage ±1 co	ber of addr		to local co	ntrol.		
2.Display 3.Indications			Re-start r Baud rate Voltage: 4 Current: 4	nodes (aut selection: digits, Ac digits, Ac	omatic res 1200,2400 ccuracy: 0.5 curacy: 0.5	tart, safe n 0,4800,960 5% of rated 6% of rated	adjust end node). 00 and 19,2 d output Vo	200. oltage ±1 corrent ±1 cor	ber of addr	esses:31.		ntrol.		
3.Indications	r Optional	GPIE	Re-start r Baud rate Voltage: ² Current: ² Voltage, 0	modes (aut selection: digits, Ac digits, Ac Current, Ala	omatic res 1200,2400 ccuracy: 0.5 curacy: 0.5	tart, safe n 0,4800,960 5% of rated 6% of rated	adjust end node). 00 and 19,2 d output Vo	200. oltage ±1 corrent ±1 cor	ber of addrount.	esses:31.		ntrol.		
3.Indications 1.6 Interface RS232&RS485 or Model	r Optional	GPIB V	Re-start r Baud rate Voltage: ² Current: ² Voltage, 0	modes (aut selection: digits, Ac digits, Ac Current, Ala	omatic res 1200,2400 ccuracy: 0.5 curacy: 0.5	tart, safe n 0,4800,960 5% of rated 6% of rated	adjust end node). 00 and 19,2 d output Vo	200. oltage ±1 corrent ±1 cor	ber of addrount.	esses:31.		150	300	600
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit)	•	V	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 B Interfa	nodes (aut e selection: digits , Ac digits , Ac Current, Ala Ce	1200,2400 ccuracy: 0.5 curacy: 0.5 arm, Fine,	tart, safe n 0,4800,960 5% of rated % of rated Preview, Fo	adjust enc node). 00 and 19,2 d output Vo output cur oldback, Lo	eoder. Num 200. bitage ±1 cc rent ±1 col cocal, Outpu	ber of addr bunt. unt. ut On, Fron	Panel Loc	bk, CVCC.	150		
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated)	•	V mV	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 8 Interfa 8	nodes (aut e selection: d digits , Ac d digits, Ac Current, Ala Ce 10	1200,2400 ccuracy: 0.5 curacy: 0.5 arm, Fine,	tart, safe n 0,4800,960 5% of rated 6% of rated Preview, Fo 20	adjust end node). 00 and 19,2 d output Vo output cur oldback, Lo 30	200. bitage ±1 corrent ±1 corporal, Output 40	ount. unt. unt. it On, Front	Panel Loc 80 9.6	100 12	150	36	72
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Acturacy (0.05%Vo Rated+0.05% of Vo Rated+0.05% of Vo Acturacy (0.05%Vo Rated+0.05% of Vo Rated+0.05% of V	•	V	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 B Interfa	nodes (aut e selection: digits , Ac digits , Ac Current, Ala Ce	1200,2400 ccuracy: 0.5 curacy: 0.5 arm, Fine,	tart, safe n 0,4800,960 5% of rated % of rated Preview, Fo	adjust enc node). 00 and 19,2 d output Vo output cur oldback, Lo	eoder. Num 200. bitage ±1 cc rent ±1 col cocal, Outpu	ber of addr bunt. unt. ut On, Fron	Panel Loc	bk, CVCC.	150		
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit)	ual Output)	V mV mV	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 B Interfa 8 0.96 8	nodes (aut e selection: d digits , Ac d digits , Ac Current, Ala Ce 10	iomatic res 1200,2400 ccuracy: 0.5 ccuracy: 0.5 arm, Fine, 15	tart, safe n 0,4800,960 5% of rated % of rated Preview, Fe 20 2.40 20	adjust enc node). 10 and 19,2 d output Vo output cur oldback, Lo 30 3.60 30	200. Ditage ±1 corrent ±1 correct, Output 40 4.80 40	ber of addr bunt. unt. ut On, Front 60 7.2 60	Panel Loc 80 9.6 80	100 12 100	150 18 150	36 300	72 600
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated)	ual Output)	MV mV mA	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 B Interfa 8 0.96 8	nodes (autories nodes (autories nodes (autories nodes (autories nodes no	1200,2400 ccuracy: 0.5 curacy: 0.5 carm, Fine, 15 1.8 15	tart, safe n 0,4800,960 5% of rated % of rated Preview, Fo 20 2.40 20	adjust enc node). 10 and 19,2 10 and 19,2 10 output Vo output cur oldback, Lo 30 3.60 30	200. Stage ±1 corrent ±1 corocal, Output 40 4.80 40	ber of addr bunt. unt. it On, Front 60 7.2 60	Panel Loc 80 9.6 80	100 12 100 4.0	150 18 150	36 300	72 600 0.7
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05% Vo Rated+0.05% of Vo Actual 2. Remote Current Programming (16 bit) Resolution (0.012% of Io Rated) Accuracy (0.2% of Io Rated+0.1% of Io Actual	ual Output)	V mV mV	Re-start r Baud rate Voltage: 2 Current: 2 Voltage, 0 B Interfa 8 0.96 8	nodes (aut e selection: d digits , Ac d digits , Ac Current, Ala Ce 10	iomatic res 1200,2400 ccuracy: 0.5 ccuracy: 0.5 arm, Fine, 15	tart, safe n 0,4800,960 5% of rated % of rated Preview, Fe 20 2.40 20	adjust enc node). 10 and 19,2 d output Vo output cur oldback, Lo 30 3.60 30	200. Ditage ±1 corrent ±1 correct, Output 40 4.80 40	ber of addr bunt. unt. ut On, Front 60 7.2 60	Panel Loc 80 9.6 80	100 12 100	150 18 150	36 300	72 600 0.7
3.Indications 1.6 Interface RS232&RS485 of Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage	ual Output) Output) (*13)	MV mV mA mA	Re-start r Baud rated Voltage: 4 Current: 4 Voltage, 6 B Interfa 8 0.96 8	nodes (aut selection: digits, Aci digits, Aci digits, Aci current, Ala Ce 10 1.2 10	1200,240(bcuracy: 0.5 curacy: 0.5 curacy: 0.5 arm, Fine, 15 1.8 15 26.4 660	tart, safe n ,4800,960 5% of rated % of rated Preview, Fi 20 2.40 20 19.8 495	adjust enc node). 90 and 19,2 d output Vc output cur oldback, Lo 30 3.60 30 13.2 330	200. 200. 201. 201. 201. 200. 201. 201.	ber of addr bunt. bunt. bunt. it On, Front 60 7.2 60 6.6 165	Panel Loc 80 9.6 80 5.0 126	100 12 100 4.0 99	150 18 150 2.6 66	36 300 1.3 33	72 600 0.7 16.5
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated)	output) Output) (*13)	V mV mV mA mA	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 48 1200	nodes (aut selection: 4 digits , Aci digits , Aci Current, Ala Ce 10 1.2 10	0matic res 1200,240(couracy: 0.5 curacy: 0.5 arm, Fine, 15 1.8 15 26.4 660	tart, safe n 0,4800,960 5% of rated 5% of rated Preview, Fi 20 2.40 20 19.8 495	adjust enc node). 90 and 19,2 90 and 19,2 90 output cur oldback, Lo 30 3.60 3.60 3.30	200. toder. Num 200. toder. Num 200. toder. Num toder. Nu	ber of addr bunt. bunt. unt. it On, Front 60 7.2 60 6.6 165	Panel Loc 80 9.6 80 5.0 126	100 12 100 4.0 99	150 18 150 2.6 66	36 300 1.3 33	72 600 0.7 16.5
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage	output) Output) (*13)	MV mV mA mA	Re-start r Baud rated Voltage: 4 Current: 4 Voltage, 6 B Interfa 8 0.96 8	nodes (aut selection: digits, Aci digits, Aci digits, Aci current, Ala Ce 10 1.2 10	1200,240(bcuracy: 0.5 curacy: 0.5 curacy: 0.5 arm, Fine, 15 1.8 15 26.4 660	tart, safe n ,4800,960 5% of rated % of rated Preview, Fi 20 2.40 20 19.8 495	adjust enc node). 10 and 19,2 d output Vc output cur oldback, Lo 30 3.60 30 13.2 330	200. 200. 201. 201. 201. 201. 201. 201.	ber of addr bunt. bunt. bunt. it On, Front 60 7.2 60 6.6 165	Panel Loc 80 9.6 80 5.0 126	100 12 100 4.0 99	150 18 150 2.6 66	36 300 1.3 33	72 600 0.7 16.5
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual 4. Readback Current	output) Output) (*13)	V mV mV mA mA	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 1200	modes (aut selection: I digits , Ac digits , Ac digits , Ac courrent, Ala cour	1200,240(boundary 0.240(boundary 0.340(boundary 0.3	tart, safe n ,4800,960 5% of rated % of rated Preview, Fr 20 2.40 20 19.8 495	adjust enc node). 10 and 19,2 10 and 19,2 10 output Vou output cur oldback, Lo 30 3.60 33 3.60 60	200. Stage ±1 colored to the colo	ber of addr bunt. bunt. unt. ut On, Front 60 7.2 60 6.6 165	80 9.6 80 5.0 126 9.6 160	100 12 100 4.0 99	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.5 72 1200
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual 4. Readback Current Resolution (0.012% of lo Rated)	Output) (*13) Output) (*13)	MV mV mA mA mA	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 1200	modes (aut selection: 4 digits , Act digits , Act digits , Act Current, Ala CCC 10 10 10 10 10 10 10 10 10 10 10 10 10	1200,2400 1200,2400 1200,2400 1200,2400 1200,2400 1500 1500 1500 1500 1600 1800 1800 1800 1800 1800 1800 18	tart, safe n ,4800,960 5% of rated % of rated Preview, F. 20 2.40 20 19.8 495	adjust enc node). 90 and 19,26 90 and 19,26 90 output cur oldback, Lo 30 3.60 30 13.2 3.60 60	200. 200.	ber of addr punt. unt. ut On, Front 60 7.2 60 6.6 165 7.2 120	80 9.6 80 5.0 126 9.6 160	100 12 100 4.0 99 12 200	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.5 72 1200
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual 4. Readback Current	Output) (*13) Output) (*13)	MV mV mA mA mV mV	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 1200	modes (aut selection: I digits , Ac digits , Ac digits , Ac courrent, Ala cour	1200,240(boundary 0.240(boundary 0.340(boundary 0.3	tart, safe n ,4800,960 5% of rated % of rated Preview, Fr 20 2.40 20 19.8 495	adjust enc node). 10 and 19,2 10 and 19,2 10 output Vou output cur oldback, Lo 30 3.60 33 3.60 60	200. Stage ±1 colored to the colo	ber of addr bunt. bunt. unt. ut On, Front 60 7.2 60 6.6 165	80 9.6 80 5.0 126 9.6 160	100 12 100 4.0 99	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.5 72 1200
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actu 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated) Accuracy (0.2% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual 4. Readback Current Resolution (0.012% of lo Rated)	Output) (*13) Output) (*13)	MV mV mA mA mA	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 1200	modes (aut selection: 4 digits , Act digits , Act digits , Act Current, Ala CCC 10 10 10 10 10 10 10 10 10 10 10 10 10	1200,2400 1200,2400 1200,2400 1200,2400 1200,2400 1500 1500 1500 1500 1600 1800 1800 1800 1800 1800 1800 18	tart, safe n ,4800,960 5% of rated % of rated Preview, F. 20 2.40 20 19.8 495	adjust enc node). 90 and 19,26 90 and 19,26 90 output cur oldback, Lo 30 3.60 30 13.2 3.60 60	200. 200.	ber of addr punt. unt. ut On, Front 60 7.2 60 6.6 165 7.2 120	80 9.6 80 5.0 126 9.6 160	100 12 100 4.0 99 12 200	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.5 72 1200
3.Indications 1.6 Interface RS232&RS485 or Model 1. Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05%Vo Rated+0.05% of Vo Actual 2. Remote Current Programming (16 bit) Resolution (0.012% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual 4. Readback Current Resolution (0.012% of Io Rated) Accuracy (0.3% of Io Rated) Accuracy (0.3% of Io Rated)	Output) (*13) Output) (*13)	MV mV mA mA mA	Re-start r Baud rate Voltage: 4 Voltage: 4 Voltage, 0 8 Interfa 8 0.96 8 1200	modes (aut selection: 4 digits , Act digits , Act digits , Act Current, Ala CCC 10 10 10 10 10 10 10 10 10 10 10 10 10	1200,2400 1200,2400 1200,2400 1200,2400 1200,2400 1500 1500 1500 1500 1600 1800 1800 1800 1800 1800 1800 18	tart, safe n ,4800,960 5% of rated % of rated Preview, F. 20 2.40 20 19.8 495	adjust enc node). 90 and 19,26 90 and 19,26 90 output cur oldback, Lo 30 3.60 30 13.2 3.60 60	200. 200.	ber of addr punt. unt. ut On, Front 60 7.2 60 6.6 165 7.2 120	80 9.6 80 5.0 126 9.6 160	100 12 100 4.0 99 12 200	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.5 72 1200

- *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 CHARA	CTERISTICS	GEN	8-400	10-330	15-220	20-165	30-110	40-85	60-55	80-42	100-33	150-22	300-11	600-5.5
1. Input voltage/fre	eq. (*3)		Single Ph	nase,230V r	models: 17	0~265Vac,	47~63Hz							
			3-Phase,	208V mode	els: 170~26	65Vac, 47~	63Hz							
			3-Phase,	400V mode	els: 342~46	60Vac, 47~	63Hz							
2. Maximum	Single Phase,230V models:		24	24	24	24	24	24	23	23	23	23	23	23
Input current at 100% load	3-Phase, 208V models:	Α	15	15	15	15	15	15	14.5	14.5	14.5	14.5	14.5	14.5
at 100 /6 10au	3-Phase, 400V models:		7.5	7.5	7.5	7.5	7.5	7.5	7	7	7	7	7	7
3. Power Factor (T	yp)		Single Phase models: 0.99@230Vac, rated output power. 3-Phase models: 0.94@208/380Vac, rated output power.											
4. Efficiency (*4)		%	82	84	84	86	86	88	88	88	88	88	88	87
5. Inrush Current (5. Inrush Current (*5)		Single-Pl	hase and 3-	Phase 208	V models:	Less than 5	50A						
A			3-Phase	400V mode	ls: Less the	an 20A								
6. Hold-up time (Tr	(qy	mS	10mSec	for Single-P	hase and 3	3-phase 20	BV models,	6mSec for	3-Phase 4	00V model	ls. Rated ou	utput power	1.	

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

Operating temp	0~50 °C, 100% load.
2. Storage temp	-30~85°C
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

Z.4 LIVIO	
1. Applicable Standards:	
2.ESD	IEC1000-4-2. Air-disch8KV, contact disch4KV
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

CE Mark, UL60950,EN60950 listed. Vout≤40V:Output is SELV , IEEE/Isolated analog are SELV.					
40 <vout≤400v: analog="" are="" hazardous,="" ieee="" is="" isolated="" output="" selv.<="" td=""></vout≤400v:>					
400 <vout≤600v:output analog="" are="" hazardous,="" ieee="" is="" isolated="" not="" selv.<="" td=""></vout≤600v:output>					
Vout≤40V models :Input-Outputs (SELV): 4242VDC 1min, Input-Ground: 2828VDC 1min.					
40 <vout≤100v 1min,="" 1min.<="" 2600vdc="" 4242vdc="" input-haz.="" input-selv:="" models:="" output:="" td=""></vout≤100v>					
Hazardous OutputSELV: 1900VDC 1min, Hazardous Output-Ground:1200VDC 1min. Input-Ground: 2828VDC 1min.					
100 <vout≤600v 1min,="" 1min.<="" 4000vdc="" 4242vdc="" input-haz.="" input-selv:="" models:="" output:="" td=""></vout≤600v>					
Hazardous OutputSELV: 3550VDC 1min. Hazardous Output-Ground:2670VDC 1min. Input-Ground: 2828VDC 1min.					
More than 100Mohm at 25°C , 70% RH.					

2.6 MECHANICAL CONSTRUCTION

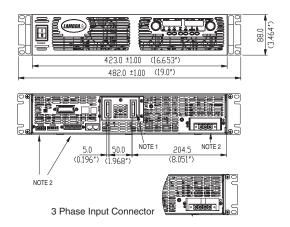
1. Cooling	Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed.			
2. Dimensions (WxHxD)	W: 423mm, H: 88mm, D: 442.5mm (excluding connectors, encoders, handles, etc.)			
3. Weight	13 kg.			
4. AC Input connector (with Protective Cover)	Single 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			

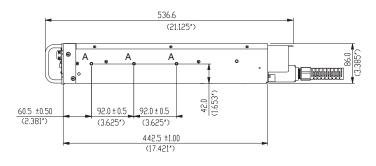
2.7 RELIABILITY SPECS

1. Warranty 5 years.

All specifications subject to change without notice.

Outline Drawing Genesys™ 3.3kW Units





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.

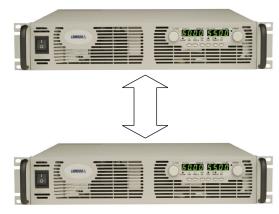




Program Current

Measure Current

Current Foldback shutdown



Programming Options (Factory installed)

Digital Programming via IEEE Interface

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

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: IEEE

P/N: IS420

Power Supply Identification / Accessories How to order

GEN 400 Factory AC Input Options: Factory Options: Output Series Output Option: IEEE 1P230 (Single Phase 230VAC) Voltage Name Current IS510 3P208 (Three Phase 208VAC) (0~8V) (0~400A)3P400 (Three Phase 400VAC) IS420

Models 3.3kW

	Output	Output	Output
Model	Voltage	Current	Power
	VDC	(A)	(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

	Output	Output	Output
Model	Voltage	Current	Power
	VDC	(A)	(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 300-11	0~300V	0~11	3300
GEN 600-5.5	0~600V	0~5.5	3300

Factory options

RS-232/RS-485 Interface Built-in Standard IEEE 488.2 (GPIB) Interface IEEE
Voltage Programming Isolated Analog Interface IS510
Current Programming Isolated Analog Interface IS420

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

P/N

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, GenesysTM
1U full Rack 750W/1500W
& Half Rack 750W

LAMBDA



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