GEN 5000W SERIES SPECIFICATIONS

OUTPUT RATING		8-600	60-85	150-34	600-8.5	REV.
1.Rated output voltage(*1)	V	8	60	150	600	
2.Rated output current (*2)	A	600	85	34	8.5	
3.Rated output power	W	4800	5100	5100	5100	

INPUT CHARACTERISTICS		V	8	60	150	600	
1.Input voltage/freq. (*3)			3-Phase, 200V models: 170~265Vac, 47~63Hz				
			3-Phase, 400V models: 342~460Vac, 47~63Hz				
2. Maximum Input current at 100% load	3-Phase, 200V models:		21	22	22	22	
	3-Phase, 400V models:		10.5	11	11	11	
3.Power Factor (Typ)		---	0.94@200/380Vac, rated output power.				
5.Efficiency (*4)		%	83	90	88	88	
6.Inrush current (*5)		---	3-Phase 200V models: Less than 50A				
			3-Phase 400V models: Less than 20A				

CONSTANT VOLTAGE MODE		V	8	60	150	600	
1.Max. Line regulation (*6)		---	0.01% of rated output voltage				
2.Max. Load regulation (*7)		---	0.015% of rated output voltage +5mV				
3.Ripple and noise (p-p, 20MHz) (*8)		mV	75	75	120	500	A
4.Ripple r.m.s. 5Hz~1MHz		mV	10	10	25	120	
5.Temperature coefficient		PPM/°C	100PPM/°C from rated output voltage, following 30 minutes warm-up.				
6.Temperature stability		---	0.05% of rated Vout over 8hrs interval following 30 minutes warm-up. Constant line, load & temp.				
7. Warm-up drift		---	Less than 0.05% of rated output voltage+2mV over 30 minutes following power on.				
8.Remote sense compensation/wire		V	2	5	5	5	
9.Up-prog. Response time, 0~Vomax.(*9)		mS	30	50		100	
10.Down-prog.response time:	Full load (*9)	mS	15	80	100	200	
	No load (*10)		400	1000	2000	3000	
11.Transient response time		mS	Time for output voltage to recover within 0.5% of its rated output for a load change 10~90% of rated output current. Output set-point: 10~100%, Local sense. Less than 1mS, for models up to and including 100V. 2mS, for models above 100V.				
12.Hold-up time		---	5mSec Typical. Rated output power.				

CONSTANT CURRENT MODE	V	8	60	150	600	
1.Max. Line regulation (*6)	---	0.05% of rated output current.				
2.Max. Load regulation (*11)	---	0.1% of rated output current.				
3.Load regulation thermal drift	---	Less than 0.1% of rated output current over 30 minutes following load change.				
4.Ripple r.m.s. 5Hz~1MHz (*12)	mA	1950	150	90	15	
5.Temperature coefficient	PPM/°C	100PPM/°C from rated output current, following 30 minutes warm-up.				
6.Temperature stability	---	0.05% of rated Iout over 8hrs. interval following 30 minutes warm-up. Constant line, load & temperature.				
7. Warm-up drift	---	8~16V model: Less than +/-0.5% of rated output current over 30 minutes following power on.				
		20V~600V: Less than +/-0.25% of rated output current over 30 minutes following power on.				

ANALOG PROGRAMMING AND MONITORING		
1.Vout voltage programming	---	0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-0.5% of rated Vout.
2.Iout voltage programming (*13)	---	0~100%, 0~5V or 0~10V, user selectable. Accuracy and linearity: +/-1% of rated Iout.
3.Vout resistor programming	---	0~100%, 0~5/10Kohm full scale, user selectable. Accuracy and linearity: +/-1% of rated Vout.
4.Iout resistor programming (*13)	---	0~100%, 0~5/10Kohm full scale, user selectable. Accuracy and linearity: +/-1.5% of rated Iout.
5.On/Off control	---	By electrical Voltage: 0~0.6V/2~15V or dry contact, user selectable logic.
6.Output current monitor (*13)	---	0~5V or 0~10V, user selectable. Accuracy: +/-1%.
7.Output voltage monitor	---	0~5V or 0~10V, user selectable. Accuracy: +/-1%.
8.Power supply OK signal	---	4~5V-OK, 0V-Fail. 500ohm series resistance.
9.Parallel operation	---	Possible, up to 4 units in master/slave mode with two wires current balance connection.
10.Series operation	---	Possible (with external diodes), up to 2 units. 600Vdc max. from chassis ground.
11.CV/CC indicator	---	Open collector. CC mode: On, CV mode: Off. Maximum voltage: 30V, maximum sink current: 10mA
12.Enable/Disable	---	Dry contact. Open: Off, Short: On. Max. voltage at Enable/Disable in: 6V.
13.Local/Remote analog Control	---	By electrical signal or Open/Short: 0~0.6V or short: Remote, 2~15V or open: Local
14.Local/Remote analog Indicator	---	Open collector. Local: Open, Remote: On. Maximum voltage: 30V, maximum sink current: 10mA

PROGRAMMING AND READBACK (RS232/485, Optional IEEE Interface)		
1.Vout programming accuracy	---	0.1% of rated output voltage
2.Iout programming accuracy (*13)	---	0.1% of actual output current+0.3% of rated output current
3.Vout programming resolution	---	0.012% of full scale
4.Iout programming resolution	---	0.012% of full scale
5.Vout readback accuracy	---	0.15% of rated output voltage
6.Iout readback accuracy (*13)	---	0.4% of rated output current
7.Vout readback resolution	---	0.012% of full scale
8.Iout readback resolution	---	0.012% of full scale

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GEN 5000W SERIES SPECIFICATIONS

PROTECTIVE FUNCTIONS	V	8	60	150	600	REV.
1.Foldback protection	---	Output shut-down when power supply change from CV to CC. User presetable.				
2.Over-voltage protection (OVP)	---	Inverter shut-down, manual reset by AC input recycle or by OUT button or by communication port command.				
3.Over -voltage trip point	V	0.5~10	5~66	5~165	5~660	
4.Output under voltage limit (UVL)	---	Preset by front panel or communication port. Prevents from adjusting Vout below limit.				
5.Over temperature protection	---	User selectable, latched or non latched.				

FRONT PANEL			
1.Control functions	---	Vout/Iout manual adjust by separate encoders (coarse and fine adjustment).	
	---	OVP/UVL manual adjust by Vout. Adjust encoder.	
	---	Address selection by Voltage Adjust encoder. No of addresses:31.	
	---	Go to local control.	
	---	Output on/off	
	---	AC on/off	
	---	Front panel lock	
	---	Foldback control	
	---	Baud rate selection: 1200, 2400, 4800, 9600 and 19200.	
	---	Re-start modes (automatic restart, safe mode).	
2.Display	---	Vout: 4 digits, accuracy: 0.5% of rated output voltage+/-1 count.	
	---	Iout: 4 digits, accuracy: 0.5% of rated output current+/-1 count.	
3.Indications	---	VOLTAGE, CURRENT, ALARM, FINE, PREVIEW, FOLDBACK, LOCAL, OUTPUT ON.	

ENVIRONMENTAL CONDITIONS			
1.Operating temperature	---	0~50°C, 100% load.	
2.Storage temperature	---	-20~85°C	
3.Operating humidity	%	20~90% RH (no condensation).	
4.Storage humidity	%	10~95% RH (no condensation).	
5.Altitude	---	Maximum 3000m. Derate output current by 2%/100m above 2000m.	A

MECHANICAL			
1.Cooling	---	Forced air cooling by internal fans.	
2.Weight	Kg	Less than 16Kg.	
3.Dimensions (WxHxD)	mm	W: 423, H: 88, D: 442.5 (Refer to Outline drawing).	
4.Vibration	---	MIL-810F, method 514.5	
5.Shock	---	Less than 20G, half sine, 11mS. Unit is unpacked.	

SAFETY/EMC				
1.Applicable standards:	Safety	---	UL60950-1 listed, EN60950-1. Vout≤ 40V: Output is SELV, IEEE/Isolated analog are SELV. 60≤ Vout≤ 400V: Output is hazardous, IEEE/Isolated analog are SELV. 400<Vout≤ 600V: Output is hazardous, IEEE/Isolated analog are not SELV.	
	EMC	---	EN55022, EN55024	
2.Withstand voltage		---	Vout≤ 40V models: Input-Outputs (SELV): 4242VDC 1min, Input-Ground: 2828VDC 1min.,	
			40V<Vout≤ 100V models: Input-Haz. Output: 2600VDC 1min, Input-SELV: 4242VDC 1min, Hazard. Output-SELV: 1900VDC 1min, Hazard. Output-Ground: 1200VDC 1min, Input-Ground: 2828VDC 1min.	
			100V<Vout≤ 600V models: Input-Haz. Output: 4000VDC 1min, Input-SELV: 4242VDC 1min, Hazard. Output-SELV: 3550VDC 1min, Hazard. Output-Ground: 2670VDC 1min, Input-Ground: 2828VDC 1min.	
3.Insulation resistance		---	More than 100Mohm at 25°C, 70%RH.	
4.Conducted emmision		---	EN55022A, FCC part 15-A, VCCI-A	
5.Radiated emission		---	EN55022A, FCC part 15-A, VCCI-A	

NOTES:

*1: Minimum voltage is guaranteed to maximum 0.2% of rated output voltage.
*2: Minimum current is guaranteed to maximum 0.4% of rated output current.
*3: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase 200V models, and 380~415Vac (50/60Hz) for 3-Phase 400V models.
*4: 3-Phase 200V models: At 200Vac 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: 3-Phase 200V models: 170~265Vac, constant load. 3-Phase 400V models: 342~460Vac, constant load.
*7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
*8: For 8V~300V models: Measured with JEITA RC-9131A (1:1) probe. For 600V model: Measured with 10:1 probe.
*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated, resistive load.
*10: From 90% to 10% of Rated Output Voltage.
*11: For load voltage change, equal to the unit voltage rating, constant input voltage.
*12: For 8V~15V models the ripple is measured at 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 do not include the warm-up and Load regulation thermal drift.

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