

Programmable DC Power Supplies 3.3 kW in 2U Built in RS-232 & RS-485 Interface Parallel Current Summing Optional Interfaces: USB Optional Interfaces: USB IEEE488.2 SCPI Multi-Drop Isolated Analog Interface



Genesys[™] Family GEN H 750W Half Rack GEN 1U 750/1500W Full Rack GEN 2U 3.3/5kW GEN 3U 10/15kW



www.us.tdk-lambda.com/hp

The Genesys[™] family of programmable power supplies sets a new standard for flexible, reliable, AC/DC power systems in Test & Measurement, 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
- Last Setting Memory; Front Panel Lockout
- Advanced Parallel reports total current up to four identical units
- Global Commands for Serial RS-232/RS-485 Interface
- Reliable Encoders for Voltage and Current Adjustment
- Independent Remote ON/OFF and Remote ENABLE/DISABLE
- Reliable Modular and SMT Design
- 19" Rack Mounted for ATE and OEM Applications, zero stack
- Optional Interfaces

Isolated Analog Programming and Monitoring IEEE Multi-Drop - SCPI LXI Compliant LAN Interface USB Interface

- Labview[™] and LabWindows[™] drivers
- Five Year Warranty

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



Applications

Genesys[™] power supplies are designed for demanding applications. Common controls are shared across all platforms.

Test & Measurement systems using GPIB control save significant costs by incorporating the optional IEEE Multi-Drop Interface (IEMD) in the Master. Then up to 30 Slaves may be equipped with the less expensive Optional RS-485 Multi-Drop (MD) interface.

Automated 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 as well as optional LAN (LXI compliant) or USB Interfaces.

Industrial & Military high power systems can be configured with up to four identical units in parallel, up to 60kW. No space is required above or below each power supply (zero stack). The Master can be configured by the user to report total current of the combination. Applications include Heaters, Magnets and Laser Diodes.

Aerospace & Satellite Testing systems use the complete Genesys[™] Family: 1U 750W Half Rack, 1U 750W or 1500W Full-Rack, 2U 3.3kW and 3U 10/15kW. All are identical in Front Panel, Rear Panel Analog and Digital Interface Commands. A wide variety of outputs allows testing of many different devices.

Component Device Testing is simplified because of the many user-friendly control options in analog and digital interfaces. Lamps, capacitors, motors and actuators are typical devices tested.

Medical Imaging and Treatment systems require reliable power. Modular construction, SMT and thoroughly proven designs assure continuous performance at full rated power.

Semiconductor Processing & Burn-in equipment designers appreciate the wide variety of worldwide Inputs and Outputs from which to select depending on application. Selectable Safe and Auto Re-start protects loads and process integrity. Typical applications include Magnets, Filaments and Heaters.

Front Panel Description



- 1. ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable encoder controls Output Voltage, Address, OVP and UVL settings.
- 4. Volt Display shows Output Voltage and directly displays OVP, UVL and Address settings.
- 5. Reliable encoder controls Output Current, sets baudrate, and Advanced Parallel Mode
- 6. Current Display shows Output Current and displays Baud rate. Displays total current in Parallel Master/Slave Mode
- 7. Function/Status LEDs:
 - Alarm
- Fine Control
- Preview Settings

- Foldback Mode
- Remote Mode
- Output On
- 8. Pushbuttons allow flexible user configuration
 - Coarse and fine Adjustment of Output Voltage/Current and Advanced Parallel Master or Slave select.
 - 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), Isolated Analog Interface, LAN Interface or USB Interface.

LAN Interface complies with **LXI** Class C Specification

TDK·Lambda |2

Genesvs ™ 3 3kW Specifications

.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)		8	10	15	20	30	40	60	80	100	150	300	600
2.Rated Output Current(*2) 3.Rated Output Power	A	400 3200	<u>330</u> 3300	220 3300	165 3300	<u>110</u> 3300	85 3400	55 3300	42 3360	33 3300	22 3300	<u>11</u> 3300	<u>5.5</u> 3300
	**	5200	3300	3300	5500	5300	5400	3300		3300	5300	3300	3300
1 CONSTANT VOLTAGE MODE		-											
1.Max.line regulation (0.01% of rated Vo+ 2mV)(*6)	mV	2.8	3	3.5	4	5	6	8	10	12	17	32	62
2.Max load regulation (0.015% of rated Vo+5mV)(*7)	mV	6.2	6.5	7.25	8	9.5	11	14	17	20	27.5	50	95
3.Ripple and noise p-p 20MHz (*8)	mV	60	60	60	60	60	60	60	80	100	100	300	500
4.Ripple r.m.s 5Hz~1MHz	mV	8	8	8	8	8	8	8	8	8	25	100	120
5.Remote sense compensation/wire	V PPM/ºC	2 100PPM/	2	2	2	5	5	5	5	5	5	5	5
6.Temp. coefficient 7.Temp. stability	PPIN/-C			t over 8hrs	interval fo	llowing 30	minutes w	arm-un Co	netant line	, load & ten	n		
3.Warm-up drift								s following			ip.		
9.Up-prog. response time, 0~Vo Rated (*9)	mS	LC33 trial	10.00 /0 01		30	ZIIIV OVCI	oo minute.	sionowing	Jower on.	150			250
10.Down-prog response time Full-load (*9)	mS	20		100			160			30	00		500
No-load (*10)	mS	500	600	700	800	900	1000	1100	1200	1500	2000	3500	4000
11.Transient response time	mS	current. C	Dutput set-p	point: 10-10	00%, local	sense.		ut for a load	•	10-90% of ra	ated output	t	
2 CONSTANT CURRENT MODE													
1.Max.line regulation (0.01% of rated lo+ 2mA)(*6)	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+5mA)(*11)	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	1200	880	660	300	200	100	80	70	60	20	10
4.Load regulation thermal drift	DDM							ing load cha	ange.				
	PPM/ºC				current, fo				otont lin -	lood ^o to re-	noroture		
5. Temp. stability										load & terr	iperature.		
.Warm-up drift								30 minutes		power On. ing power ()n		
		1 00 0 -000		LC33 UIdH	J.2J /0 UI I	alou ouipu		•01 00 milli	100 1011000	ing power (
.3 PROTECTIVE FUNCTIONS		0~1050/	Constant (Surrent									
. OCP . OCP Foldback					r supply ch	ange from	CV to CC	User selec	table				
. OVP type										unication p	ort comma	nd	
. OVP trip point			0.5~12V	1~18V	1~24V	2~36V	2~44V	5~66V	5~88V	5~110V	5~165V	5~330V	5~66
5. Output Under Voltage Limit								djusting Vo			0 1001	0 0001	10 00
6. Over Temp. Protection				tched or no				, ,					
4 ANALOG PROGRAMMING AND MONITORING													
1. Vout Voltage Programming		0~100%	0~5V or 0	~10V, user	select. Ac	curacy and	linearity:+	0.5% of rat	ed Vout.				
2.lout Voltage Programming (*13)				~10V, user									
3.Vout Resistor Programming							inicality.	1% of rated	i iout.				
2. Vout recolotor r rogramming		0 100 /0,	0~5/10Ko	hm full sca				earity: ±1%		out.			
4.lout Resistor Programming (*13)		0~100%,	0~5/10Ko	hm full sca	le,user sel le,user sel	ect.,Accura ect. Accura	cy and line	earity: ±1% earity:±1.5%	of rated V				
4.lout Resistor Programming (*13) 5.On/Off control (rear panel)		0~100%, By electri	0~5/10Ko ical. Voltag	hm full sca je: 0~0.6V/	le,user sel le,user sel 2~15V,or d	ect.,Accura ect. Accura Iry contact	cy and line	earity: ±1%	of rated V				
4.lout Resistor Programming (*13) 5.On/Off control (rear panel) 6.Output Current monitor (*13)		0~100%, By electri 0~5V or 0	0~5/10Ko ical. Voltag 0~10V , Ac	hm full sca je: 0~0.6V/ curacy:±19	le,user sel le,user sel 2~15V,or d % , user se	ect.,Accura ect. Accura Iry contact lectable.	cy and line	earity: ±1% earity:±1.5%	of rated V				
4.lout Resistor Programming (*13) 5.On/Off control (rear panel) 6.Output Current monitor (*13) 7.Output Voltage monitor		0~100%, By electri 0~5V or 0 0~5V or 0	0~5/10Ko ical. Voltag 0~10V , Ac 0~10V ,Ac	hm full sca je: 0~0.6V/ curacy:±19 curacy:±19	le,user sel le,user sel 2~15V,or d %, user se 6,user sel	ect.,Accura ect. Accura lry contact lectable. ectable.	cy and line cy and line user select	earity: ±1% earity:±1.5%	of rated V				
4.lout Resistor Programming (*13) 5.On/Off control (rear panel) 6.Output Current monitor (*13) 7.Output Voltage monitor 8.Power Supply OK signal		0~100%, By electri 0~5V or (0~5V or (TTL high	0~5/10Ko ical. Voltag 0~10V , Ac 0~10V ,Ac (4~5V) -O	hm full sca je: 0~0.6V/ curacy:±19 curacy:±19 K, 0V-Fail	le,user sel le,user sel 2~15V,or d %, user sel 6,user sel 500ohm se	ect.,Accura ect. Accura lry contact lectable. ectable. eries resist	cy and line cy and line user select ance.	earity: ±1% earity:±1.5% stable logic.	of rated V of rated I				
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4. lout Resistor Programming (*13) 5. On/Off control (rear panel) 6. Output Current monitor (*13) 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC Indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control Indicator 5 FRONT PANEL		0~100%, By electri 0~5V or (0~5V or (TTL high CV: TTL Dry conta By electri Open col OVP/UVI OVP/UVI ON/Off, C Address Re-start (0~5/10Ko ical. Voltag 0~10V , Ac 0~10V , Ac 0~10V , Ac (4~5V) -0 high (4~5V act. Open: cical signal illector, Loc t manual a Dutput on/ selection b modes (au	hm full sca le: 0~0.6V/ curacy:±1? curacy:±1? k, 0V-Fail /) source: 1 off, Short: or Open/SI al: Off, Re- djust by se djust by vot ff, Re-start y Votlage tomatic res	le,user sel- le,user sel- le,user sel- 2~15V,or c %, user se 5000hm si 5000hm si 00mA, CC: on. Max, vo no. Max, vo	ect.,Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) litage at E: V or short: Maximum v coders (coa ncoder. uto, safe), I adjust enc mode).	cy and line cy and line user select ance. ~0.6V), sir nable/Disa Remote, 4 oltage: 30 rse and fir Foldback c soder. Num	earity: ±1% earity:±1.5% table logic. k current: ^ ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV f	of rated V 6 of rated I 10mA. n: Local. n sink curr int selecta to CC), Gc	ent: 10mA. ble).	ntrol.		
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Lout Resistor Programming (*13) S.On/Off control (rear panel) S.Output Current monitor (*13) Coutput Voltage monitor Power Supply OK signal CV/CC Indicator Local/Remote analog control Local/Remote analog control S FRONT PANEL L.Control functions		0~100%, By electri 0~5V or (0~5V or (0~5V or (0-5V or (TTL high CV: TTL Dry conta By electri Open col Vout/ lou OvP/UVI On/Off, C Address Re-start i Baud rate Voltage:	0~5/10Ko ical. Voltag 0~10V, Ac 0~10V, Ac 0~10V, Ac (4~5V) -O high (4~5V) act. Open: ical signal llector, Loc t manual a L manual a Dutput on/o selection b modes (au e selection 4 digits, A	hm full sca e: 0-0.6V/ curacy:±1? curacy:±1? k, 0V-Fail /) source: 1 or Open/SI al: Off, Ren djust by se djust by se djust by se djust by votage tomatic res : 1200,240 ccuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or c %, user se 5000hm si 5000hm si 00mA, CC: on. Max, vo no. Max, vo	ect. Accura ect. Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. uto, safe), 1 adjust enc mode). 00 and 19,2	cy and line cy and line cy and line cy and line ance. ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	aarity: ±1% aarity:±1.5% table logic. ak current:	of rated V 6 of rated I 10mA. n: Local. n sink curr int selecta to CC), Gc	ent: 10mA. ble).	ntrol.		
4.lout Resistor Programming (*13) 5.On/Off control (rear panel) 6.Output Current monitor (*13) 7.Output Voltage monitor 8.Power Supply OK signal 9. CV/CC Indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control Indicator 5 FRONT PANEL 1.Control functions 2.Display		0~100%, By electri 0~5V or (0~5V or (0~5V or (TTL high CV: TTL 1 Dry conta By electri 0 pen col Vout/ lou OVP/UVI OVP/UVI ON/Off, C Address: Re-start (Baud rate Voltage:	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b d igits, At 4 digits, A	hm full sca e: 0~0.6V/ scuracy:±19 kcuracy:±19 k, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Rei djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 10mA, CC: 10mA, CC: 10m	ect.,Accura ect.,Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bilage at E V or short: Maximum v encoder. uto, safe), I adjust enc mode). 00 and 19,2,30 output vu o output vu	cy and line cy and line cy and line ,user select ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Nurr coldback c coder. Nurr coldback c rent ±1 co	aarity: ±1% aarity:±1.5% table logic. ak current:	of rated Vi 6 of rated I 10mA. n: Local. n sink curr nt selecta to CC), Gc esses:31.	ent: 10mA. ble).	ntrol.		
Lout Resistor Programming (*13) S.On/Off control (rear panel) S.Output Current monitor (*13) Output Voltage monitor Power Supply OK signal Output Voltage monitor Disenbele/Disable I. Local/Remote analog control Local/Remote analog control Local/Remote analog control Indicator S FRONT PANEL I.Control functions 2.Display		0~100%, By electri 0~5V or (0~5V or (0~5V or (TTL high CV: TTL Dry conta By electri Open col OVP/UVI OVP/UVI OVP/UVI ON/Off.C Address Re-start 1 Baud rate Voltage,	0-5/10Ko ical. Voltago 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V) - O high (4-5V) - O high	hm full sca e: 0~0.6V/ scuracy:±19 kcuracy:±19 k, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Rei djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 10mA, CC: 10mA, CC: 10m	ect.,Accura ect.,Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bilage at E V or short: Maximum v encoder. uto, safe), I adjust enc mode). 00 and 19,2,30 output vu o output vu	cy and line cy and line cy and line ,user select ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Nurr coldback c coder. Nurr coldback c rent ±1 co	aarity: ±1% aarity:±1.5% table logic. k current:	of rated Vi 6 of rated I 10mA. n: Local. n sink curr nt selecta to CC), Gc esses:31.	ent: 10mA. ble).	ntrol.		
Alout Resistor Programming (*13) S.On/Off control (rear panel) S.Output Current monitor (*13) Output Voltage monitor B.Power Supply OK signal O.CV/CC Indicator I. Local/Remote analog control I. Local/Remote analog control Indicator S FRONT PANEL I.Control functions C.Display Display S.Indications .6 Interface RS232&RS485 or Optional		0~100%, By electri 0~5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () Dry conta By electri Open col 0VP/UVI 0/Off, C) Address Re-start 1 Baud rate Voltage, Voltage, 3 Interfa	0-5/10Ko ical. Voltago 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V)-O high (4-5V)-O ical signal llector, Loc t manual a L manual a L manual a L manual a L manual a Untput on/o selection b modes (au e selection b 4 digits, Ac Current, Al aCE	hm full sca e: 0~0.6V/ scuracy:±19 k, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Ren djust by Se djust by Vo djust by Vo ldjust by Vo ldju	le, user sel- le, user sel- 2~15V, or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. to, safe), 1 adjust enc mode). 00 and 19,2 0 output v I output cur oldback, Lo	cy and line cy and line cy and line yuser select ance. ~~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. Itage ±1 c rent ±1 co occal, Outpr	aarity: ±1% aarity:±1.5% stable logic. k current:	of rated Vi 6 of rated I 10mA. n: Local. n sink curr int selecta to CC), Gc esses:31.	ent: 10mA. ble). ck, CVCC.		200	
4.lout Resistor Programming (*13) 5.On/Off control (rear panel) 6.Output Current monitor (*13) 7.Output Voltage monitor 8.Power Supply OK signal 9. CV/CC Indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control Indicator 5.FRONT PANEL 1.Control functions 2.Display 3.Indications .6 Interface RS232&RS485 or Optiona Model	al GPIE V	0~100%, By electri 0~5V or (0~5V or (0~5V or (TTL high CV: TTL Dry conta By electri Open col OVP/UVI OVP/UVI OVP/UVI ON/Off.C Address Re-start 1 Baud rate Voltage,	0-5/10Ko ical. Voltago 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V) - O high (4-5V) - O high	hm full sca e: 0~0.6V/ scuracy:±19 kcuracy:±19 k, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Rei djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 10mA, CC: 10mA, CC: 10m	ect.,Accura ect.,Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bilage at E V or short: Maximum v encoder. uto, safe), I adjust enc node). 00 and 19,2,30 a output Vo o output voi	cy and line cy and line cy and line ,user select ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Nurr coldback c coder. Nurr coldback c rent ±1 co	aarity: ±1% aarity:±1.5% table logic. k current:	of rated Vi 6 of rated I 10mA. n: Local. n sink curr nt selecta to CC), Gc esses:31.	ent: 10mA. ble).	ntrol.	300	600
Alout Resistor Programming (*13) S.On/Off control (rear panel) B.Output Current monitor (*13) C.Output Voltage monitor B.Power Supply OK signal C.VCC Indicator C. Enable/Disable C. Local/Remote analog control C. Local/Remote analog control Indicator F FRONT PANEL C. Control functions C. Display	V	0~100%, By electri 0~5V or (0~5V or (0~5V or (0~5V or (0-5V or (0-0) (0-	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4~5V)-O high (4~5V act. Open: ical signal lector, Loc t manual a Dutput on/o selection b modes (au e selection b acce 10	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail /) source: 1 off , Short: or Open/SI al: Off, Re djust by se djust by Vo ff, Re-start y Voltage I tomatic res : 1200,240 ccuracy: 0. scuracy: 0. 15	le,user sel- le,user sel- le,user sel- 2~15V,or d/ %, user sel- 5000hm sr 5000hm sr 00mA, CC2: on. Max. vr 00mA, C	ect. Accura ect. Accura iny contact lectable. ectable. ectable. eries resist TTL low (0 bitage at El V or short: Maximum v coders (coa nocder. uto, safe), I adjust enc node). 00 and 19,2 d output ver oldback, Lo 30	cy and line cy and line cy and line cy and line cy and line ance. ~0.6V), sir hable/Disa Remote, 4 oltage: 30 rise and fir Foldback c boder. Num 200. litage ±1 c rent ±1 co bocal, Output	aarity: ±1% aarity:±1.5% stable logic. ik current: : ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV ! ber of addr ount. unt. unt. t On, Fron 60	of rated Vi 6 of rated I 10mA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80	ent: 10mA. ble). bt local co ck, CVCC. 100	150		600
Alout Resistor Programming (*13) S.On/Off control (rear panel) S.Output Current monitor (*13) C.Output Voltage monitor B.Power Supply OK signal C.ViCC Indicator C. Enable/Disable C.I. Local/Remote analog control C. Local/Remote analog control Indicator S FRONT PANEL C.Ontrol functions C.Display		0~100%, By electri 0~5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () 0-5V or () Dry conta By electri Open col 0VP/UVI 0/Off, C) Address Re-start 1 Baud rate Voltage, Voltage, 3 Interfa	0-5/10Ko ical. Voltago 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V)-O high (4-5V)-O ical signal llector, Loc t manual a L manual a L manual a L manual a L manual a Untput on/o selection b modes (au e selection b 4 digits, Ac Current, Al aCE	hm full sca e: 0~0.6V/ scuracy:±19 k, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Ren djust by Se djust by Vo djust by Vo ldjust by Vo ldju	le, user sel- le, user sel- 2~15V, or d %, user sel- 5000hm si 10mA, CC: 10mA, CC: 10m	ect. Accura ect. Accura iny contact lectable. ectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. to, safe), 1 adjust enc node). 00 and 19,2 0 output v I output cur oldback, Lo	cy and line cy and line cy and line yuser select ance. ~~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. Itage ±1 c rent ±1 co occal, Outpr	aarity: ±1% aarity:±1.5% stable logic. k current:	of rated Vi 6 of rated I 10mA. n: Local. n sink curr int selecta to CC), Gc esses:31.	ent: 10mA. ble). ck, CVCC.		300 36 300	600 72 600
Lout Resistor Programming (*13) S.On/Off control (rear panel) S.On/Off control (rear panel) S.Output Current monitor (*13) C.Output Voltage monitor B.Power Supply OK signal S.CVCC Indicator I. Enable/Disable I. Local/Remote analog control I. Local/Remote analog control Indicator 5 FRONT PANEL I.Control functions S.Indications S.Interface RS232&RS485 or Optiona Wodel Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05% Vo Rated+0.05% of Vo Actual Output)	V mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (0~5V or (0-5V or (0-0) (0-	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: ical signal llector, Loc t manual a L manual a Dutput on/0 selection b modes (au e selection b modes (au e selection b digits, Ac Current, Al ace 10 1.2	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 of open/SI al: Off, Re- djust by se djust by se djust by Vo fig. Re-start y Voltage I tomatic res : 1200,240 ccuracy: 0.1 arm, Fine, 15 1.8	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 0 and 19,2 d output v oldback, L 30 3.60	cy and line cy and line cy and line cy and line cy and line acce.	aarity: ±1% aarity:±1.5% stable logic. ak current: -: ble in: 6V. ~5V or opee V, maximur e adjustme ontrol (CV bber of addr ount. urt. ut On, Fron 60 7.2	of rated Vi 6 of rated I 10mA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6	ent: 10mA. ble). o to local co ck, CVCC. 100 12	150 18	36	72
Liout Resistor Programming (*13) COI/Off control (rear panel) COI/Off control (rear panel) COI/Off control (rear panel) COI/Off control (rear panel) COI/Off control (*13) COI/OK signal COI/CC Indicator COI. Enable/Disable Local/Remote analog control Local/Remote analog control COI. Enable/Disable COI. Control functions COINTRANEL CONTROL FUNCE COINTROL COINTRO	V mV mV	0~100%, By electri 0~5V or (0~5V or (0-5V or (1TL high CV: TTL Dry conta By electri Open col 0VP/UVI On/Off, C Address Re-start 1 Baud rate Voltage, Voltage, 8 Binterfa 8	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V)-O high (4-5V)-O t (4-5V)-O (hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off, Short: djust by se djust by se djust by Vo fig. Re-start vy Voltage I tomatic res : 1200,240 ccuracy: 0.1 arm, Fine, 15 1.8 15	le,user sel- le,user sel- le,user sel- 2~15V,or d/ %, user sel- 5000hm si 0mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 0 and 19,2 d output cu oldback, Lu 30 3.60 30	cy and line cy and line cy and line cy and line ance. ~0.6V), sir able/Disa Remote, 4 foldback c coder. Num coder. Num code. Num	aarity: ±1% aarity:±1.5% stable logic. stable logic. stabl	of rated Vi of rated I of rated I IOmA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80	ent: 10mA. ble). o to local co ck, CVCC. 100 12 100	150 18 150	36 300	72 600
Liout Resistor Programming (*13) COI/Off control (rear panel) COUTOF control (rear panel) COUTOF control (rear panel) COUTOF control (*13) COUTOF control for the second	V mV mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TL high CV: TTL 1 Dry conta By electri 0 per col 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vOVP/UVI 0 vOVP/0 vO	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: ical signal lector, Loc t manual a L manual a L manual a L manual a L manual a Uutput on/o selection b e selection b 4 digits, Ac Current, Al digits, Ac Current, Al ace 10 1.2 10 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Ren djust by se djust by se djust by vo djust by Vo ltage to tomatic res : 1200,240 ccuracy: 0. scuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. ito, safe), lot, safe), lot, adjust enc node). 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 10 output cur oldback, Lu 30 30 30	cy and line cy and line, cy and line, cy and line, ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder, Num 200. litage ±1 c cocal, Outpr 40 4.80 40	aarity: ±1% aarity:±1.5% stable logic. k current:	of rated Vi of rated I i of rated I IOmA. n: Local. n sink curr int selectal i co CC), Gc esses:31. t Panel Lo 80 9.6 80 5.0	ent: 10mA. ble). ble). ck, CVCC. 100 12 100 4.0	150 18 150 2.6	36 300 1.3	72 600
Liout Resistor Programming (*13) COI/Off control (rear panel) COUTOF control (rear panel) COUTOF control (rear panel) COUTOF control (*13) COUTOF control for the second	V mV mV	0~100%, By electri 0~5V or (0~5V or (0-5V or (1TL high CV: TTL Dry conta By electri Open col 0VP/UVI On/Off, C Address Re-start 1 Baud rate Voltage, Voltage, 8 Binterfa 8	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V)-O high (4-5V)-O t (4-5V)-O (hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off, Short: djust by se djust by se djust by Vo fig. Re-start y Voltage I tomatic res : 1200,240 ccuracy: 0.1 arm, Fine, 15 1.8 15	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 0mA, CC: 00mA, CC: 00mA	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 0 and 19,2 d output cu oldback, Lu 30 3.60 30	cy and line cy and line cy and line cy and line ance. ~0.6V), sir able/Disa Remote, 4 foldback c coder. Num coder. Num code. Num	aarity: ±1% aarity:±1.5% stable logic. stable logic. stabl	of rated Vi of rated I of rated I IOmA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80	ent: 10mA. ble). o to local co ck, CVCC. 100 12 100	150 18 150	36 300	72 600 0.7
	V mV mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TL high CV: TTL 1 Dry conta By electri 0 per col 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vOVP/UVI 0 vOVP/0 vO	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: ical signal lector, Loc t manual a L manual a L manual a L manual a L manual a Uutput on/o selection b e selection b 4 digits, Ac Current, Al digits, Ac Current, Al ace 10 1.2 10 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Ren djust by se djust by se djust by vo djust by Vo ltage to tomatic res : 1200,240 ccuracy: 0. scuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. ito, safe), lot, safe), lot, adjust enc node). 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 10 output cur oldback, Lu 30 30 30	cy and line cy and line, cy and line, cy and line, ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder, Num 200. litage ±1 c cocal, Outpr 40 4.80 40	aarity: ±1% aarity:±1.5% stable logic. k current:	of rated Vi of rated I i of rated I IOmA. n: Local. n sink curr int selectal i co CC), Gc esses:31. t Panel Lo 80 9.6 80 5.0	ent: 10mA. ble). ble). ck, CVCC. 100 12 100 4.0	150 18 150 2.6	36 300 1.3	72
Llout Resistor Programming (*13) Cn/Off control (rear panel) Courtor (rear panel) Courtout Current monitor (*13) Courtout Voltage monitor Power Supply OK signal CV/CC Indicator COURD INSTRUMENT IN COURT IN COU	V mV mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TL high CV: TTL 1 Dry conta By electri 0 per col 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vOVP/UVI 0 vOVP/0 vO	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: ical signal lector, Loc t manual a L manual a L manual a L manual a L manual a Uutput on/o selection b e selection b 4 digits, Ac Current, Al digits, Ac Current, Al ace 10 1.2 10 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Ren djust by se djust by se djust by vo djust by Vo ltage to tomatic res : 1200,240 ccuracy: 0. scuracy: 0.	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) bitage at E V or short: Maximum v coders (coa encoder. ito, safe), lot, safe), lot, adjust enc node). 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 00 and 19,2 10 output cur oldback, Lu 30 30 30	cy and line cy and line, cy and line, cy and line, ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir coldback c coder, Num 200. litage ±1 c cocal, Outpr 40 4.80 40	aarity: ±1% aarity:±1.5% stable logic. k current:	of rated Vi of rated I i of rated I IOmA. n: Local. n sink curr int selecta i co CC), Gc esses:31. t Panel Lo 80 9.6 80 5.0	ent: 10mA. ble). ble). ck, CVCC. 100 12 100 4.0	150 18 150 2.6	36 300 1.3	72 600 0.7 16.4
	V mV mV mA mA	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TL high CV: TTL Dry conta By electri 0 pen col 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vP/UVI 0 vV/UVI 0 vV/I 0 vVI 0	0-5/10Ko ical. Voltag0 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V)-O high (4-5V)-O ical signal lector, Loc t manual a L manual a L manual a L manual a L manual a L manual a 4 digits, Ac Current, Al 4 digits, Ac Current, Al A digits, Ac Current, Al 10 1.2 10 39.6 990	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or Open/Si al: Off, Rest djust by se djust by se djust by vo djust by Vo tage I tomatic res : 1200,240 ccuracy: 0. scuracy: 0. s	le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00m	ect.,Accura ect.,Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0) bitage at E V or short: Maximum v coders (coa mcoder. doigtet V or short: Maximum v coders (coa mcode). 00 and 19,2 00 and	cy and line ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. litage ±1 c cocal, Outpr 40 4.80 40 10.2 255	aarity: ±1% aarity:±1.5% stable logic. stable logic. k current:	of rated Vi of rated I of rated I IOmA. n: Local. n sink curr int selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80 5.0 126	ent: 10mA. ble). ble). ck, CVCC. 100 12 100 4.0 99	150 18 150 2.6 66	36 300 1.3 33	72 600 0.7 16.4
Lout Resistor Programming (*13) S.On/Off control (rear panel) S.On/Off control (rear panel) S.Output Current monitor (*13) C.Output Voltage monitor S.Power Supply OK signal S.Ot/CC Indicator IO. Enable/Disable I1. Local/Remote analog control I1. Local/Remote analog control Indicator 5 FRONT PANEL I.Control functions S.Indications S.Indications Interface RS232&RS485 or Optiona Vodel Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.2% of Io Rated+0.1% of Io Actual Output) (*13) Readback Voltage Resolution (0.012% of Vo Rated) Accuracy (0.1%Vo Rated+0.1% of Vo Actual Output)	V mV mV mA mA mA	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TTL high CV: TTL Dry conta By electri Open col Vout/ lou OVP/UVI On/Off, C Address Re-start 1 Baud rate Voltage, 1 S Interfa 8 0.96 8	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-0 high (4-5V act. Open: (ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b digits, Ac 4 digits, Ac 10 1.2 10 39.6 990	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or or Open/SI al: Off, Rei djust by se djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0. ccurac	le,user sel- le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sec 5000hm si 10mA, CC: 5000hm si 10mA, CC: 00mA, CC: 0	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) blage at EL V or short: Maximum v coders (coa encoder. to, safe), fl adjust enc node). 00 and 19,2, 10 output cui oldback, Lu 30 3.60 3.30 13.2 3.30	cy and line cy and line cy and line ,user select ance. ~~0.6V), sir nable/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Nurr Foldback c coder. State foldback c coder. State foldback c c foldback c c foldback c c foldback c c foldback c c foldback c c foldback c foldback c fold	aarity: ±1% aarity:±1.5% table logic. k current: -: ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV / ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165	of rated Vi of rated I of rated I I0mA. n: Local. n sink curr nt selecta to CC), Gc esses:31. t Panel Lo 80 9.6 80 5.0 126	iout. ient: 10mA. ble). blo to local co ck, CVCC. 100 12 100 100 12 12 100 12 12 12 12	150 18 150 2.6 66 18	36 300 1.3 33 36	72 600 0.7 16. 72
	V mV mV mA mA mV mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TTL high CV: TTL L Dry conta By electri Open col Vout/ lou OVP/UVI On/Off, C Address : Re-start 1 Baud rate Voltage. Voltage, 3 Interfa 8 0.96 8 48 1200	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-0 high (4-5V act. Open: (ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b digits, Ac 4 digits, Ac 10 10 10 10 10 10 10 10 10 10 10 10 10	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or or Open/SI al: Off, Rei- djust by se djust by se djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0. arm, Fine, 15 1.8 15 26.4 660 1.8 30	le,user sel- le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sec 5000hm si 10mA, CC: 5000hm si 00mA, CC: 00mA, CC: 0	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) blage at EL V or short: Maximum v coders (coa encoder. ito, safe), fl adjust enc mode). 00 and 19,2, 00 and 19,2, 00 and 19,2, 00 at 12,2, 00 at 19,2, 00	cy and line cy and line, cy and line, cy and line, cy and line, ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir coldback c coder. Nurr cold. litage ±1 c cocal, Outpr 40 4.80 40 4.80 80	arity: ±1% arity:±1.5% table logic. k current: -: ble in: 6V. 5V or ope V, maximur e adjustme ontrol (CV / ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165 7.2 120	of rated Vi of rated Vi of rated I I0mA. n: Local. n sink curr nt selecta to CC), Gc esses:31. t Panel Lo 80 9.6 80 9.6 80 9.6 126	iout. ient: 10mA. ble). bt to local co ck, CVCC. 100 12 100 12 100 12 12 200	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16. 72 120
	V mV mV mA mA mV mV mV	0~100%, By electri 0~5V or (0~5V or	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: (acl signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b modes (au e selection b 4 digits, Ac 4 digits, Ac 10 10 1.2 20 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail /) source: 1 off , Short: or or Open/SI al: Off, Rei djust by se djust by se djust by se djust by se djust by se djust by se tiglust by se djust by se dj	le,user sel- le,user sel- le,user sel- 2~15V,or d/ %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0 blage at E V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 00 and 19,2 d output ver oldback, Le 30 3.60 30 13.2 3.60 60	cy and line ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. oltage ±1 c rent ±1 coocal, Output 40 4.80 40 10.2 255 4.80 80 10.2	arity: ±1% arity:±1.5% table logic. ik current: . ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV 1 ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165 7.2 120	of rated Vi 5 of rated I 10mA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80 9.6 80 9.6 126 9.6 160	iout. eent: 10mA. ble). bt local co to loc	150 18 150 2.6 66 18 300 2.6	36 300 1.3 33 36 600 1.3	72 600 0.7 16.3 72 120 0.7
Llout Resistor Programming (*13) Cn/Off control (rear panel) Cutput Current monitor (*13) Cutput Voltage monitor Rower Supply OK signal CV/CC Indicator Control Indicator Control Indicator Control Indicator Control Indicator Control functions Control Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) Accuracy (0.05% Vo Rated+0.05% of Vo Actual Output) (*13) Carenado Voltage Resolution (0.012% of Vo Rated) Curracy (0.2% of Io Rated) Curracy (0.2% of Vo Rated+0.1% of Io Actual Output) (*13) Carenado Voltage Resolution (0.012% of Vo Rated) Curracy (0.1% Vo Rated+0.1% of Vo Actual Output) Carenado Voltage Control Information C	V mV mV mA mA mV mV mV	0~100%, By electri 0~5V or (0~5V or (0~5V or (1TTL high CV: TTL L Dry conta By electri Open col Vout/ lou OVP/UVI On/Off, C Address : Re-start 1 Baud rate Voltage. Voltage, 3 Interfa 8 0.96 8 48 1200	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-0 high (4-5V act. Open: (ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b digits, Ac 4 digits, Ac 10 10 10 10 10 10 10 10 10 10 10 10 10	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail) source: 1 off , Short: or or Open/SI al: Off, Rei- djust by se djust by se djust by se djust by se djust by se djust by se tomatic res : 1200,240 ccuracy: 0. ccuracy: 0. arm, Fine, 15 1.8 15 26.4 660 1.8 30	le,user sel- le,user sel- le,user sel- le,user sel- 2~15V,or d %, user sec 5000hm si 10mA, CC: 5000hm si 00mA, CC: 00mA, CC: 0	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. eries resist TTL low (0) blage at EL V or short: Maximum v coders (coa encoder. ito, safe), fl adjust enc node). 00 and 19,2, 00 and 19,2, 00 and 19,2, 00 at 12,2, 00 at 19,2, 00	cy and line cy and line, cy and line, cy and line, cy and line, ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir coldback c coder. Nurr cold. litage ±1 c cocal, Outpr 40 4.80 40 4.80 80	arity: ±1% arity:±1.5% table logic. k current: -: ble in: 6V. 5V or ope V, maximur e adjustme ontrol (CV / ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165 7.2 120	of rated Vi of rated Vi of rated I I0mA. n: Local. n sink curr nt selecta to CC), Gc esses:31. t Panel Lo 80 9.6 80 9.6 80 9.6 126	iout. ient: 10mA. ble). bt to local co ck, CVCC. 100 12 100 12 100 12 12 200	150 18 150 2.6 66 18 300	36 300 1.3 33 36 600	72 600 0.7 16.3 72 120 0.7
Lout Resistor Programming (*13) COI/Off control (rear panel) COI/Off control (rear panel) COUTENT Current monitor (*13) COUTENT Voltage monitor Power Supply OK signal CV/CC Indicator COI.Enable/Disable Local/Remote analog control Local/Remote Analog Local/Remote Analog Control Local/Remote Analog Local/Remote Analog Control Local/Remote Analog Control Local/Remote Analog Local/Remote Analog Local/Remote Analog Local/R	V mV mV mA mA mV mV mV	0~100%, By electri 0~5V or (0~5V or	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: (ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b modes (au e selection b 4 digits, Ac 4 digits, Ac 10 10 1.2 20 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail /) source: 1 off , Short: or or Open/SI al: Off, Rei djust by se djust by se djust by se djust by se djust by se djust by se tiglust by se djust by se dj	le,user sel- le,user sel- le,user sel- 2~15V,or d/ %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0 blage at E V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 00 and 19,2 d output ver oldback, Le 30 3.60 3.60 60 13.2	cy and line ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. oltage ±1 c rent ±1 coocal, Output 40 4.80 40 10.2 255 4.80 80 10.2	arity: ±1% arity:±1.5% table logic. ik current: . ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV 1 ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165 7.2 120	of rated Vi 5 of rated I 10mA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80 9.6 80 9.6 126 9.6 160	iout. eent: 10mA. ble). bt local co to loc	150 18 150 2.6 66 18 300 2.6	36 300 1.3 33 36 600 1.3	72 600
.lout Resistor Programming (*13) .On/Off control (rear panel) .Output Current monitor (*13) .Output Voltage monitor .Power Supply OK signal .CV/CC Indicator 0. Enable/Disable 1. Local/Remote analog control 2. Local/Remote analog control Indicator 5 FRONT PANEL .Control functions 6 Interface RS232&RS485 or Optiona Model .Remote Voltage Programming (16 bit) Resolution (0.012% of Vo Rated) .ccuracy (0.05% Vo Rated+0.05% of Vo Actual Output) (*13) .Readback Voltage Resolution (0.012% of Vo Rated) .ccuracy (0.1% of No Rated) .ccuracy (0.1% of No Rated) .ccuracy (0.1% of No Rated) .ccuracy (0.3% of Io Rated) (1% of Io Actual Output) (*13)	V mV mV mA mA mV mV mV	0~100%, By electri 0~5V or (0~5V or	0-5/10Ko ical. Voltag 0-10V, Ac 0-10V, Ac 0-10V, Ac 0-10V, Ac (4-5V)-O high (4-5V act. Open: (ical signal llector, Loc t manual a Dutput on/o selection b modes (au e selection b modes (au e selection b 4 digits, Ac 4 digits, Ac 10 10 1.2 20 39.6	hm full sca e: 0~0.6V/ scuracy:±19 curacy:±19 K, 0V-Fail /) source: 1 off , Short: or or Open/SI al: Off, Rei djust by se djust by se djust by se djust by se djust by se djust by se tiglust by se djust by se dj	le,user sel- le,user sel- le,user sel- 2~15V,or d/ %, user sel- 5000hm si 00mA, CC: 00mA, CC: 00	ect. Accura ect. Accura ect. Accura iny contact lectable. ectable. ectable. TTL low (0) blage at EC V or short: Maximum v coders (coa encoder. uto, safe), I adjust enc node). 00 and 19,2 d output ver oldback, Le 30 3.60 3.60 60 13.2	cy and line ance. ~0.6V), sir able/Disa Remote, 4 oltage: 30 rse and fir Foldback c coder. Num 200. oltage ±1 c rent ±1 coocal, Output 40 4.80 40 10.2 255 4.80 80 10.2	arity: ±1% arity:±1.5% table logic. ik current: . ble in: 6V. ~5V or ope V, maximur e adjustme ontrol (CV 1 ber of addr ount. unt. ut On, Fron 60 7.2 60 6.6 165 7.2 120	of rated Vi 5 of rated I 10mA. n: Local. n sink curr nt selectal to CC), Gc esses:31. t Panel Lo 80 9.6 80 9.6 80 9.6 126 9.6 160	iout. eent: 10mA. ble). bt local co to loc	150 18 150 2.6 66 18 300 2.6	36 300 1.3 33 36 600 1.3	72 600 0.7 16.3 72 120 0.7

nimum current is guaranteed to maximum 0.4% of rated *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.

3 Genesys[™] GEN 3.3kW 2U

Is: Measured with JEITA RC-9131A (1:1) probe. For 600V model *8: For 8\ ~300V mod 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	ase,230V	models: 17	0~265Vac,	47~63Hz							
		VAC	3-Phase,	208V mod	lels: 170~26	65Vac, 47~	63Hz							
			3-Phase,	400V mod	lels: 342~46	60Vac, 47~	63Hz							
2. Maximum	Single Phase,230V models:		24	24	24	23	24	23	23	23.5	23	23	23	23
Input current at 100% load	3-Phase, 208V models:	A	14.5	14.5	14.5	14.5	14	14.5	13.6	14	13.7	13.7	13.8	13.9
	3-Phase, 400V models:		7.2	7.2	7.2	7.2	7	7.2	6.8	7	6.8	6.8	6.9	7
3. Power Factor (T 4. Efficiency (*4)	(yp)	%	Single Ph 82	ase model 84		80 Vac, rated 86					/380Vac, ra			07
5. Inrush Current ((*5)				84 -Phase 208		86 Less than F	88 50A	88	88	88	88	88	87
o. mildon ounchi (()	A			els: Less th		Looo than c	,0,1						
6. Hold-up time (Tr	yp)	mS					8V models,	6mSec for	3-Phase 4	00V model	s. Rated or	utput powe	r.	
	LY CONFIGURATION													
1. Parallel Operation	on				ster/slave r					nced Para	allel)			
2. Series Operatio	n	Up to 2 i	identical u	nits. with e	external dic	des. 600V	Max to Ch	nassis grou	und					
2.3 ENVIRONMEN														
1. Operating temp		0~50 °C	. 100% loa	od.										
2. Storage temp		-30~85°	,	iu.										
3. Operating humi	dit.		RH (non-	oondonoin	~)									
	/	-			0/									
4. Storage humidit	ly		RH (non-		0/									
5. Vibration					he EUT is f			surface.						
6. Shock			,	,	1mSec. Un									
7. Altitude					, Derate o Non oper				ve 2000m,	Alternativ	ely, derate	maximun	n ambient	temp.
8. RoHS Complian	nce	Complie	s with the	requirem	ents of Rol	HS directiv	/e.							
2.4 EMC														
1.Applicable Stand	dards:													
2.ESD		IEC1000)-4-2. Air-c	lisch8KV	, contact d	isch4KV								
3.Fast transients		IEC1000)-4-4. 2KV											
4. Surge immunity		IEC1000)-4-5. 1KV	line to line	e, 2KV line	to ground								
5.Conducted imm	unity	IEC1000)-4-6, 3V											
6.Radiated immun	nity	IEC1000)-4-3, 3V/r	n										
7. Magnetic field in	nmunity	EN6100	0-4-8, 1A/	m										
8. Voltage dips	r	EN6100	0-4-11											
9.Conducted emis	sion	EN5502	2A, FCC p	art 15-A, '	VCCI-A.									
10. Radiated emis	sion	EN5502	2A, FCC p	art 15-A,	VCCI-A.									
2.5 SAFETY			•	,										
1.Applicable stand	lards:	CE Marl	k III 6095	0 EN6095	0 listed. V	′out<40\/·∩)utnut is SF		/Isolated a	nalog are	SELV			
					zardous, IE					analog ale	ULLV.			
					azardous, I				=1.V					
2.Withstand voltage	10				puts (SEL)					C 1min				
	je	-				,	,							
40 <vout<100v 1min,="" 1min.<="" 2600vdc="" 4242vdc="" input-haz.="" input-selv:="" models:="" output:="" td=""><td></td><td></td></vout<100v>														

3.Insulation resistance					

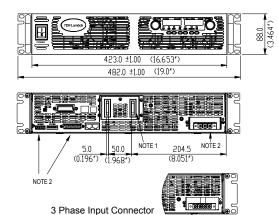
2.8 MECHANICAL CONSTRUCTION	
1. Cooling	Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed.
2. Dimensions (WxHxD)	W: 16.65in, H: 3.46in, D: 17.42in (excluding connectors, encoders, handles, etc.)
3. Weight	13 kg.
4. AC Input connector (with 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.

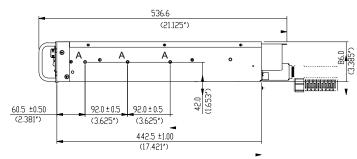
More than 100Mohm at 25°C , 70% RH.

Hazardous Output.-SELV: 1900VDC 1min, Hazardous Output-Ground: 1200VDC 1min. Input-Ground: 2828VDC 1min. 100<Vout<600V models: Input-Haz. Output: 4000VDC 1min, Input-SELV: 4242VDC 1min. Hazardous Output.-SELV: 3550VDC 1min. Hazardous Output-Ground:2670VDC 1min. Input-Ground: 2828VDC 1min.

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
- Chassis slides mounting holes #10-32 marked "A" GENERAL DEVICES P/N: C-300-S-116 or equivalent
 - TDK·Lambda |4

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 with or without Multi-Drop option.





Programming Options (Factory installed)

New IEEE Multi-Drop Interface

Allows IEEE Master to control up to 30 (Multi-Drop equipped) slaves over RS-485 daisy-chain

Program Current

Measure Current

Current Foldback shutdown

- Only the Master needs be equipped with IEEE Interface
- IEEE 488.2 SCPI Compliant
- Program Voltage
- Measure Voltage
- Over Voltage setting and shutdown
- · Error and Status Messages

New Multi-Drop Slave Option

· Slaves need to be equipped with the MD Slave (RS-485) option

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.
- P/N: IS510 • 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% P/N: IS420 Current Programming with 4-20mA signal. Power supply Voltage and Current Programming Accuracy ±1%
- Power supply Voltage and Current Monitoring Accuracy ±1.5%
- LAN Interface

LX Compliant to Class C

Auto-detects LAN Cross-over Cable

· Compatible with most standard Networks

- Meets all LXI-C Requirements VISA & SCPI Compatible LAN Fault Indicators
- Address Viewable on Front Panel
- Fixed and Dynamic Addressing
- Fast Startup

USB Interface

- Allows Serial Connection to USB Port on computer
- Serial commands same as (standard) RS-232/RS-485 Interface

P/N: IEMD

P/N: MD

- P/N: LAN

- P/N: USB

Power Supply Identification / Accessories How to order

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

Output

Voltage

VDC

0~60V

0~80V

0~100V

0~150V

0~300V

0~600V

Model

GEN 60-55

GEN 80-42

GEN 100-33

GEN 150-22

GEN 300-11

GEN 600-5.5

Output

Current

(A)

0~55

0~42

0~33

0~22

0~11

0~5.5

Output

Power

(W)

3300

3360

3300

3300

3300

3300

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

Factory options

P/N	
-	
IEMD)

RS-232/RS-485 Interface built-in Standard	-
GPIB (Multi-Drop Master) Interface	IEMD
Multi-Drop Slave Interface	MD
Voltage Programming Isolated Analog Interface	IS510
Current Programming Isolated Analog Interface	IS420
LAN Interface	LAN
USB Interface	USB

Accessories

1. Serial Communication cable

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

Mode	RS-485	RS-232	RS-232
PC Connector Communication Cable Power Supply Connector	DB-9F Shield Ground L=2m EIA/TIA-568A (RJ-45)	DB-9F Shield Ground L=2m EIA/TIA-568A (RJ-45)	DB-25F Shield Ground L=2m EIA/TIA-568A (RJ-45)
P/N	GEN/485-9	GEN/232-9	GEN/232-25

2. Serial link cable*

Daisy-chain up to 31 Genesys[™] power supplies.

Mode	Power Supply Connector	Communication Cable	P/N
RS-485	EIA/TIA-568A (RJ-45)	Shield Ground L=50cm	GEN/RJ45
* Included with power supply			OEI WI KO IO

Included with power supply



Also Available Genesys™ 1U Half Rack 750W 1U 750W/1500W 2U 5kW 3U 10/15kW

TDK·Lambda 6

TDK·Lambda

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