



GENESYS[™]

Programmable DC Power Supplies Configurable High Power System GSPS 30kW/45kW/60kW - 19" Rack in 20U

! Advanced Features Built-In!

Arbitrary Waveform Generator with Auto-Trigger Capability

- Programmable Slew Rate Control (Vout/Iout)
- Constant Power Limit Operation Internal Resistance Programming
 - Built-In Remote Isolated Analog Interface
 - Built-In LAN (LXI 1.5), USB, and RS-232/RS-485 Interfaces
 - Optional EtherCAT, Modbus-TCP, IEEE (488.2) Interfaces
 - Blank Front Panel Option Available



TDK·Lambda

Trusted • Innovative • Reliable

TDK·Lambda

The **GENESYS™** Scalable Power System with GSP15kW SERIES assembly are compact, efficient and flexible DC power supplies.

Features include:

- Wide Range of popular worldwide AC inputs:
 3ø 208VAC (170VAC ~ 265VAC), Wide-range 3ø 480VAC (342VAC ~ 528VAC)
- Active PFC (0.94 typical)
- Output Voltage up to 600V, Current up to 4500A
- Built-in LAN (LXI 1.5), USB, RS-232/RS-485 Interface
- Multi-Drop capability (RS-485)
- Multi-functional front panel display
- Last-Setting Memory
- Auto-Start / Safe-Start: user selectable
- High Resolution 16 bit ADCs & DACs
- · Arbitrary Waveform Generator with Auto-Trigger Capability
- Store up to 100 steps into four internal memory cells
- High-speed Programming
- · Constant Voltage/Constant Current operation modes
- · Constant Power (CP) Limit
- Slew-Rate Control (V/I)
- Internal Resistance Programming Simulation
- Local / Remote Sensing software controlled
- Built-In Remote Isolated Analog Program/Monitor and Control Interface
- Protection functions (OVP, UVP, UVL, FOLD (CV/CC), OCL, OTP, AC FAIL)
- Fan speed controlled by ambient temperature and load
- Certified LabWindows™/CVI, LabVIEW™, and IVI Drivers
- Optional EtherCAT, Modbus-TCP, IEEE (488.2) Interfaces
- 19" Rack Mount capability for ATE and OEM application
- Scalable Power Systems of 15kW
- Parallel Systems (up to 120kW) with Auto-Configure
- Worldwide Safety Agency approvals
- · CE Mark for Low Voltage, EMC and RoHS3 Directives
- Five year warranty for the Power Supply

Applications

GENESYS™ power supplies have been designed to meet the demands of a wide variety of applications.

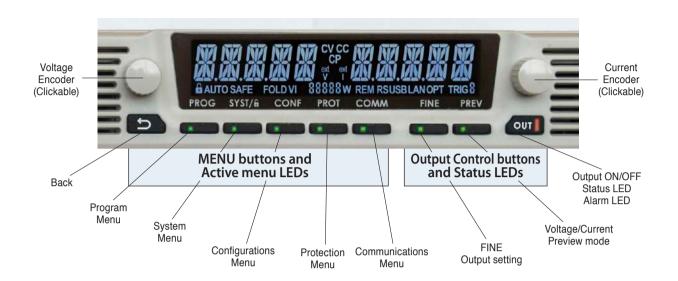
- Test & Measurement systems
- Component Device Testing
- Industrial Automation and process control
- · Semiconductor Processing & Burn-In
- Aerospace & Satellite Testing
- Automotive Component & HIL Testing
- Medical Imaging
- · Magnets, RF Magnifiers and Beam Steering
- Green Technology
- **Higher power systems** can be configured with up to twelve (12) 7.5kW units. Each unit is 1U with zero space between them (zero stack).
- **OEM Designers** have a wide variety of Inputs and Outputs from which to select depending on application and location.



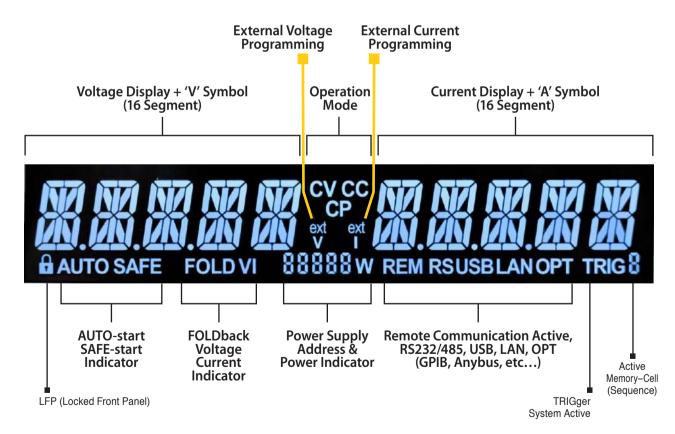




Front Panel Display MENU/CONTROL buttons:



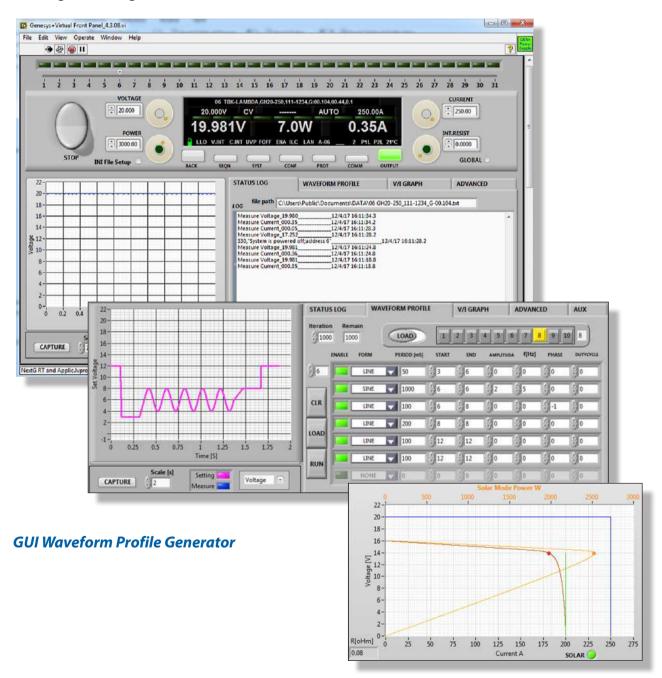
Front Panel Display indicators



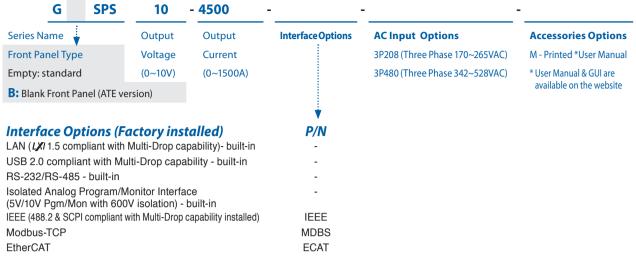
Graphical User Interface

Advanced "Virtual Front Panel" allows programming and monitoring unit(s) with or without front panel display.

- 1. Control and monitor up-to 31 units with "Address" bar
- 2. Front panel set-up menu control (PROGram, SYSTem, CONFiguration, PROTection and COMMnication)
- 3. Informative "Parameters" status bar
- 4. Individual unit and Global command control
- 5. Data logging including errors, events and recovery
- 6. Realtime Graph and Waveform creator, store/load sequence.
- 7. Solar array mode calculate MPP (Max Peak Power) for solar array.
- 8. Registers View: Operation Status, Fault, Event Status, ENABLE and INTERLOCK signals.
- 9. Remote communication state LOC, REM, LLO.
- 10. Programmed signals 1&2



How to order GSPS 60kW - Configurable Power solu-



Power (kW)	30kW	45kW	60kW
Voltage (VDC)		Current (A)	
0~10V	0~3000	-	0~4500
0~20V	0~1500	0~2250	0~3000
0~30V	0~1020	0~1530	0~2040
0~40V	0~750	0~1125	0~1500
0~50V	0~600	0~900	0~1200
0~60V	0~510	0~765	0~1020
0~80V	0~390	0~585	0~780
0~100V	0~300	0~450	0~600
0~150V	0~204	0~306	0~408
0~200V	0~150	0~225	0~300
0~300V	0~102	0~153	0~204
0~400V	0~78	0~117	0~156
0~500V	0~60	0~90	0~120
0~600V	0~51	0~76.5	0~102

60kW High Power System Series Specifications

Unless otherwise noted, specifications are warranted over the ambient temperature range of 0° to 50° Celsius.

OUTPUT RATING		10-4500	20-3000	30-2040	40-1500	50-1200	60-1020	80-780	100-600	150-408	200-300	300-204	400-156	500-120	600-102
1.Rated output voltage (*1)	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
2.Rated output current (*2)	Α	4500 (*3)	3000	2040	1500	1200	1020	780	600	408	300	204	156	120	102
3.Rated output power	KW	45.0	60.0	61.2	60.0	60.0	61.2	62.4	60.0	61.2	60.0	61.2	62.4	60.0	61.2
INPUT CHARACTERISTICS	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Input voltage/freq. 3 phase, 3 wire+ground (*4)		3-Phase,	200V mod	els: 170~26	55Vac, 47~	63Hz (Cov	ers 200/23	0Vac).	•			•	•	•	
		3-Phase,	ase, 480V models: 342~528Vac, 47~63Hz (Covers 380/400/415/440/460/480Vac).												
Maximum Input 3-Phase, 200V models:		212A @ 2	A @ 200Vac.												
current at 100% load 3-Phase, 480V models:		110.4A @	.4A @ 380Vac.												
3.Power Factor (Typ.)		0.94@20	@ 200/380Vac, rated output power.												
4.Efficiency (minimum) (*5)	%	8	17	88	8	9					90				
CONSTANT VOLTAGE MODE	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*6)		0.01% of	rated outp	ut voltage.											
2.Max. Load regulation (*7)		0.01% of	.01% of rated output voltage +5mV.												
3.Temperature coefficient		50PPM/O	C from rate	d output vo	oltage, follo	wing 30 m	inutes warr	n-up.							
4.Temperature stability		0.01% of	rated Vout	over 8hrs i	nterval foll	owing 30 n	ninutes war	m-up. Con	stant line,	load & temp	perature.				
5.Warm-up drift		Less than	0.05% of	rated outpu	ıt voltage +	2mV over	30 minutes	following	power on.						
6.Remote sense compensation/wire (*8)	٧	2	2	5	5	5	5	5	5	5	5	5	5	5	5
7.Up-prog. response time (*9)	mS	30	30	30	30	50	50	50	50	50	50	50	100	100	100
8.Down-prog. Full load (*9)	mS	50	50	80	80	80	80	100	100	100	100	100	150	200	200
response time: No load (*10)	1110	300	600	800	900	950	1000	1200	1900	2000	2500	3000	4000	4000	3000
9.Transient response time		Output se	t point: 10	~100%, Lo	cal sense.		rated outpu 2mS for m		•	0~90% of ra	ated outpu	t current.			
CONSTANT CURRENT MODE	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*6)		0.05% of	rated outpo	ut current.											
2.Max. Load regulation (*11)		0.08% of	rated outp	ut current.		·	·	·	·			·	·		
3.Temperature coefficient		10V~100\	/ models:	100PPM/ ^O 0	c from rate	d output cu	ırrent, follo	wing 30 mi	nutes warn	n-up.					
		150V~600	OV models:	70PPM/ ⁰ 0	from rate	d output cu	irrent, follo	wing 30 mi	nutes warn	n-up.					
4.Temperature stability		0.01% of rated lout over 8hrs. interval following 30 minutes warm-up. Constant line, load & temperature.													
5.Warm-up drift		10V~100\	/ models: I	Less than +	-/-0.25% of	rated outp	ut current	over 30 mi	nutes follov	ving power	on.				
		150V ~ 60	00V model	s: Less tha	n +/-0.15%	of rated o	utput curre	nt over 30	minutes fol	lowing pow	er on.				
ANALOG PROGRAMMING AND MONITORI	NG (ISOLAT	ED FROM	THE OUT	PUT)											

Vout voltage programming	 0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.15% of rated Vout.
2.lout voltage programming (*12)	 0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.4% of rated lout.
3.Vout resistor programming	 0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated Vout.
4.lout resistor programming (*12)	 0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated lout.
5.Output voltage monitor (*19)	 0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated Vout.
6.Output current monitor (*12) (*19)	 0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated lout.

SIGNALS AND CONTROLS (ISOLATED FROM THE OUTPUT)

1.Power supply OK #1 signal	 Power supply output monitor. Open collector. Output On: On. Output Off: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.
2.CV/CC signal	 CV/CC Monitor. Open collector. CC mode: On. CV mode: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.
3.LOCAL/REMOTE Analog control	 Enable/Disable analog programming control by electrical signal or dry contact. Remote: 0~0.6V or short. Local: 2~30V or open.
4.LOCAL/REMOTE Analog signal	 Analog programming control monitor signal. Open collector. Remote: On. Local: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.
5.ENABLE/DISABLE signal	 Enable/Disable PS output by electrical signal or dry contact. 0~0.6V or short, 2~30V or open. User selectable logic.
6.INTERLOCK (ILC) control	 Enable/Disable PS output by electrical signal or dry contact. Output ON: 0~0.6V or short. Output OFF: 2~30V or open.
7.Programmed signals	 Two open drain programmable signals. Maximum voltage 25V. Maximum sink current 100mA (shunted by 27V zener).
8.TRIGGER IN / TRIGGER OUT signals	 Maximum low level input voltage = 0.8V. Minimum high level input voltage = 2.5V. Maximum high level input = 5V positive edge trigger: tw = 10us minimum. Tr,Tf = 1us maximum. Min delay between 2 pulses 1ms.
9.DAISY_IN/SO control signal	 By electrical Voltage: 0~0.6V/2~30V or dry contact.
10.DAISY_OUT/PS_OK #2 signal	 $4\sim$ 5V = OK, 0V (500Ω impedance) = Fail.

FUNCTIONS AND FEATURES

Parallel operation Constant power control	Consult with manufacturer. Limits the output power to a programmed value. Programming via the communication ports or the front panel.
3.Output resistance control	 Emulates series resistance. Resistance range: 1~1000mΩ. Programming via the communication ports or the front panel.
4.Siew rate control	 Programmable Output rise and Output fall slew rate. Programming range: 0.0001~999.99 V/mS. or A/mS. Programming via communication ports or front panel.
5.Arbitrary waveforms	Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via communication ports or front panel.



### Control Processing Proc																
Processing processing (**)20	PROGRAMMING AND READBACK (USB, I						50	60	80	100	150	200	300	400	500	600
Size to programmy revision	1.Vout programming accuracy (*13)		0.05% of ra	ted output	voltage.											
March Control Contro	2.lout programming accuracy (*12)		0.3% of rat	ed output o	current.											
Social enterlands decreasing (**)																
Execution Compared																
So of mode	,															
April Control Contro			0.2 % OI Ial	eu output t	Juli elit.						1					1
Country	7. Vol. (Caabaok (Coolado))	output	0.011%	0.006%	0.004%	0.003%	0.003%	0.002%	0.002%	0.011%	0.007%	0.005%	0.004%	0.003%	0.003%	0.002%
Supply shall-down when prower supply changes made from CV or Prewar Land to CO probe was from CV or Probe Liver to CO probe was from CV or Probe Liver to CO probe was from CV or Probe Liver to CO probe was from CV or Probe Liver to CO probe was from CV or Probe Liver to CO probe was from CV or Probe Liver to CO probe with the CV probe Liver to CO probe with the CV probe Liver to CV probe was from CV or Probe Liver to CV probe was from CV or Probe Liver to CV probe was from CV probe Liver to CV probe Liver Liv	8.lout readback resolution	output	0.003%	0.004%	0.005%	0.007%	0.01%	0.01%	0.0013%	0.002%	0.003%	0.004%	0.005%	0.007%	0.009%	0.01%
Cover-votage protection (OVP) Descriptions programming range V 0.5-12 1-2-3 2-36 2-34 1 2-55 12 1-55 125 5-96 15 5-68 2 5-110 25 5-105 37 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-110 25 [5-105 37] 5-20 5 [5-300 76] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 2] 5-10 25 [5-105 37] 5-44 1 [5-55 125 5-68 15 5-68 125 5-68 15 5-68 125 5-10 25 [5-105 37] 5-44 15 [PROTECTIVE FUNCTIONS	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
Exercising protection (OVP) Select violating protection (OVP) Solver violating protection (OVP) Solver violating protection (OVP) Solver violating protection (OVP) Solver violating protection (OVP) Ob-12 1-2-8 2-3-8 3-4-4 1-5-51 29 5-68 15 5-8-82 2-10 1028 5-88 2 5-8	1.Foldback protection			shut-down when power supply changes mode from CV or Power Limit to CC mode or from CC or Power Limit to CV mode. User												esetable.
Corest days programming range V 0.5-12 1-28 2-36 72-41 1-565 726 5-68.15 5-68.2 5-10.28 5-10.28 5-30.75 5-41 3-561.28 5-661.5 Coverating programming accuracy			Reset by A	by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.												
Cover software programming accuracy	2.Over-voltage protection (OVP)		Output shu	t-down. Re	eset by AC	input recy	cle in autos	tart mode,	by Power	Switch, by	OUTPUT	button, by	rear panel	or by comn	nunication.	
Cover software programming accuracy	3.Over -voltage programming range	V	0.5~12	1~24	2~36	2~44.1	5~55.125	5~66.15	5~88.2	5~110.25	5~165.37	5~220.5	5~330.75	5~441	5~551.25	5~661.5
Foundation Fou																
Some interperature protection Shuth down the notified. Also recovery by adultatin mode. Proceedings protection (UVP) Province adultation of the objection in Except during under voltage condition. Reset by AC input model in autostant mode, by Power Switch, by OuTPUT button, by rear panel or by communication. Province of the Control functions International Province of the Control function International Province of the Control functional Province International Province Interna						low limit. D	oes not ap	ply in ana	log prograr	nming. Pre	set by fror	t panel or	communica	ation port.		
Fourth Panel Fourth Four	, , ,				-				0					•		
Rearby No. Tiput respois in autotater mode, by Power Switch, by Out PPUT button, by rear panel or by communication. FRONT PANEL I. Control functions									rina under	voltage co	ndition.					
Department Dep	roulput unus. roulugo protosuon (6 tr.)		Reset by A	is adjustment of Vout below limit. P.S output turns Off during under voltage condition. by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.												
	FRONT PANEL															
	1.Control functions		Multiple op	options with 2 Encoders.												
			Vout/Iout/F	ower Limit	t manual a	djust.										
			OVP/UVL/	JVP manu	al adjust.											
							AN, RS232	, RS485, l	JSB or Opt	ional comr	nunication	interface.				
Display											KΩ progra	mming.				
### Sent Panel Buttons Indications ### Count ### Service Panel Buttons Indications	2 Diamles									V.						
### Sprint Panel Buttons Indications ### Continuous	Z.Dispiay								it.							
Communication RS/USB/LAN/Optional communication interface. Trigger, Load/Store Cell.	3.Front Panel Buttons Indications								ROTECTI	ON CONF	IGURATIO	N SYSTEM	Л, SEQUEI	NCER.		
ENVIRONMENTAL CONDITIONS 1. Operating temperature (*3)	4.Front Panel Display Indications											art, Safetst	art, Foldba	ick V/I, Ren	note	
Coperating temperature (*3)	5.Circuit breaker		The AC su	pply for the	Power Sy	stem unit i	s protected	by 80A ci	rcuit break	ers. These	CB's are	accessible	on the fror	t panel of t	he cabinet.	
25rage temperature 25-66°C. 3.Operating humidity 20-90% RH (no condensation). 4. Storage humidity 10-95% RH (no condensation). 5. Altitude (*14) Operating: 10000ft (3000m), output current derating 2%/100m or Ta derating 1°C/100m above 2000m. Non-operating: 40000ft (12000m). MECHANICAL 1. Cooling Forced air cooling by power supply internal fans. Airflow direction: From cabinet front panel to rear. 2. Weight																
3. Operating humidity				00% load.												
4.Storage humidity — 10-95% RH (no condensation). 5.Altitude (*14) — 10-95% RH (no condensation). Operating: 10000ft (3000m), output current derating 2%/100m or Ta derating 1°C/100m above 2000m. Non-operating: 40000ft (12000m). MECHANICAL 1.Cooling — Forced air cooling by power supply internal fans. Airflow direction: From cabinet front panel to rear. 2.Weight Kg Less than 200Kg. 3.Dimensions (WxHxD) — W: 553, H: 1028 (With Castors; Without casrors cabinet hight is 947), D: 902. 4.Vibration (*Package transportation) — ISTA 1H: 2014, Method: ASTM D4728 Random vibration test. 5.Shock & Drop (*Package transportation) — ISTA 1H: 2014, Drop test Method: ASTM D5276 free fall; Rotation edge drop test: ASTM D6179 Rotational drop. SAFETY/EMC 1.Safety standards — EC 61010-1:2010, IEC 61010-1:2010/AMD1:2016 1.1.Interface classification — Vout≤50V Models: Output, J1, J2, J3, J4, J5, J6, J7, J8 (sense) & J9 (communication options) are Non Hazardous. 50s/sout≤600V Models: Output & J8 (sense) are hazardous, J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, nput - Ground: 2835VDC 1min. 50vfsout≤50V Models: Input - Output & J8 (sense), J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, 1put - Ground: 2835VDC 1min, 1put - Ground: 2835V																
S.Altitude (*14) MECHANICAL 1. Cooling —— Forced air cooling by power supply internal fans. Airflow direction: From cabinet front panel to rear. Weight Kg Less than 200Kg. 3. Dimensions (WxHxD) mm W: 553, H: 1028 (With Castors; Without casrors cabinet hight is 947), D: 902. 4. Vibration (Package transportation) —— ISTA 1H: 2014, Method: ASTM D4728 Random vibration test. 5. Shock & Drop (Package transportation) —— ISTA 1H: 2014, Method: ASTM D4728 Random vibration edge drop test: ASTM D6179 Rotational drop. SAFETY/EMC 1. Safety standards —— IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016 1. 1.1.Interface classification —— ISTA 1H: 2014, Weithod: ASTM D5276 free fall; Rotation edge drop test: ASTM D6179 Rotational drop. 1. Solvouts600V Models: Output, J1, J2, J3, J4, J5, J6, J7, J8 (sense) & J9 (communication options) are Non Hazardous. 80≤Vouts600V Models: Output & J8 (sense) are hazardous, J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Input - Ground: 2835VDC 1min. 80√SVouts100V Models: Input - Output & J8 (sense), J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Input - Ground: 2835VDC 1min, Output & J8 (sense), J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Input - Ground: 2835VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Input - Ground: 2835VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication op	1 0 7			٠.												
MECHANICAL 1. Cooling																
Cooling	5.Altitude (*14)						t derating 2	2%/100m c	r Ta derati	ng 1ºC/10	0m above	2000m.				
2.Weight Kg Less than 200Kg. 3.Dimensions (WxHxD) mm W: 553, H: 1028 (With Castors; Without casrors cabinet hight is 947), D: 902. 4.Vibration (Package transportation)		T	Farac 4 -*	liv l-			I fama A: O	ann dies se	Гъ	hinat for						
3.Dimensions (WxHxD) mm W: 553, H: 1028 (With Castors; Without casrors cabinet hight is 947), D: 902. 4.Vibration (Package transportation)	****	 V-		2001/	power sup	pıy interna	ı ıans. Airf	ow airection	ii: From ca	unet front	panel to r	еаг.				
4. Vibration (Package transportation) ISTA 1H: 2014, Method: ASTM D4728 Random vibration test. 5. Shock & Drop (Package transportation) ISTA 1H: 2014, Drop test Method: ASTM D5276 free fall; Rotation edge drop test: ASTM D6179 Rotational drop. 8. ASTM D6179 Rotational drop.					h Castoro	Without	erore cabi	net hight in	0/17) D- 0	02						
STA 1H: 2014, Drop test Method: ASTM D5276 free fall; Rotation edge drop test: ASTM D6179 Rotational drop. SAFETY/EMC									541 J, D. 9	υ ∠ .						
1.Safety standards									on edge di	op test: As	STM D617	9 Rotations	l drop			
1.1.Interface classification Vout≤50V Models: Output, J1, J2, J3, J4, J5, J6, J7, J8 (sense) & J9 (communication options) are Non Hazardous. 50≤Vout≤600V Models: Output & J8 (sense) are hazardous, J1, J2, J3, J4, J5, J6, J7 & J9 (communication options) are Non Hazardous. 1.2.Withstand voltage Vout≤50V Models: Input – Output & J8 (sense), J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, nput - Ground: 2835VDC 1min. 50∨≤Vout≤100V Models: Input – Output & J8 (sense), J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, Output & J8 (sense) – J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 4242VDC 1min, nput - Ground: 2835VDC 1min. 100∨ <vout≤600v &="" (*15)="" (*18)<="" (communication="" (sense)="" (sense),="" -="" 100∨<vouts600v="" 1min,="" 1min.="" 2.emc="" 2500vdc="" 2835vdc="" 4242vdc="" and="" ground:="" input="" j1,="" j2,="" j3,="" j4,="" j5,="" j6,="" j7="" j8="" j9="" models:="" nput="" options):="" output="" standards="" td="" –=""><td></td><td></td><td></td><td>011, 510</td><td>toot moure</td><td></td><td>00210 1100</td><td>run, r totuu</td><td>on ougo u</td><td>op 1001.71</td><td>J 2011.</td><td>o rectatione</td><td>. и ор.</td><td></td><td></td><td></td></vout≤600v>				011, 510	toot moure		00210 1100	run, r totuu	on ougo u	op 1001.71	J 2011.	o rectatione	. и ор.			
50≤Vout≤600V Models: Output & J8 (sense) are hazardous, J1, J2, J3, J4, J5, J6, J7 & J9 (communication options) are Non Hazardous. 1.2.Withstand voltage	1.Safety standards															
S0≤Vouts600V Models: Output & J8 (sense) are hazardous, J1, J2, J3, J4, J5, J6, J7 & J9 (communication options) are Non Hazardous. 1.2.Withstand voltage	1.1.Interface classification							. ,	,		. ,					
Input - Ground: 2835VDC 1min.															zardous.	-
Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 850VDC 1min, Output & J8 (sense) - Ground: 1500VDC 1min,	1.2.Withstand voltage		Input - Gro	und: 2835	VDC 1min.		,, ,			,		. ,				
Output & J8 (sense) - J1, J2, J3, J4, J5, J6, J7 & J9 (communication options): 1275VDC 1min, Output & J8 (sense) - Ground: 2500VDC 1min. 2.EMC standards (*15) (*18) IEC/EN61204-3 Industrial environment 2.1.Conducted emission (*18) IEC/EN61204-3 Industrial environment, Annex H table H.1, FCC Part 15-A, VCCI-A.			Output & J Input - Gro	8 (sense) - und: 2835	- J1, J2, J3 VDC 1min.	, J4, J5, J6	S, J7 & J9 (communic	ation optio	ns): 850VI	C 1min, C	utput & J8	(sense) - (Ground: 150		in,
2.EMC standards (*15) (*18)			Output & J	8 (sense) -	- J1, J2, J3	, J4, J5, J6										nin.
2.1.Conducted emission (*18) IEC/EN61204-3 Industrial environment, Annex H table H.1, FCC Part 15-A, VCCI-A.	2.EMC standards (*15) (*18)															
2.2.Radiated emission (*18) IEC/EN61204-3 Industrial environment, Annex H table H.3 and H.4, FCC Part 15-A, VCCI-A.																
	2.2.Radiated emission (*18)		IEC/EN612	204-3 Indu	strial envir	onment, Ar	nex H tab	e H.3 and	H.4, FCC	Part 15-A,	VCCI-A.			·	-	

NOTES:

- *1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- *2: Minimum current is guaranteed to maximum 0.2% of rated output current.
- *3: Model: 10V Max. ambient temperature is 40°C.
- *4: For cases where conformance to various safety standards (IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase 200V models and 380~480Vac (50/60Hz) for 3-Phase 480V models.

 *5: 3-Phase 200V models: At 200Vac input voltage, 3-Phase 480V: At 380Vac input voltage. With rated output power.
- *6: 3-Phase 200V models: 170~265Vac, 3-Phase 480V models: 342~528Vac. Constant load.
- *7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- *8: The maximum voltage on the power supply terminals must not exceed the rated voltage.
- *9: From 10% to 90% of Rated Output Voltage at 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. The Constant Current programming, readback and monitoring accuracy do not include the warm-up and Load regulation thermal drift.
- *13: Measured at the sensing point.
- *14: For 10V model, Ta derating 2°C/100m.
- *15: Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.
- *16: Max. ambient temperature for IEEE is 40C.
- *17: For 10V model only: Max. output current for IEEE is 4500A up to 40C
- *18: EMC specs based on GSP15kW series.
- *19: For steady state only.

45kW High Power System Series Specifications

Unless otherwise noted, specifications are warranted over the ambient temperature range of 0° to 50° Celsius.

OUTPUT RATING			20-2250	30-1530	40-1125	50-900	60-765	80-585	100-450	150-306	200-225	300-153	400-117	500-90	600-76.5
1.Rated output voltage (*1)	V		20	30	40	50	60	80	100	150	200	300	400	500	600
2.Rated output current (*2)	Α		2250	1530	1125	900	765	585	450	306	225	153	117	90	76.5
3.Rated output power	KW		45.0	45.9	45.0	45.0	45.9	46.8	45.0	45.9	45.0	45.9	46.8	45.0	45.9
INPUT CHARACTERISTICS	V		20	30	40	50	60	80	100	150	200	300	400	500	600
1.Input voltage/freq. 3 phase, 3 wire+ground (*3)		3-Phase,	200V mod	els: 170~2	65Vac, 47~	63Hz (Cov	ers 200/23	0Vac).							
		3-Phase,	ase, 480V models: 342~528Vac, 47~63Hz (Covers 380/400/415/440/460/480Vac).												
Maximum Input 3-Phase, 200V models:		160A @ 2	200Vac.												
current at 100% load 3-Phase, 480V models:		84.3A @	380Vac.												
3.Power Factor (Typ.)		0.94 @ 20	00/380Vac	, rated out	out power.										
4.Efficiency (minimum) (*4)	%	8	37	88	8	9					90				
CONSTANT VOLTAGE MODE	V		20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*5)		0.01% of	rated outp	ut voltage.					•			•			
2.Max. Load regulation (*6)		0.01% of	rated outp	ut voltage -	+5mV.										
3.Temperature coefficient		50PPM/O	C from rate	ed output v	oltage, follo	wing 30 m	inutes warr	n-up.							
4.Temperature stability		0.01% of	rated Vout	over 8hrs	interval foll	owing 30 n	ninutes war	m-up. Con	stant line, l	oad & tem	perature.				
5.Warm-up drift		Less than	0.05% of	rated outpu	ıt voltage +	2mV over	30 minutes	following	power on.						
6.Remote sense compensation/wire (*7)	V		2	5	5	5	5	5	5	5	5	5	5	5	5
7.Up-prog. response time (*8)	mS		30	30	30	50	50	50	50	50	50	50	100	100	100
8.Down-prog. Full load (*8)	mS		50	80	80	80	80	100	100	100	100	100	150	200	200
response time: No load (*9)	IIIO		600	800	900	950	1000	1200	1900	2000	2500	3000	4000	4000	3000
9.Transient response time		Output se	t point: 10	~100%, Lo	ver within (cal sense. o and inclu				·	0~90% of r	ated outpu	t current.			
CONSTANT CURRENT MODE	V		20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*5)		0.05% of	rated outp	ut current.											
2.Max. Load regulation (*10)		0.08% of	rated outp	ut current.											
3.Temperature coefficient		20V~100	V models:	100PPM/ ⁰ (C from rate	d output cu	rrent, follo	wing 30 mi	nutes warn	n-up.					
		150V~600	0V models	: 70PPM/ ⁰ 0	C from rate	d output cu	rrent, follo	wing 30 mi	nutes warn	n-up.					
4.Temperature stability		0.01% of	rated lout	over 8hrs. i	interval follo	owing 30 m	inutes war	m-up. Con	stant line, I	oad & temp	erature.				
5.Warm-up drift					+/-0.25% of										
1 '					n +/-0.15%										
ANALOG PROGRAMMING AND MONITORI	NO (1001 A						,			5 -011					

ANALOG PROGRAMMING AND MONITORING (ISOLATED FROM THE OUTPUT)

Vout voltage programming		0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.15% of rated Vout.
2.lout voltage programming (*11)		0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.4% of rated lout.
3.Vout resistor programming		0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated Vout.
4.lout resistor programming (*11)		0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated lout.
5.Output voltage monitor (*16)		0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated Vout.
6.Output current monitor (*11) (*16)	-	0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated lout.

SIGNALS AND CONTROLS (ISOLATED FROM THE OUTPUT)

1.Power supply OK #1 signal	 Power supply output monitor. Open collector. Output On: On. Output Off: Off.
	Maximum Voltage: 30V. Maximum Sink Current: 10mA.
2.CV/CC signal	 CV/CC Monitor. Open collector. CC mode: On. CV mode: Off. Maximum Voltage: 30V.
	Maximum Sink Current: 10mA.
3.LOCAL/REMOTE Analog control	 Enable/Disable analog programming control by electrical signal or dry contact.
	Remote: 0~0.6V or short. Local: 2~30V or open.
4.LOCAL/REMOTE Analog signal	 Analog programming control monitor signal. Open collector. Remote: On. Local: Off.
	Maximum Voltage: 30V. Maximum Sink Current: 10mA.
5.ENABLE/DISABLE signal	 Enable/Disable PS output by electrical signal or dry contact.
	0~0.6V or short, 2~30V or open. User selectable logic.
6.INTERLOCK (ILC) control	 Enable/Disable PS output by electrical signal or dry contact.
	Output ON: 0~0.6V or short. Output OFF: 2~30V or open.
7.Programmed signals	 Two open drain programmable signals. Maximum voltage 25V. Maximum sink current 100mA
	(shunted by 27V zener).
8.TRIGGER IN / TRIGGER OUT signals	Maximum low level input voltage = 0.8V. Minimum high level input voltage = 2.5V.
	 Maximum high level input = 5V positive edge trigger: tw = 10us minimum. Tr,Tf = 1us maximum.
	Min delay between 2 pulses 1ms.
9.DAISY_IN/SO control signal	 By electrical Voltage: 0~0.6V/2~30V or dry contact.
10.DAISY_OUT/PS_OK #2 signal	 4~5V = OK, 0V (500Ω impedance) = Fail.

FUNCTIONS AND FEATURES

1.Parallel operation	 Consult with manufacturer.
2.Constant power control	 Limits the output power to a programmed value. Programming via the communication ports or the front panel.
3.Output resistance control	 Emulates series resistance. Resistance range: 1~1000mΩ. Programming via the communication ports or the front panel.
4.Slew rate control	 Programmable Output rise and Output fall slew rate. Programming range: 0.0001~999.99 V/mS. or A/mS. Programming via communication ports or front panel.
5.Arbitrary waveforms	Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via communication ports or front panel.

DDOODAMMING AND DEADDAOK (HOD	LAN DOGGO	105 0-41	-1 (*4.4) 1	4 -6 \												
PROGRAMMING AND READBACK (USB,	V		20	30	40	50	60	80	100	150	200	300	400	500	600	
1.Vout programming accuracy (*12)		0.05% of ra														
2.lout programming accuracy (*11)		0.3% of rat														
3. Vout programming resolution		0.002% of														
4.lout programming resolution		0.002% of														
5. Vout readback accuracy		0.05% of ra														
6.lout readback accuracy (*11)		0.2% of rat	ed output	current.												
7.Vout readback resolution	% of rated output voltage		0.006%	0.004%	0.003%	0.003%	0.002%	0.002%	0.011%	0.007%	0.005%	0.004%	0.003%	0.003%	0.002%	
8.lout readback resolution	% of rated output current		0.005%	0.007%	0.009%	0.0012%	0.002%	0.002%	0.003%	0.004%	0.005%	0.007%	0.009%	0.0012%	0.0014%	
PROTECTIVE FUNCTIONS	V		20	30	40	50	60	80	100	150	200	300	400	500	600	
1.Foldback protection		Output shu Reset by A	shut-down when power supply changes mode from CV or Power Limit to CC mode or from CC or Power Limit to CV mode. User preserby AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.												esetable.	
2.Over-voltage protection (OVP)		Output shu	shut-down. Reset by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.													
3.Over -voltage programming range	V		1~24 2~36 2~44.1 5~55.125 5~66.15 5~88.2 5~110.25 5~165.37 5~220.5 5~330.75 5~441 5~551.25												5~661.5	
4.Over-voltage programming accuracy		+/-1% of ra		-	2 77.1	0 00.120	0 00.10	0 00.2	0 110.20	0 100.01	0 220.0	0 000.70	0 111	0 001.20	0 001.0	
5.Output under voltage limit (UVL)		Prevents fr			low limit 「	nes not ar	nly in anal	od brodra	nming Pre	set by from	t nanel or	communic	ation port			
				•			• •	- g p. og al			paoi 01		port.			
6.Over temperature protection		Shuts down							velte	malitia						
7.Output under voltage protection (UVP)			ts adjustment of Vout below limit. P.S output turns Off during under voltage condition. by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.													
FRONT PANEL		h a 1:- :														
1.Control functions			e options with 2 Encoders.													
			lout/Power Limit manual adjust. UVL/UVP manual adjust.													
				,				•								
						oldback, O										
						AN, RS232	, RS485, L	JSB or Op	ional comr	nunication	interface.					
				nt Panel Lo		I Dt-	A -1 -1 15									
						aud Rate,										
						ige/resistiv				KΩ progra	mming.					
2 Diamless			nalog Monitor Functions - Selection of Voltage/Current Monitoring 5V/10V. but: 4 digits, accuracy: 0.05% of rated output voltage +/-1 count.													
2.Display								11.								
3.Front Panel Buttons Indications		OUTPUT (ut current		DOTECTI	ON COME	ICLIDATIO	NI CVCTEN	4 CEOUE	UCED			
3.FIOIR Parier Bullons Indications		OUIFUI	JN, ALAKI	VI, FREVIE	VV, FIIN⊑, V	COMMON	CATION, F	KUIEUII	ON CONF	IGUNATIO	IN STSTE	VI, SEQUE	NOEK.			
4.Front Panel Display Indications						ernal Volta ommunica					art, Safetst	art, Foldba	ick V/I, Rer	note		
5.Circuit breaker						is protected nel of the c		circuit bre	akers for 2	00Vac Inp	ut & 1x40A	+1x80A ci	cuit breake	ers for 380\	/ac Input.	
ENVIRONMENTAL CONDITIONS																
Operating temperature		0~50 ⁰ C, 1	00% load.													
2.Storage temperature		-25~65 ⁰ C.														
3. Operating humidity		20~90% R	H (no cond	densation).												
4.Storage humidity		10~95% R	H (no cond	densation).												
5.Altitude		Operating: Non-opera				t derating 2	2%/100m c	r Ta derat	ing 1 ^o C/10	0m above	2000m.					
MECHANICAL																
1.Cooling		Forced air		power sup	ply interna	ıl fans. Airfl	ow direction	n: From ca	abinet front	panel to re	ear.					
2.Weight	Kg	Less than														
3.Dimensions (WxHxD)	mm					srors cabir		947), D: 9	02.							
4.Vibration (Package transportation)						ndom vibra										
5.Shock & Drop (Package transportation) SAFETY/EMC		ISTA 1H: 2	014, Drop	test Metho	od: ASTM [D5276 free	fall; Rotati	on edge d	rop test: A	STM D6179	9 Rotationa	al drop.				
		150 6 : 5 : 5	100:5	-0.045::		D4.05:5										
1.Safety standards		IEC 61010					10 / `	0 10 /		\	N !!					
1.1.Interface classification						J5, J6, J7,							are Non Ha	zorde::e		
1.2.Withstand voltage		Vout≤50V	Models: In		ut & J8 (se	ense), J1, J								izaruous.		
		60V≤Vouts Output & J Input - Gro	8 (sense)	- J1, J2, J3	i, J4, J5, J6									00VDC 1mi	in,	
		100V <vou Output & J</vou 	t≤600V Mo 8 (sense)	dels: Inpu	t – Output s, J4, J5, J6								42VDC 1m Ground: 2	nin, 500VDC 1n	nin.	
2.EMC standards (*13) (*15)				strial envir												
2.1.Conducted emission (*15)	-					nnex H tabl	e H.1 FCC	2 Part 15-	A. VCCI-A							
2.2.Radiated emission (*15)	 					nex H tabl				VCCI-A						
E.E. Galdios officoroff (10)			o muu	Cara Cityll	o.mont, Al		o i i.o aiiu	, 1 00	an ro-A,	. JUI-A.						



NOTES:

- *1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- *2: Minimum current is guaranteed to maximum 0.2% of rated output current.

 *3: For cases where conformance to various safety standards (IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase 200V models and 380~480Vac (50/60Hz) for 3-Phase 480V models.

 *4: 3-Phase 200V models: At 200Vac input voltage, 3-Phase 480V: At 380Vac input voltage. With rated output power.

 *5: 3-Phase 200V models: 170~265Vac, 3-Phase 480V models: 342~528Vac. Constant load.

- *6: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- *7: The maximum voltage on the power supply terminals must not exceed the rated voltage.
 *8: From 10% to 90% of Rated Output Voltage at rated resistive load.
- *9: From 90% to 10% of Rated Output Voltage.
- *10: For load voltage change, equal to the unit voltage rating, constant input voltage
- *11: The Constant Current programming, readback and monitoring accuracy do not include the warm-up and Load regulation thermal drift.
- *12: Measured at the sensing point.
- *13: Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.
- *14: Max. ambient temperature for IEEE is 40C.
- *15: EMC specs based on GSP15kW series
- *16: For steady state only.

30kW High Power System Series Specifications

Unless otherwise noted, specifications are warranted over the ambient temperature range of 0° to 50° Celsius.

OUTPUT RATING		10-3000	20-1500	30-1020	40-750	50-600	60-510	80-390	100-300	150-204	200-150	300-102	400-78	500-60	600-51
1.Rated output voltage (*1)	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
2.Rated output current (*2)	Α	3000(*3)	1500	1020	750	600	510	390	300	204	150	102	78	60	51
3.Rated output power	KW	30.0	30.0	30.6	30.0	30.0	30.6	31.2	30.0	30.6	30.0	30.6	31.2	30.0	30.6
INPUT CHARACTERISTICS	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Input voltage/freq. 3 phase, 3 wire+ground (*4)				els: 170~26 els: 342~52					/460/480Va	ac).		•		•	
2.Maximum Input 3-Phase, 200V models: current at 100% load 3-Phase, 480V models:	-		A @ 200Vac. @ 380Vac.												
3.Power Factor (Typ.)		0.94 @ 2	00/380Vac	, rated outp	ut power.										
4.Efficiency (minimum) (*5)	%	8	37	88	8	19					90				
CONSTANT VOLTAGE MODE	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*6)		0.01% of	rated outpo	ut voltage.		•			•			-		•	-
2.Max. Load regulation (*7)		0.01% of	rated outpo	ut voltage +	-5mV.										
3.Temperature coefficient		50PPM/ ^O	C from rate	d output vo	oltage, follo	owing 30 m	inutes warı	m-up.							
4.Temperature stability		0.01% of	rated Vout	over 8hrs i	nterval foll	owing 30 n	ninutes war	m-up. Con	stant line, l	oad & tem	perature.				
5.Warm-up drift		Less than	0.05% of	rated outpu	ıt voltage +	-2mV over	30 minutes	following	power on.						
6.Remote sense compensation/wire (*8)	V	2	2	5	5	5	5	5	5	5	5	5	5	5	5
7.Up-prog. response time (*9)	mS	30	30	30	30	50	50	50	50	50	50	50	100	100	100
8.Down-prog. Full load (*9) response time: No load (*10)	mS	50 300	50 600	80 800	80 900	80 950	80 1000	100 1200	100 1900	100 2000	100 2500	100 3000	150 4000	200 4000	200 3000
9.Transient response time		Output se	t point: 10	age to recov ~100%, Lou nodels up to	cal sense.		·		change 10 ve 100V.	0~90% of r	ated outpu	t current.			
CONSTANT CURRENT MODE	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*6)		0.05% of	rated outpo	ut current.		•			•					•	
2.Max. Load regulation (*11)		0.08% of	rated outp	ut current.											
3.Temperature coefficient		10V~100	V models:	100PPM/ ⁰ 0	from rate	d output cu	rrent, follo	wing 30 mi	nutes warn	n-up.					
		150V~60	OV models:	: 70PPM/ ⁰ 0	c from rate	d output cu	rrent, follo	wing 30 mi	nutes warn	n-up.					
4.Temperature stability								_	stant line, l		perature.				
5.Warm-up drift									nutes follov						
·		150V ~ 60	00V model	s: Less tha	n +/-0.15%	of rated o	utput curre	nt over 30	minutes fol	lowing pow	er on.				
ANALOG PROGRAMMING AND MONITORI	NG (ISOL AT	•													

ANALOG PROGRAMMING AND MONITORING (ISOLATED FROM THE OUTPUT)

Vout voltage programming	 0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.15% of rated Vout.
2.lout voltage programming (*12)	 0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.4% of rated lout.
3.Vout resistor programming	 0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated Vout.
4.lout resistor programming (*12)	 0~100%, 0~5/10KΩ full scale, user selectable. Accuracy and linearity: +/-0.5% of rated lout.
5.Output voltage monitor (*19)	 0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated Vout.
6.Output current monitor (*12) (*19)	 0~5V or 0~10V, user selectable. Accuracy: +/-0.5% of rated lout.

SIGNALS AND CONTROLS (ISOLATED FROM THE OUTPUT)

1.Power supply OK #1 signal	 Power supply output monitor. Open collector. Output On: On. Output Off: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.							
2.CV/CC signal	 CV/CC Monitor. Open collector. CC mode: On. CV mode: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.							
3.LOCAL/REMOTE Analog control	 Enable/Disable analog programming control by electrical signal or dry contact. Remote: 0~0.6V or short. Local: 2~30V or open.							
4.LOCAL/REMOTE Analog signal	 Analog programming control monitor signal. Open collector. Remote: On. Local: Off. Maximum Voltage: 30V. Maximum Sink Current: 10mA.							
5.ENABLE/DISABLE signal	 Enable/Disable PS output by electrical signal or dry contact. 0~0.6V or short, 2~30V or open. User selectable logic.							
6.INTERLOCK (ILC) control	 Enable/Disable PS output by electrical signal or dry contact. Output ON: 0~0.6V or short. Output OFF: 2~30V or open.							
7.Programmed signals	 Two open drain programmable signals. Maximum voltage 25V. Maximum sink current 100mA (shunted by 27V zener).							
8.TRIGGER IN / TRIGGER OUT signals	 Maximum low level input voltage = 0.8V. Minimum high level input voltage = 2.5V. Maximum high level input = 5V positive edge trigger: tw = 10us minimum. Tr,Tf = 1us maximum. Min delay between 2 pulses 1ms.							
9.DAISY_IN/SO control signal	 By electrical Voltage: 0~0.6V/2~30V or dry contact.							
10.DAISY_OUT/PS_OK #2 signal	 $4\sim5V = OK$, $OV (500\Omega \text{ impedance}) = Fail$.							

FUNCTIONS AND FEATURES

1.Parallel operation	 Consult with manufacturer.
2.Constant power control	 Limits the output power to a programmed value. Programming via the communication ports or the front panel.
3.Output resistance control	 Emulates series resistance. Resistance range: 1~1000mΩ. Programming via the communication ports or the front panel.
4.Slew rate control	 Programmable Output rise and Output fall slew rate. Programming range: 0.0001~999.99 V/mS. or A/mS. Programming via communication ports or front panel.
5.Arbitrary waveforms	Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via communication ports or front panel.



2.EMC standards (*15) (*18) 2.1.Conducted emission (*18)

PROGRAMMING AND READBACK (US	B, LAN, RS232/												600		
1.Vout programming accuracy (*13)		10 20 30 40 50 60 80 100 150 200 300 400 500 600 0.05% of rated output voltage.													
2.lout programming accuracy (*12)		0.3% of rated output current.													
3.Vout programming resolution		0.002% of rated output voltage.													
4.lout programming resolution		0.002% of rated output current.													
Vout readback accuracy Iout readback accuracy (*12)		0.05% of rated output voltage. 0.2% of rated output current.													
7.Vout readback resolution	% of rated	p.2.70 or raised compan comforts.											I	T	
	output voltage	0.011%	0.006%	0.004%	0.003%	0.003%	0.002%	0.002%	0.011%	0.007%	0.005%	0.004%	0.003%	0.003%	0.002%
8.lout readback resolution	% of rated output current	0.004%	0.008%	0.01%	0.0014%	0.002%	0.002%	0.003%	0.005%	0.005%	0.001%	0.001%	0.0014%	0.002%	0.002%
PROTECTIVE FUNCTIONS	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Foldback protection		Output shu	t-down wh	en power s	supply char	nges mode	from CV o	r Power L	imit to CC	node or fro	om CC or I	ower Limit	to CV mod	le. User pre	esetable.
·		Output shut-down when power supply changes mode from CV or Power Limit to CC mode or from CC or Power Limit Reset by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication										n.	·		
2.Over-voltage protection (OVP)		Output shu	Output shut-down. Reset by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.												
3.Over -voltage programming range	V	0.5~12												5~661.5	
4.Over-voltage programming accuracy		+/-1% of ra	ited output												
5.Output under voltage limit (UVL)		Prevents from adjusting Vout below limit. Does not apply in analog programming. Preset by front panel or communication port.													
6.Over temperature protection		Shuts down the output. Auto recovery by autostart mode.													
7.Output under voltage protection (UVP)		Prevents adjustment of Vout below limit. P.S output turns Off during under voltage condition. Reset by AC input recycle in autostart mode, by Power Switch, by OUTPUT button, by rear panel or by communication.													
FRONT PANEL															
1.Control functions		Multiple op													
		Vout/lout/F			djust.										
		OVP/UVL/UVP manual adjust.													
		Protection Functions - OVP, UVL, UVP, Foldback, OCL, ENA, ILC. Communication Functions - Selection of LAN, RS232, RS485, USB or Optional communication interface.													
		Output ON/OFF, Front Panel Lock.													
		Communication Functions - Selection of Baud Rate, Address, IP and communication language.													
		Analog Control Functions - Selection Voltage/resistive programming 5V/10V, 5ΚΩ/10ΚΩ programming.													
		Analog Monitor Functions - Selection of Voltage/Current Monitoring 5V/10V. Vout: 4 digits, accuracy: 0.05% of rated output voltage +/-1 count.													
2.Display								nt.							
3.Front Panel Buttons Indications		lout: 4 digits, accuracy: 0.2% of rated output current +/-1 count. OUTPUT ON, ALARM, PREVIEW, FINE, COMMUNICATION, PROTECTION CONFIGURATION SYSTEM, SEQUENCER.													
4.Front Panel Display Indications		Voltage, Communic									art, Safets	tart, Foldba	ck V/I, Ren	note	
5.Circuit breaker		The AC su These CB's						circuit bre	akers for 2	00Vac & 2	x40A circu	it breakers	for 380Vac	D.	
ENVIRONMENTAL CONDITIONS	.				'										
1.Operating temperature (*3)		0~50°C, 10	00% load.												
2.Storage temperature		-25~65 ⁰ C.													
3.Operating humidity		20~90% R	H (no cond	densation).											
4.Storage humidity		10~95% R							_						
5.Altitude (*14)		Operating: Non-opera				t derating 2	!%/100m o	r Ta derat	ing 1 ^o C/10	0m above	2000m.				
MECHANICAL	•														
1.Cooling		Forced air	cooling by	power sup	ply interna	l fans. Airfl	ow directio	n: From c	abinet front	panel to r	ear.				
2.Weight	Kg	Less than													
3.Dimensions (WxHxD)	mm	W: 553, H:	,					947), D: 9	02.						
Vibration (Package transportation) Shock & Drop (Package transportation)		ISTA 1H: 2		test Metho				on odgo d	ron toet: A	TM D617	Dotation	al drop			
SAFETY/EMC		131A 111. Z	.014, Бюр	test Wetho	u. ASTIVIL	33270 IIEE	iali, Notali	on eage a	Top test. At	JIW DOTA	TOtation	агигор.			-
1.Safety standards		IEC 61010	-1:2010 II	EC 61010-1	1:2010/AM	D1:2016									
1.1.Interface classification				utput, J1, J			J8 (sense)	& J9 (com	munication	options) a	re Non Ha	zardous.			
													are Non Ha	zardous.	
1.2.Withstand voltage				put – Outp VDC 1min.		nse), J1, J	2, J3, J4, J	15, J6, J7 8	& J9 (comn	nunication	options): 4	242VDC 1r	nin,		
		Output & J Input - Gro	18 (sense) ound: 2835	- J1, J2, J3 VDC 1min.	, J4, J5, J6	6, J7 & J9 (communic	ation optio	ns): 850VI	C 1min, C	utput & J8	, ,	Ground: 150		in,
		Output & J Input - Gro	18 (sense) ound: 2835	- J1, J2, J3 VDC 1min.	, J4, J5, J6								42VDC 1m Ground: 2		nin.
2 FMC standards (*15) (*18)		Input - Ground: 2835VDC 1min. FC/FN61204-3 Industrial environment													

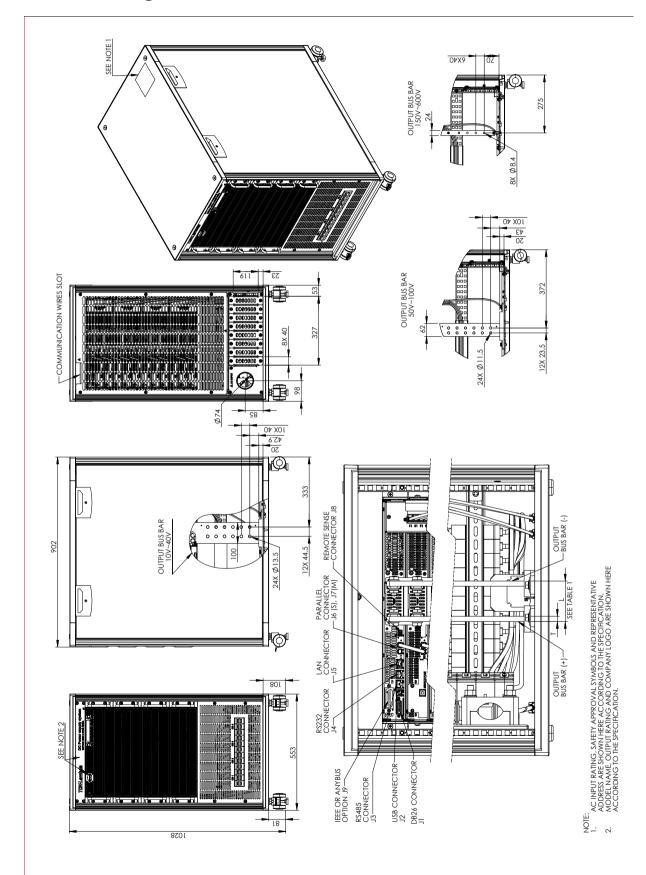
IEC/EN61204-3 Industrial environment, Annex H table H.1, FCC Part 15-A, VCCI-A

NOTES:

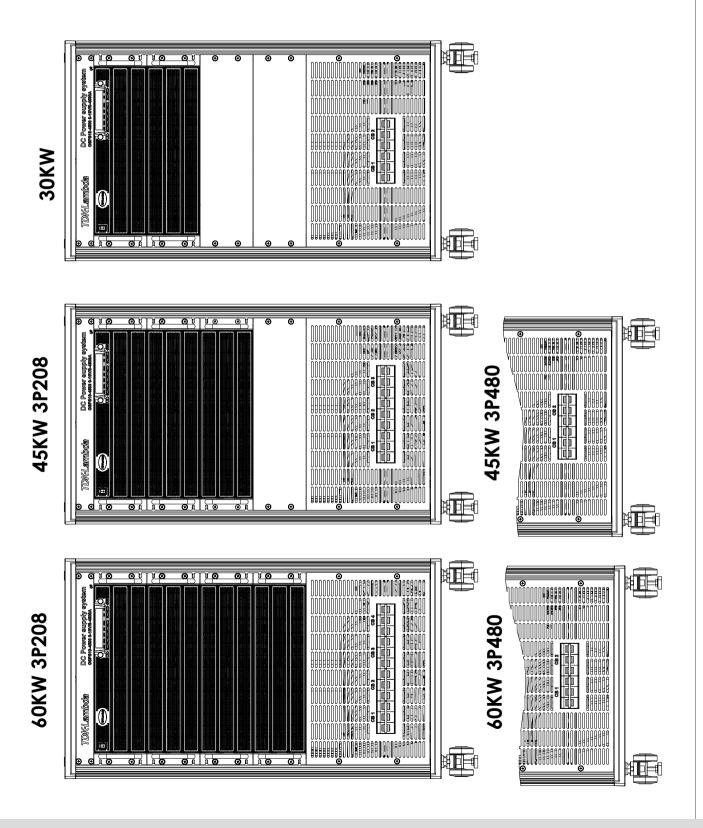
- *1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- *2: Minimum current is guaranteed to maximum 0.2% of rated output current.
- *3: Model: 10V Max. ambient temperature is 30°C. Output current derate 30A / 1°C
- *4: For cases where conformance to various safety standards (IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase 200V models and 380-480Vac (50/60Hz) for 3-Phase 480V models.

 *5: 3-Phase 200V models: At 200Vac input voltage, 3-Phase 480V: At 380Vac input voltage. With rated output power.
- *6: 3-Phase 200V models: 170~265Vac, 3-Phase 480V models: 342~528Vac. Constant load.
- *7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- *8: The maximum voltage on the power supply terminals must not exceed the rated voltage.
- *9: From 10% to 90% of Rated Output Voltage at 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: The Constant Current programming, readback and monitoring accuracy do not include the warm-up and Load regulation thermal drift.
- *13: Measured at the sensing point.
- *14: For 10V model, Ta derating 2°C/100m.
- *15: Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.
- *16: Max. ambient temperature for IEEE is 40C.
- *17: For 10V model only: Max. output current for IEEE is 2700A up to 40C
- *18: EMC specs based on GSP15kW series.
- *19: For steady state only.

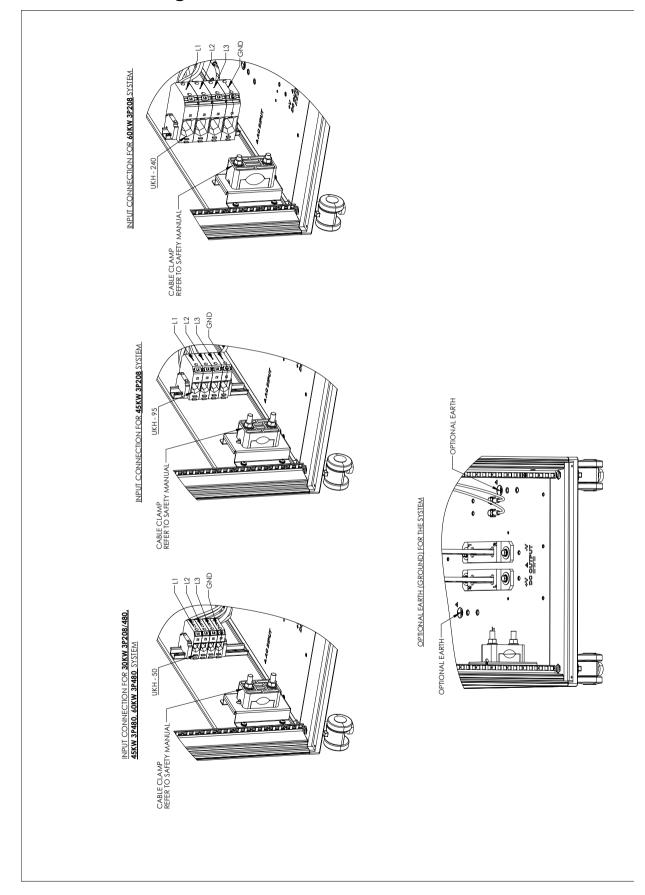
Outline Drawing GENESYS™ GSPS Series



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Outline Drawing **G**ENESYS[™] GSPS Series



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