# hivolt.de



# **G**ENESYS<sup>™</sup> G Series Programmable DC Power Supplies

- Full-Rack 1kW / 1.7kW / 2.7kW / 3.4kW / 5kW in 1U Height
- GSP 10kW / 15kW in 2U / 3U Height

# **Built-In Advanced Features**

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



The **GENESYS™** family of programmable power supplies sets a new standard for flexible, reliable, AC/DC power systems in OEM, Industrial and Laboratory applications.

# Features include:

- Leading DC Programmable power density (5kW in 1U height, 10kW/15kW in 2U/3U height) in 19" rack-mount
- Light-weight 5kW<7.5 kg, GSP 10kW<15.5 kg, 15kW<23.5 kg</li>
- Wide Range of popular worldwide AC inputs:
  - G1kW/1.7kW: 1ø (85~265VAC)
  - G2.7kW / G3.4kW: 1ø (170~265VAC), 3ø (208VAC, 400VAC)
  - G5kW / GSP10kW / 15kW: 3ø (208VAC, 400VAC & 480VAC), Wide-range 3ø 480VAC (342VAC ~ 528VAC)
- Active PFC (0.94 typical)
- Output Voltage up to 600V, Current up to 1500A
- Built-in LAN (L)XI 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 10kW and 15kW
- Parallel Systems (up to 30kW) with Auto-Configure
- Worldwide Safety Agency approvals
- CE Mark for Low Voltage, EMC and RoHS3 Directives
- Five year warranty

# **Applications**

**G**ENESYS<sup>™</sup> power supplies have been designed to meet the demands of a wide variety of applications.

Test & Measurement systems, Component Device Testing, Manufacturing and process control.

Semiconductor Processing & Burn-In, Aerospace & Satellite Testing, Medical Imaging, Green Technology.

**Higher power systems** can be configured with up to six 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.

# **G1kW-5kW Front Panel Description**



- 1. Input Power ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable Detent Encoders for settings and Menu navigation.
- 4. High Contrast/Brightness display with wide viewing angle, 16 segment LCD
- 5. Function/Status LEDs: Active modes and function indicators
- 6. Pushbuttons allow flexible user configuration

# **G1kW-5kW Rear Panel Description**



- 1. Isolated Analog Programming, Monitoring and other control connector (DB26 Female)
- 2. USB Interface connector (Type B).
- 3. RS-232/RS-485 IN/OUT Remote Digital Interface (RJ-45 type) for Multi-Drop connection
- 4. LAN (LXI 1.5) Interface connector (RJ-45 type with LAN status indicators).
- 5. Auto paralleling Bus connectors (mini I/O type) for connecting Master Unit-to-Slave and Slave Unit-to-Slave unit.
- 6. Remote/Local Output Voltage Sense Connections (spring cage).
- 7. Output Connections: Rugged busbars (shown) for models up to and including 100V Output; Plug connector: PHOENIX CONTACT IPC 5/4-STF-7.62 for models with Outputs >100V.
- 8. G2.7kW / G3.4kW / G5kW AC Input: 208VAC, 400VAC & 480VAC, Three Phase, 50/60 Hz. (Model shown) AC Input Plug Connector: PHOENIX CONTACT Power Combicon PC 5/4-STCL1-7.62 Series with strain relief. G1.7kW / G2.7kW / G3.4kW AC Input Single Phase, 50/60 Hz. AC Input Plug Connector: PHOENIX CONTACT Power Combicon PC 5/3-STCL1-7.62 Series with strain relief. G1kW AC Input Connector: IEC320 C16.
- 9. Optional Interface Position for IEEE 488.2 SCPI or AnyBus Interface.
- 10. Exhaust air assures reliable operation when units are zero stacked.
- 11. Functional Ground connection (M4x8mm stud).
- 12. Reset button. Set default Power Supply settings.

# **GSP10kW Front Panel Description**



- 1. Input Power ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable Detent Encoders for settings and Menu navigation.
- 4. High Contrast/Brightness display with wide viewing angle, 16 segment LCD
- 5. Function/Status LEDs: Active modes and function indicators
- 6. Pushbuttons allow flexible user configuration

# **GSP10kW Rear Panel Description**



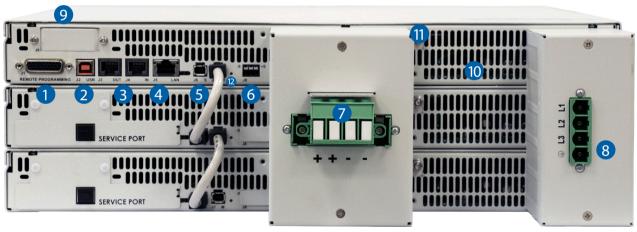
- 1. Isolated Analog Programming, Monitoring and other control connector (DB26 Female)
- 2. USB Interface connector (Type B).
- 3. RS-232/RS-485 IN/OUT Remote Digital Interface (RJ-45 type) for Multi-Drop connection
- 4. LAN (LXI 1.5) Interface connector (RJ-45 type with LAN status indicators).
- 5. Auto paralleling Bus connectors (mini I/O type) for connecting Master unit-to-Slave and Slave unit-to-Slave unit.
- 6. Remote/Local Output Voltage Sense Connections (spring cage).
- 7. Output Connections: Rugged busbars (shown) for models up to and including 100V Output; Plug connector: PHOENIX CONTACT DFK-IPC 16/4-STF-10.16 for models with Outputs >100V.
- 8. Input: 208VAC, 400VAC & 480VAC Three Phase, 50/60 Hz. AC Input Plug Connector: PHOENIX CONTACT DFK-IPC 16/4-STF-10.16 with strain relief.
- 9. Optional Interface Position for IEEE 488.2 SCPI or AnyBus Interface.
- 10. Exhaust air assures reliable operation when zero stacked.
- 11. Functional Ground connection (M4x8mm stud).
- 12. Reset button. Set default Power Supply settings.

# **GSP15kW Front Panel Description**



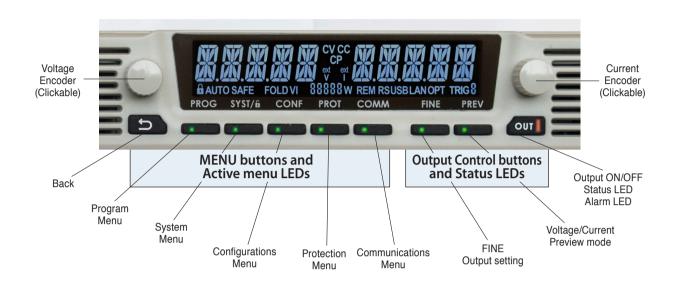
- 1. Input Power ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable Detent Encoders for settings and Menu navigation.
- 4. High Contrast/Brightness display with wide viewing angle, 16 segment LCD
- 5. Function/Status LEDs: Active modes and function indicators
- 6. Pushbuttons allow flexible user configuration

# **GSP15kW Rear Panel Description**

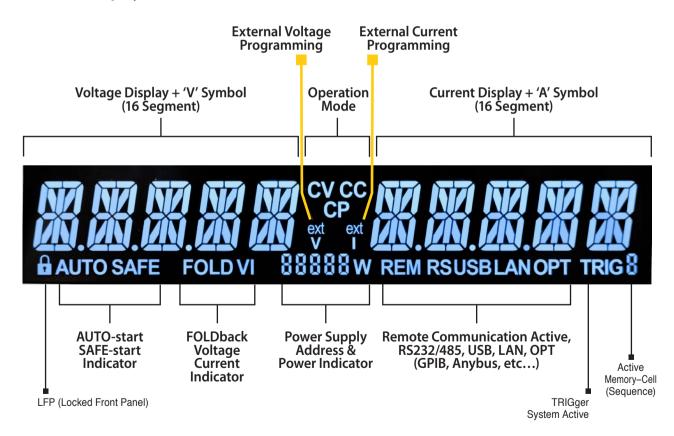


- 1. Isolated Analog Programming, Monitoring and other control connector (DB26 Female)
- 2. USB Interface connector (Type B).
- 3. RS-232/RS-485 IN/OUT Remote Digital Interface (RJ-45 type) for Multi-Drop connection
- 4. LAN (LXI 1.5) Interface connector (RJ-45 type with LAN status indicators).
- 5. Auto paralleling Bus connectors (mini I/O type) for connecting Master unit-to-Slave and Slave unit-to-Slave unit.
- 6. Remote/Local Output Voltage Sense Connections (spring cage).
- Output Connections: Rugged busbars for models up to and including 100V Output;
   Plug connector: PHOENIX CONTACT DFK-IPC 16/4-STF-10.16 for models with Outputs >100V (shown).
- Input: 208VAC, 400VAC & 480VAC Three Phase, 50/60 Hz.
   AC Input Plug Connector: PHOENIX CONTACT DFK-PC 16/4-ST-10.16 with strain relief.
- 9. Optional Interface Position for IEEE 488.2 SCPI or AnyBus Interface.
- 10. Exhaust air assures reliable operation when zero stacked.
- 11. Functional Ground connection (M4x8mm stud).
- 12. Reset button. Set default Power Supply settings.

# **Front Panel Display MENU/CONTROL buttons:**



# **Front Panel Display indicators**



# GENESYS<sup>™</sup> G&GSP Series Blank Front Panel (ATE version) POWER (LED) POWER (LED) OUT (LED) REM (LED) OUT (LED) REM (LED) OUT (LED) REM (LED) OUT (LED) REM (LED)

A Blank Front Panel is available for applications where the front panel display and controls are not required and only remote interface (Digital/Analog) is needed.

The Blank Front Panel option has all the standard product functions and features except the display.

The power supply can be controlled via the rear panel Remote digital interface

(LAN, USB, RS-232/RS-485) or via the remote Isolated Analog interface.

# **G**ENESYS<sup>™</sup> Parallel and Series Configurations

# Parallel operation - Master/Slave:

Auto paralleling Scalable Master-Slave Operation. Active current sharing allows up to six identical units to be connected

Total real current is programmed measured and reported by the Master. Up to six supplies operate as one.

Separate Parallel Kit available for 30kW (6 unit) systems allowing easy system setup.

Order P/N: G/P - 6U

# **Series operation**

Two units may be connected in series to increase the output voltage or to provide bipolar output. (Max 600V to Chassis Ground).

# **Multi-Drop Remote Programming via Communication Interface**

Standard Built-in LAN, USB, RS-232 & RS-485 allows "Multi-Drop" daisy-chain control of up to 31 Power supplies on the same communication bus. Can be Daisy chained via built-in RS-485 Interface.

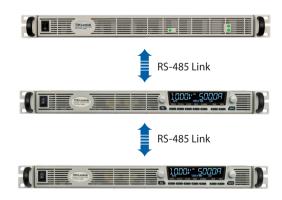
- First unit is LAN, USB, RS-232, RS-485, etc.
- All other units use RS-485 daisy chain with linking cable.





Standard Unit - zero stacked up to 6 units

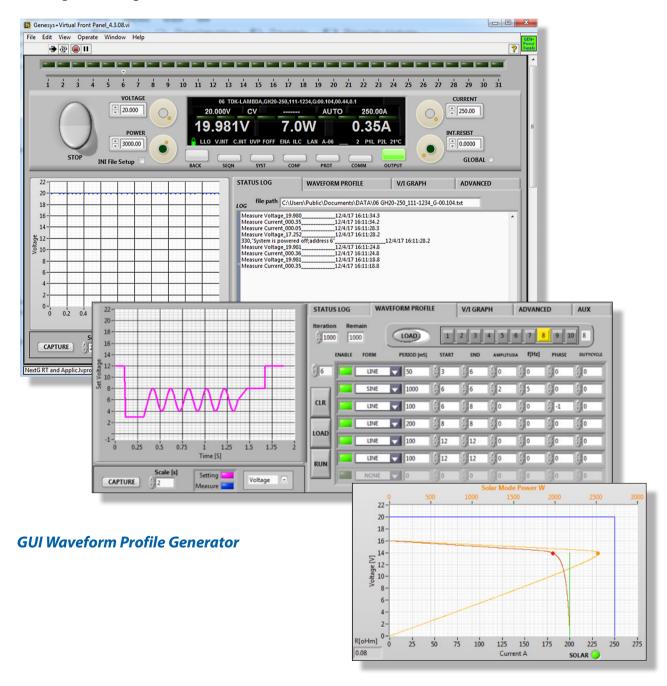




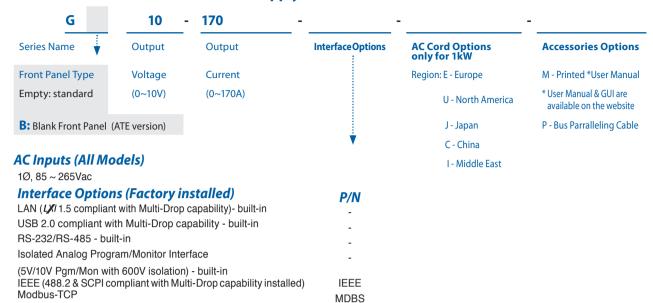
# **Graphical User Interface**

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.
- 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 G1kW/1.7kW - Power Supply Identification / Accessories



**ECAT** 

# **Models 1kW**

EtherCAT

Model	Voltage (V)	Current (A)	Power (W)
G10-100	0~10V	0~100	1000
G20-50	0~20V	0~50	1000
G30-34	0~30V	0~34	1020
G40-25	0~40V	0~25	1000
G60-17	0~60V	0~17	1020

Model	Voltage (V)	Current (A)	Power (W)
G80-12.5	0~80V	0~12.5	1000
G100-10	0~100V	0~10	1000
G150-7	0~150V	0~7	1050
G300-3.5	0~300V	0~3.5	1050
G600-1.7	0~600V	0~1.7	1020

# Models 1.7kW

Model	Voltage (V)	Current (A)	Power (W)
G10-170	0~10V	0~170	1700
G20-85	0~20V	0~85	1700
G30-56	0~30V	0~56	1680
G40-42	0~40V	0~42	1680
G60-28	0~60V	0~28	1680

Model	Voltage (V)	Current (A)	Power (W)
G80-21	0~80V	0~21	1680
G100-17	0~100V	0~17	1700
G150-11.2	0~150V	0~11.2	1680
G300-5.6	0~300V	0~5.6	1680
G600-2.8	0~600V	0~2.8	1680

# **Accessories**

Accessories will be sent separately from the Power Supply packing, according to order.

**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
PC Connector, Communication Cable, Power Supply Connector	DB-9F. Shielded L=2m. RJ-45	DB-9F. Shielded L=2m, RJ-45
P/N	GEN/485-9	GEN/232-9

# 2. Serial link cable (Included with the power supply)

Daisy-chain up to 31 **GENESYS**<sup>™</sup> power supplies.

Mode	Power Supply Connector	Communication Cable	P/N
RS-485	RJ-45	Shielded L=50cm	GEN/RJ45

# 3. Bus Paralleling cable

Connectors	Cables	P/N
2013595-1 (TYCO)	Shielded L=11cm	G/P

### 4. User Manual

Printed User Manual	G/M

**Accessories Options** 

M - Printed \*User Manual \* User Manual & GUI are

available on the website

# How to order G2.7kW / 3.4kW - Power Supply Identification / Accessories

G 10 340 Series Name Output Output **Interface Options** Front Panel Type Voltage Current (0~10V) Empty: standard (0~340A) **B:** Blank Front Panel (ATE version)

**Interface Options (Factory installed)** 

LAN (LXI 1.5 compliant with Multi-Drop capability)- built-in USB 2.0 compliant with Multi-Drop capability - built-in RS-232/RS-485 - built-in Isolated Analog Program/Monitor Interface (5V/10V Pgm/Mon with 600V isolation) - built-in

IEEE (488.2 & SCPI compliant with Multi-Drop capability installed) Modbus-TCP

EtherCAT

# **AC Input Options**

1P208 (Single Phase 170~265VAC) 3P208 (Three Phase 170~265VAC) 3P400 (Three Phase 342~460VAC)

3P480 (Three Phase 342~528VAC)

P - Bus Parralleling Cable

# P<sup>'</sup>/N

**IEEE MDBS ECAT** 

# Models G2.7kW

Model	Output Voltage VDC	Output Current ( A )	Output Power (W)
G10-265	0~10V	0~265	2650
G20-135	0~20V	0~135	2700
G30-90	0~30V	0~90	2700
G40-68	0~40V	0~68	2720
G60-45	0~60V	0~45	2700

Model	Output Voltage VDC	Output Current ( A )	Output Power ( W )
G80-34	0~80V	0~34	2720
G100-27	0~100V	0~27	2700
G150-18	0~150V	0~18	2700
G300-9	0~300V	0~9	2700
G600-4.5	0~600V	0~4.5	2700

# Models G3.4kW

Model	Output Voltage VDC	Output Current ( A )	Output Power ( W )
G10-340	0~10V	0~340	3400
G20-170	0~20V	0~170	3400
G30-112	0~30V	0~112	3360
G40-85	0~40V	0~85	3400
G60-56	0~60V	0~56	3360

Model	Output Voltage VDC	Output Current ( A )	Output Power (W)
G80-42	0~80V	0~42	3360
G100-34	0~100V	0~34	3400
G150-22.5	0~150V	0~22.5	3375
G300-11.5	0~300V	0~11.5	3450
G600-5.6	0~600V	0~5.6	3360

# **Accessories**

Accessories will be sent separately from the Power Supply packing, according to order.

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
PC Connector, Communication Cable, Power Supply Connector	DB-9F. Shielded L=2m. RJ-45	DB-9F. Shielded L=2m, RJ-45
P/N	GEN/485-9	GEN/232-9

# 2. Serial link cable (Included with the power supply)

Daisy-chain up to 31 **GENESYS**<sup>™</sup> power supplies.

Mode	Power Supply Connector	Communication Cable	P/N
RS-485	RJ-45	Shielded L=50cm	GEN/RJ45

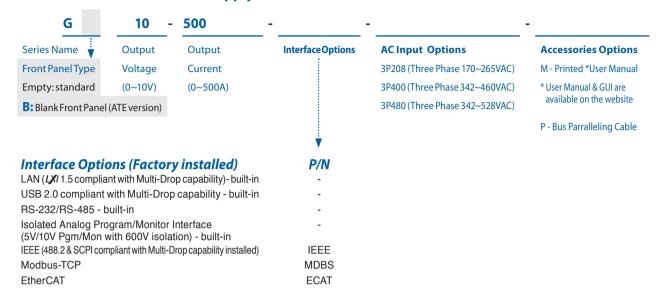
# 3. Bus Paralleling cable

Connectors	Cables	P/N
2013595-1 (TYCO)	Shielded L=11cm	G/P

# 4. User Manual

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	Printed User Manual	G/M

# How to order G5kW - Power Supply Identification / Accessories



# **Models 5kW**

Model	Voltage (VDC)	Current (A)	Power (W)
G10-500	0~10V	0~500	5000
G20-250	0~20V	0~250	5000
G30-170	0~30V	0~170	5100
G40-125	0~40V	0~125	5000
G50-100	0~100V	0~100	5000
G60-85	0~60V	0~85	5100
G80-65	0~80V	0~65	5200

Model	Voltage (VDC)	Current (A)	Power (W)
G100-50	0~100V	0~50	5000
G150-34	0~150V	0~34	5100
G200-25	0~200V	0~25	5000
G300-17	0~300V	0~17	5100
G400-13	0~400V	0~13	5200
G500-10	0~500V	0~10	5000
G600-8.5	0~600V	0~8.5	5100

# **Accessories**

Accessories will be sent separately from the Power Supply packing, according to order.

# 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
PC Connector Communication Cable Power Supply Connector	DB-9F Shielded L=2m RJ-45	DB-9F Shielded L=2m RJ-45
P/N	GEN/485-9	GEN/232-9

# 2. Serial link cable (Included with the power supply)

Daisy-chain up to 31 **GENESYS™** power supplies.

Mode	Power Supply Connector	Communication Cable	P/N
RS-485	RJ-45	Shielded L=50cm	GEN/RJ45

# 3. Bus Paralleling cable

Connectors	Cables	P/N
2013595-1 (TYCO)	Shielded L=11cm	G/P

# 4. User Manual

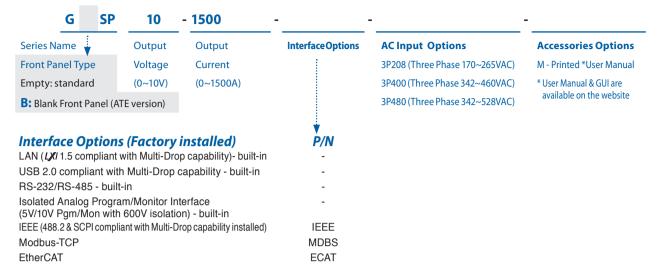
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Printed User Manual	G/M

# 5. Parallel Kit: 20kW/30kW

G/P-4U: BusBar Parallel Kit for 20 kW operation (5kW Models where Vout up to 100V)

G/P-6U: BusBar Parallel Kit for 30 kW operation (5kW Models where Vout up to 100V)

# How to order GSP10kW-15kW - Power Supply Identification / Accessories



# Models GSP 10kW

Model	Voltage (VDC)	Current (A)	Power (kW)
GSP10-1000	0~10V	0~1000	10
GSP20-500	0~20V	0~500	10
GSP30-340	0~30V	0~340	10.2
GSP40-250	0~40V	0~250	10
GSP50-200	0~50V	0~200	10
GSP60-170	0~60V	0~170	10.2
GSP80-130	0~80V	0~130	10.4

Model	Voltage (VDC)	Current (A)	Power (kW)
GSP100-100	0~100V	0~100	10
GSP150-68	0~150V	0~68	10.2
GSP200-50	0~200V	0~50	10
GSP300-34	0~300V	0~34	10.2
GSP400-26	0~400V	0~26	10.4
GSP500-20	0~500V	0~20	10
GSP600-17	0~600V	0~17	10.2

# **Models GSP 15kW**

Model	Voltage (VDC)	Current (A)	Power (kW)
GSP10-1500	0~10V	0~1500	15
GSP20-750	0~20V	0~750	15
GSP30-510	0~30V	0~510	15.3
GSP40-375	0~40V	0~375	15
GSP50-300	0~50V	0~300	15
GSP60-255	0~60V	0~255	15.3
GSP80-195	0~80V	0~195	15.6

Model	Voltage (VDC)	Current (A)	Power (kW)
GSP100-150	0~100V	0~150	15
GSP150-102	0~150V	0~102	15.3
GSP200-75	0~200V	0~75	15
GSP300-51	0~300V	0~51	15.3
GSP400-39	0~400V	0~39	15.6
GSP500-30	0~500V	0~30	15
GSP600-25.5	0~600V	0~25.5	15.3

# **Accessories**

Accessories will be sent separately from the Power Supply packing, according to order.

# 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
PC Connector	DB-9F	DB-9F
Communication Cable	Shielded L=2m	Shielded L=2m
Power Supply Connector	RJ-45	RJ-45
P/N	GEN/485-9	GEN/232-9

# 2. Bus Paralleling cable (Included with the power supply)

Connectors	Cables	P/N
2013595-1 (TYCO)	Shielded L=11cm	G/P

## 3. User Manual

Printed User Manual	G/M

# **G**ENESYS<sup>™</sup> Family Output Voltage and Current

Models Series		G (Std Front Panel Display) GB (Blank Front Panel Display)					ble Power) able Power)
Rated Power	1kW	1.7kW	2.7kW	3.4kW	5kW	10kW	15kW
Voltage Range			Cı	ırrent Range (	(A)		
0-10V	0~100A	0~170A	0~265A	0~340A	0~500A	0~1000A	0~1500A
0-20V	0~50A	0~85A	0~135A	0~170A	0~250A	0~500A	0~750A
0-30V	0~34A	0~56A	0~90A	0~112A	0~170A	0~340A	0~510A
0-40V	0~25A	0~42A	0~68A	0~85A	0~125A	0~250A	0~375A
0-50V	-	-	-	-	0~100A	0~200A	0~300A
0-60V	0~17A	0~28A	0~45A	0~56A	0~85A	0~170A	0~255A
0-80V	0~12.5A	0~21A	0~34A	0~42A	0~65A	0~130A	0~195A
0-100V	0~10A	0~17A	0~27A	0~34A	0~50A	0~100A	0~150A
0-150V	0~7A	0~11.2A	0~18A	0~22.5A	0~34A	0~68A	0~102A
0-200V	-	-	-	-	0~25A	0~50A	0~75A
0-300V	0~3.5A	0~5.6A	0~9A	0~11.5A	0~17A	0~34A	0~51A
0-400V	-	-	-	-	0~13A	0~26A	0~39A
0-500V	-	-	-	-	0~10A	0~20A	0~30A
0-600V	0~1.7A	0~2.8A	0~4.5A	0~5.6A	0~8.5A	0~17A	0~25.5A
Weight (kg/lb)	5/11	5/11	6.25/14.3	6.25/14.3	7.5/16.5	15.5/34.2	23.5/51.8

**AC Input Range** 

7131119							
Rated Power	1kW	1.7kW	2.7kW	3.4kW	5kW	10kW	15kW
1Ø, 85-265Vac	*	*	N/A	N/A	N/A	N/A	N/A
1Ø, 170-265Vac			*	*	N/A	N/A	N/A
3P208	N/A	N/A	*	*	*	*	*
3P400	N/A	N/A	*	*	*	*	*
3P480	N/A	N/A	*	*	*	*	*

# Also available GH 1kW/1.5kW Series Half-Rack 1kW/1.5kW in 1U Height



# **Models 1kW**

Model	Voltage (V)	Current (A)	Power (W)
GH10-100	0~10V	0~100	1000
GH20-50	0~20V	0~50	1000
GH30-34	0~30V	0~34	1020
GH40-25	0~40V	0~25	1000
GH60-17	0~60V	0~17	1020

Model	Voltage (V)	Current (A)	Power (W)
GH80-12.5	0~80V	0~12.5	1000
GH100-10	0~100V	0~10	1000
GH150-7	0~150V	0~7	1050
GH300-3.5	0~300V	0~3.5	1050
GH600-1.7	0~600V	0~1.7	1020

# **Models 1.5kW**

Model	Voltage (V)	Current (A)	Power (W)
GH10-150	0~10V	0~150	1500
GH20-75	0~20V	0~75	1500
GH30-50	0~30V	0~50	1500
GH40-38	0~40V	0~38	1520
GH60-25	0~60V	0~25	1500

Model	Voltage (V)	Current (A)	Power (W)
GH80-19	0~80V	0~19	1520
GH100-15	0~100V	0~15	1500
GH150-10	0~150V	0~10	1500
GH300-5	0~300V	0~5	1500
GH600-2.6	0~600V	0~2.6	1560

# **G**ENESYS™ 1kW SERIES SPECIFICATIONS

OUTPUT RATING	G	10-100	20-50	30-34	40-25	60-17	80-12.5	100-10	150-7	300-3.5	600-1.7
1.Rated output voltage(*1)	V	10	20	30	40	60	80	100	150	300	600
2.Rated output current (*2)	Α	100	50	34	25	17	12.5	10	7	3.5	1.7
3.Rated output power	W	1000	1000	1020	1000	1020	1000	1000	1050	1050	1020
INPUT CHARACTERISTICS	٧	10	20	30	40	60	80	100	150	300	600
1.Input voltage/freq. (*3)			ontinuous, 47	~63Hz,Single	Phase						
2. Maximum Input current at 100% load (100/200)	Α	12.5/6.5									
3.Power Factor (Typ) 4.Efficiency at 100 Vac/200Vac, rated output (*17)	%	0.99 @ 100Va 86/88	c 0.98 @ 200 87/89	Vac, rated out 87/89	put power. 87/89	87/89	87/89	88/90	88/90	88/90	88/90
5.Inrush current (*5)	70 A	Less than 50A		0//09	0//09	0//09	0//09	00/90	00/90	00/90	00/90
	-		1						450		
CONSTANT VOLTAGE MODE	V	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*6) 2.Max. Load regulation (*7)			d output volta d output volta	-							
3.Ripple and noise (p-p, 20MHz) (*8)	mV	50	50	50	60	60	75	75	75	120	500
4.Ripple r.m.s. 5Hz~1MHz (*8)	mV	6	6	6	7	7	10	12	9	20	100
5.Temperature coefficient	PPM/°C			ut voltage, foll				12		20	100
6.Temperature stability				hrs interval fol				e. load & temr	n.		
7. Warm-up drift				utput voltage+							
8.Remote sense compensation/wire (*10)	V	2	2	5	5	5	5	5	5	5	5
9.Up-prog. Response time (*11)	mS	35	35	35	35	35	35	40	50	100	100
Full load (*12)	mS	35	30	60	60	60	60	80	120	220	220
10.Down-prog.response time: No load (*12)	mS	500	700	1000	1200	1500	1700	2600	2900	4600	4600
11.Transient response time	mS	Time for outp	out voltage to	recover withir	0.5% of its ra	ted output fo	r a load chang	e 10~90% of r	rated output o	urrent. Output	set-point:
				s than 1mS, for	models up to	and including	100V. 2mS, fo	r models abo	ve 100V.		
12.Start up delay	Sec	Less than 6 Se	2C		22	man from to 1	ad autor :				
13.Hold-up time	mS				201	ms typical, rat	ed output pov	ver			
CONSTANT CURRENT MODE	٧	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*6)		0.02% of rate	d output curr	ent. +2mA							
2.Max. Load regulation (*9)		0.02% of rate	d output curr	ent. +5mA							
3.Ripple r.m.s. @ rated voltage. B.W 5Hz~1MHz. (*13)	mA	≤420	≤160	≤100	≤60	≤50	≤30	≤20	≤10	≤8	≤5
5.Temperature coefficient	PPM/°C			om rated outp							
Shemperature esemblent				m rated outpu							,
6.Temperature stability				rs. interval foll					-		
7. Warm-up drift		_		n +/-0.25% of r					n.		
·		150V~600V: L	ess than +/-0	.15% of rated o	utput current	over 30 minu	tes following p	oower on.		,	
ANALOG PROGRAMMING AND MONITORING (ISOLATED	FROMT	HE OUTPUT)									
1.Vout voltage programming		0~100%, 0~5	V or 0~10V, us	ser selectable.	Accuracy and	linearity: +/-0	.15% of rated \	/out.			
2.lout voltage programming (*14)		0~100%, 0~5	V or 0~10V, us	ser selectable.	Accuracy and	linearity: +/-0	.4% of rated lo	ut.			
3. Vout resistor programming		0~100%, 0~5	/10Kohm full	scale, user sele	ctable. Accura	acy and linear	ity: +/-0.5% of	rated Vout.			
4.lout resistor programming (*14)		0~100%, 0~5	/10Kohm full:	scale, user sele	ctable. Accura	acy and linear	ity: +/-0.5% of	rated lout.			
5.Output voltage monitor				able. Accuracy							
6.Output current monitor (*14)		0~5V or 0~10	V, user select	able. Accuracy	: +/-0.5% of ra	ted lout.					
SIGNALS AND CONTROLS (ISOLATED FROM THE OUTPU	T)										
1. Power supply OK #1 signal		Power supply	output moni	itor. Open colle	ector. Output (	On: On. Outpu	ıt Off: Off. Max	imum Voltag	e: 30V, Maxim	um Sink Curre	nt: 10mA.
2. CV/CC signal		CV/CC Monite	or. Open colle	ctor. CC mode	: On. CV mode	: Off. Maximu	m Voltage: 30\	/, Maximum S	ink Current: 1	0mA.	
3. LOCAL/REMOTE Analog control		Enable/Disab	le analog pro	gramming cor	ntrol by electri	ical signal or d	ry contact. Re	mote: 0~0.6V	or short. Loca	al: 2~30V or op	en.
4. LOCAL/REMOTE Analog signal		analog progr	amming contr	ol monitor sigi	nal. Open colle	ector. Remote:	On. Local: Off.	Maximum Vo	ltage: 30V, Ma	ximum Sink Cu	rrent: 10mA.
5. ENABLE/DISABLE signal		Enable/Disab	le PS output l	by electrical sig	gnal or dry cor	ntact. 0~0.6V	or short, 2~30\	V or open. Use	er selectable l	ogic.	
6. INTERLOCK (ILC) control				by electrical si	-						
7. Programmed signals				nable signals. N							
8. TRIGGER IN / TRIGGER OUT signals										level input =	5V positive
9. DAISY_IN/SO control signal				ninimum. Tr,T 5V/2~30V or dr		iuiii, iviin del	ay between 2	<sub>ε</sub> puises Ims			
10. DAISY_OUT/PS_OK #2 signal				ov/2~30v or dr oedance)=Fail	y conidct.						
-		V~JV~UN, UV	(2000) IIII	Jedancej=Fdll							
FUNCTIONS AND FEATURES											
1. Parallel operation		· ·		units in Master			ction manual.				
2. Series operation				ts. Refer to inst							
3. Daisy chain				nected in Dais					.1. 6		
4. Constant power control				a proggramm							
5. Output resistance control				Resistance rar	-						
6. Slew rate control				e and Output fa ne front panel.		rogramming r	ange: 0.0001~	999.99 V/mSe	c. or A/mSec.	Programming	via the
7. Arbitrary waveforms						ells. Activation	n by command	d via the comr	munication po	orts or by the fr	ont panel.
PROGRAMMING AND READBACK (USB, LAN,		10	20	30	40	60	80	100	150	300	600
DC222/40E Optional IEEE (*16) I-4	V										
RS232/485, Optional IEEE (*16) Interfaces)		0.050/ of -at-	d output vela	200							
1.Vout programming accuracy (*15)			d output volta	-	tod output s	rrant					
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14)		0.1% of actua	l output curre	ent+0.2% of rat	ted output cur	rrent					
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution		0.1% of actua 0.002% of rat	l output curre ed output vol	ent+0.2% of rat	ted output cur	rrent					
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution 4.lout programming resolution		0.1% of actua 0.002% of rat 0.002% of rat	l output curre ed output vol ed output cur	ent+0.2% of rat ltage rrent	ted output cur	rrent					
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution 4.lout programming resolution 5.Vout readback accuracy		0.1% of actua 0.002% of rat 0.002% of rat 0.05% of rate	l output curre ed output vol ed output cur ed output volt	ent+0.2% of rat ltage rrent rage	ted output cur	rrent			0.25% of rate	ed output curr	ent
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution 4.lout programming resolution 5.Vout readback accuracy 6.lout readback accuracy (*14)		0.1% of actua 0.002% of rat 0.002% of rat 0.05% of rate 0.2% of rated	l output curre ed output vol ed output cur ed output volt output curre	ent+0.2% of rat ltage rrent tage nt			0.002%	0.011%		ed output curr	
1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution 4.lout programming resolution 5.Vout readback accuracy		0.1% of actua 0.002% of rat 0.002% of rat 0.05% of rate	l output curre ed output vol ed output cur ed output volt	ent+0.2% of rat ltage rrent rage	0.003% 0.005%	0.002% 0.007%	0.002% 0.009%	0.011% 0.011%	0.25% of rate 0.007% 0.015%	ed output curre 0.004% 0.004%	ent 0.002% 0.007`%

# **G**ENESYS<sup>™</sup> 1.7kW SERIES SPECIFICATIONS

OUTPUT RATING	G	10-170	20-85	30-56	40-42	60-28	80-21	100-17	150-11.2	300-5.6	600-2.8
1.Rated output voltage(*1)	V	10	20	30	40	60	80	100	150	300	600
2.Rated output current (*2)	A	170	85	56	42	28	21	17	11.2	5.6	2.8
3.Rated output power	W	1700	1700	1680	1680	1680	1680	1700	1680	1680	1680
INPUT CHARACTERISTICS	V	10	20	30	40	60	80	100	150	300	600
1.Input voltage/freq. (*3)			ontinuous, 47	~63Hz,Single	Phase						
2. Maximum Input current at 100% load (100/200)  3. Power Factor (Typ)	A	20/10	c 0.98 @ 200'	Vac rated out	nut namer						
4.Efficiency at 100 Vac/200Vac, rated output (*19)	%	86/88	87/89	87/89	87/89	87/89	87/89	88/90	88/90	88/90	88/90
5.Inrush current (*5)	A	Less than 50A		07703	07/05	07/07	07/05	00/30	00/30	00/70	00/70
CONSTANT VOLTAGE MODE	V	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*6)			d output volta		40	00	00	100	130	300	000
2.Max. Load regulation (*7)			d output volta	J .							
3.Ripple and noise (p-p, 20MHz) (*8)	mV	50	50	50	60	60	75	75	75	120	500
4.Ripple r.m.s. 5Hz~1MHz (*8)	mV	6	6	6	7	7	10	12	8	20	100
5.Temperature coefficient	PPM/°C	50PPM/°C fro			lowing 30 min	utes warm-up	).				
6.Temperature stability					lowing 30 min			e, load & tem	p.		
7. Warm-up drift		Less than 0.0	1% of rated ou	tput voltage-	-2mV over 30 r	minutes follow	ving power on				
8.Remote sense compensation/wire (*10)	V	2	2	5	5	5	5	5	5	5	5
9.Up-prog. Response time (*11)	mS	20	20	20	20	20	20	25	50	100	100
Full load (*12)	mS	30	30	60	60	60	60	60	120	220	200
10.Down-prog.response time: No load (*12)	mS	450	700	1000	1200	1500	1700	2600	2900	4600	4600
11.Transient response time	mS	Time for outp	out voltage to	recover within	n 0.5% of its ra	ted output fo	r a load chang	e 10~90% of	rated output c	urrent. Outpu	t set-point:
'				tnan ims, foi	models up to	and including	g 100V. 2mS, to	or models abo	ve 100v.		
12.Start up delay	Sec mS	Less than 6 Se	2C		16	me tunical vat	ed output pov				
13.Hold-up time						ilis typicai, rat	eu output pot				
CONSTANT CURRENT MODE	V	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*6)			d output curre								
2.Max. Load regulation (*9)			d output curre								
3.Ripple r.m.s. @ rated voltage. B.W 5Hz~1MHz. (*13)	mA	≤420	≤160	≤100	≤60	≤50	≤30	≤20	≤10	≤8	≤5
5.Temperature coefficient	PPM/°C				out current, fol						
					ut current, follo						
6.Temperature stability					lowing 30 min			-			
7. Warm-up drift					ated output c				on.		
		150V~600V: L	.ess tnan +/-0.	15% of rated o	output current	over 30 minu	tes following	power on.			
ANALOG PROGRAMMING AND MONITORING (ISOLAT	ED FROM T	HE OUTPUT)									
1.Vout voltage programming		0~100%, 0~5	V or 0~10V, us	er selectable.	Accuracy and	linearity: +/-0	.15% of rated \	Vout.			
2.lout voltage programming (*14)					Accuracy and						
3.Vout resistor programming					ectable. Accur		•				
4.lout resistor programming (*14)					ectable. Accur		ity: +/-0.5% of	rated lout.			
5.Output voltage monitor					r: +/-0.5% of ra						
6.Output current monitor (*14)		0~5V or 0~10	V, user selecta	ible. Accuracy	r: +/-0.5 of rate	ed lout.%.					
SIGNALS AND CONTROLS (ISOLATED FROM THE OUT	PUT)										
1. Power supply OK #1 signal		Power supply	output moni	tor. Open coll	ector. Output	On: On. Outpu	ut Off: Off. Max	ximum Voltag	e: 30V, Maxim	um Sink Curre	nt: 10mA.
2. CV/CC signal									Sink Current: 1		
3. LOCAL/REMOTE Analog control									or short. Loca		
4. LOCAL/REMOTE Analog signal									ltage: 30V, Ma		rrent: 10mA.
5. ENABLE/DISABLE signal				•	<del> </del>				er selectable l	ogic.	
6. INTERLOCK (ILC) control				-	gnal or dry co						
7. Programmed signals									hunted by 27\		F) /
8. TRIGGER IN / TRIGGER OUT signals		Maximum lo	ow Ievel inpu r: tw=10us m	ıt voltage = ( ıinimum. Tr l	0.8V,Minimur 「f=1us Maxim	n high level i num, Min del	input voltagi av between	e = 2.5V, Ma: 2 pulses 1m	ximum high l s.	evel input =	5V positive
9. DAISY_IN/SO control signal		By electrical \				, acı	, =====================================	,			
10. DAISY_OUT/PS_OK #2 signal		-	(500ohm imp								
FUNCTIONS AND FEATURES											
		Possible II-	o Aidontical	inite in Master	r/Slave mode.	Dofor to inst	ction manual				
Parallel operation     Series operation		Li ossibile. Ob t			, siave 11100ê.	nerer to instru	iction manual.				
3. Daisy chain		Possible Tura	identical unit	s Refertains	truction manu	ıal					
por outro, crium					truction manu		turn-on and t	turn-off		-	
4 Constant power control	_	Power suppli	es can be con	nected in Dais	sy chain to syn	chronize their			or the front na	nel	
Constant power control     Output resistance control		Power suppli	es can be con tput power to	nected in Dais a proggramn	sy chain to syn ned value. Prog	chronize their gramming via	the communi	cation ports o	or the front pa		
5. Output resistance control		Power supplications out the course the cours	es can be con tput power to es resistance.	nected in Dais a proggramn Resistance ra	sy chain to syn ned value. Pro nge: 1~1000m	chronize their gramming via nΩ. Programm	the communi	cation ports o	ports or the fr	ont panel.	via the
Output resistance control     Slew rate control		Power supplications the our Emulates serior Programmab communications applications are provided to the communication of the communicati	es can be con tput power to les resistance. le Output rise ion ports or th	nected in Dais a proggramn Resistance ra and Output f e front panel.	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. P	chronize their gramming via nΩ. Programm rogramming r	the communi ing via the cor ange: 0.0001~	cation ports on mmunication 999.99 V/mSe	ports or the fr ec. or A/mSec.	ont panel. Programming	
5. Output resistance control		Power supplications the our Emulates serior Programmab communications applications are supplied to the communication of the communicati	es can be con tput power to les resistance. le Output rise ion ports or th	nected in Dais a proggramn Resistance ra and Output f e front panel.	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. P	chronize their gramming via nΩ. Programm rogramming r	the communi ing via the cor ange: 0.0001~	cation ports on mmunication 999.99 V/mSe	ports or the fr	ont panel. Programming	
5. Output resistance control     6. Slew rate control     7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB. LAN.		Power supplications the our Emulates serior Programmab communications applications are supplied to the communication of the communicati	es can be con tput power to les resistance. le Output rise ion ports or th	nected in Dais a proggramn Resistance ra and Output f e front panel.	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. P	chronize their gramming via nΩ. Programm rogramming r	the communi ing via the cor ange: 0.0001~	cation ports on mmunication 999.99 V/mSe	ports or the fr ec. or A/mSec.	ont panel. Programming	
Output resistance control     Slew rate control     Arbitrary waveforms		Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up	es can be cont tput power to les resistance. le Output rise ion ports or th to 100 steps o	a proggramn Resistance ra and Output f e front panel. an be stored	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Programmers in 4 memory c	chronize their gramming via nΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces)	    V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up	es can be coni tput power to es resistance. le Output rise ion ports or th to 100 steps c	a proggramn Resistance rai and Output f e front panel. can be stored	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Programmers in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces) 1. Vout programming accuracy (*15)	   V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 10 0.05% of rate 0.1% of actua	es can be coni tput power to es resistance. le Output rise ion ports or th to 100 steps c	a proggramn Resistance rai and Output fe front panel. an be stored 30 age nt+0.2% of ra	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Prog in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces) 1. Vout programming accuracy (*15) 2. lout programming accuracy (*14)	   V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 10 0.05% of rate 0.1% of actua 0.002% of rat	es can be cont tput power to es resistance. le Output rise on ports or th to 100 steps of 20 d output volta	nected in Dais a proggramn Resistance ra and Output f e front panel. can be stored 30 age nt+0.2% of ra tage	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Prog in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces) 1. Vout programming accuracy (*15) 2. lout programming accuracy (*14) 3. Vout programming resolution	   V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 0.05% of rate 0.1% of actua 0.002% of rat	es can be content to the total content to the series is tance. Ile Output rise on ports or the to 100 steps of the total content to the	nected in Dais a proggramn Resistance ra and Output f e front panel. can be stored  30  age nt+0.2% of ra tage rent	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Prog in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces) 1. Vout programming accuracy (*15) 2. lout programming accuracy (*14) 3. Vout programming resolution 4. lout programming resolution	V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 0.05% of rate 0.1% of actua 0.002% of rat 0.002% of rat	es can be cont tput power to es resistance. le Output rise on ports or th to 100 steps of d output voltal l output curre ed output cur	nected in Dais a proggramn Resistance ra and Output f e front panel. can be stored  30 age nt+0.2% of ra tage rent age	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Prog in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.
5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE (*18) Interfaces) 1.Vout programming accuracy (*15) 2.lout programming accuracy (*14) 3.Vout programming resolution 4.lout programming resolution 5.Vout readback accuracy	V	Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 0.05% of rate 0.1% of actua 0.002% of rat 0.002% of rat	es can be cont tput power to es resistance. le Output rise on ports or th to 100 steps of d output volta I output curre ed output vol ed output cur	nected in Dais a proggramn Resistance ra and Output f e front panel. can be stored  30 age nt+0.2% of ra tage rent age	sy chain to syn ned value. Prog nge: 1~1000m all slew rate. Prog in 4 memory c	chronize their gramming via iΩ. Programm rogramming r ells. Activation	the communi ing via the cor range: 0.0001~ In by command	cation ports on mmunication 1999.99 V/mSed via the com	ports or the freec. or A/mSec.	ont panel. Programming orts or by the fi	ront panel.

# GENESYS™ 1kW/1.7kW SERIES SPECIFICATIONS

PROTECTIVE FUNCTIONS		V	10	20	30	40	60	80	100	150	300	600
1.Foldback protection			Output shut- User presetal	down when pole. Reset by A	ower supply o	hanges mode le in autostart	from CV or P mode, by Po	ower Limit to wer Switch, by	CC mode or fro	om CC or Pow on, by rear pa	er Limit to CV nel or by com	mode. munication.
2.Over-voltage protection (OVP)			Output shut-	down. Reset b	y AC input red	ycle in autost	art mode, by	OUTPUT butte	on, by rear par	el or by comr	nunication.	
3.Over -voltage programming ran-	ge	V	0.5~12	1~24	2~36	2~44.1	5~66.15	5~88.2	5~110.25	5~165.37	5~330.75	5~661.5
4. Over-voltage programming acc	uracy		+/-1% of rate	d output volta	age							
5.Output under voltage limit (UVL	)		Prevents from	n adjusting Vo	out below limi	t. Does not ap	oly in analog	programming	. Preset by fro	nt panel or co	mmunicatior	port.
6.Over temperature protection						y autostart mo	de.					
7. Output under voltage limit (UVL	_)		Prevents adju	ıstment of Vo	ut below limit	•						
8. Output under voltage protectio	on (UVP)		Prevents adjumode, by Pov	istment of Vo ver Switch, by	ut below limit OUTPUT butt	. P.S output tu on, by rear pa	rns Off during nel or by com	g under voltag imunication.	e condition. R	eset by AC inp	out recycle in	autostart
FRONT PANEL												
1.Control functions			Multiple opti	ons with 2 En	coders							
			Vout/lout/Po									
			OVP/UVL/UV	P manual adju	ıst							
			Protection Fu	inctions - OVF	, UVL,UVP, Fol	dback, OCL, EI	NA, ILC					
			Communicat	ion Functions	- Selection of	LAN,IEEE,RS2	32,RS485,USB	or Optional c	ommunication	n interface.		
			Output ON/C									
			Communicat	ion Functions	- Selection of	Baud Rate, Ad	dress, IP and	communicati	on language.			
			Analog Contr	ol Functions -	Selection Vol	tage/resistive	programmin	g, 5V/10V, 5K/	10K programm	ning		
			Analog Moni	tor Functions	- Selection of	Voltage/Curre	nt Monitorin	g 5V/10V.				
2.Display			Vout: 4 digits	, accuracy: 0.0	05% of rated o	utput voltage	+/-1 count.					
			lout: 4 digits,	accuracy: 0.2	% of rated out	put current +/	-1 count.					
3.Front Panel Buttons Indications			OUTPUT ON,	ALARM, PREV	IEW, FINE, COI	MMUNICATION	N, PROTECTIC	N,CONFIGUR	ATION, SYSTEN	A, SEQUENCE	₹.	
4. Front Panel Display Indications			Voltage, Curr (communicat	ent, Power, C\ ion), RS/USB/	V, CC, CP, Exter LAN/IEEE com	nal Voltage, E munication, T	kternal Curre rigger, Load/S	nt, Address, LF Store Cell.	P, Autostart, S	afetstart, Fold	lback V/I, Rer	note
ENVIRONMENTAL CONDITIONS												
1.Operating temperature			0~50°C, 1009	6 load.								
2.Storage temperature			-30~85°C									
3.Operating humidity		%	20~90% RH (	no condensat	ion).							
4.Storage humidity		%		no condensati					-			
5.Altitude						ant dorating 20	1/4/100m or To	dorating 1°C/	100m above 20	200m Non on	orating: 4000	0ft (12000m)
			Operating. It	J00011 (300011	i), output curre	ent derating 2	70/ TOUTH OF TA	derating i C/	TOOTH ADOVE 20	Joonii. Non op	erating. 4000	011 (12000111).
MECHANICAL			I	1. 1. 1.	16 11 0							
1.Cooling					nal fans. Air flo	w direction: f	om Front pai	nel to power s	upply rear			
2.Weight		kg	Less than 5kg									
3.Dimensions (WxHxD)		mm	W: 423, H: 4	3.6, D: 553.2	(Including b		ousbars cove	er) (Refer to 0	Outline drawi	ng).		
4.Vibration			-			t condition Ar	nex C - 2.1.3.	1				
5.Shock			Less than 200	, half sine, 11	mSec. Unit is ι	inpacked.						
SAFETY/EMC												
1. Applicable standards:	Safety G1kW/G1.7kW		UL61010-1, C	SA22.2 No.610	010-1, IEC61010	)-1, EN61010-1			_			
1.1. Interface classification	G1kW/1.7kW		Vout ≤40V M 60≤ Vout≤ 6	odels: Output 00V Models: 0	:, J1,J2,J3,J4,J5 Output, J8 (ser	,J6,J7,J8 (sense nse) are hazaro	e) and ,J9 (cor lous, J1,J2,J3,	nmunication of J4,J5,J6,J7 and	options) are SE d J9 (communi	LV. cation option	s) are SELV	
			Vout ≤40V N	1odels: Input	- Output (SE	LV): 4242VD0	1min, Inpu	t - Ground: 28	335VDC 1min	i.		
1.2 Withstand voltage	G1kW/1.7kW		60V≤Vout≤1	00V Models:	Input - Outpu	,	1min, Input -	SELV: 4242\	/DC 1min, Ou		850VDC 1m	in,
			100 <vout≤6 Output - Gro</vout≤6 	00V Models: ound: 2500VI	Input - Outpu DC 1min, Inpu	ut: 4242VDC ut - Ground: 2	1min, Input - 835VDC 1m	SELV: 4242\ in.	/DC 1min, Ou	ıtput - SELV:	1275VDC 11	nin,
1.3 Insulation resistance			100Mohm at	25°C, 70%RH.	Output to Gro	ound 500VDC						
2.Conducted emmision						nnex H table I	H 1 FCC Part	15-A VCCI-A				
3.Radiated emission			_			nnex H table I			VCCL A			
	EMC (#4)						ı.ə anu n4, f	CC Part 13-A,	VCCI-A			
4. EMC compliance	EMC (*4)		According to	IEC/EN61204-	-3 Industrial er	nvironment						

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

  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 (UL, IEC, etc...) is required, to be described as 100-240Vac (50/60Hz).

  \*4: Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.

  \*5: Not including EMI filter inrush current, less than 0.2mSec.

  \*6: 85~132Vac or 170-265Vac. Constant load.

  \*7: From No-Load to Full-Load, constant input voltage.

  \*8: For 10V-300V models: Measured with JEITA RC-9131C (1:1) probe. For 400~600V model: Measured with 100:1 probe.

  \*9: For load voltage change, equal to the unit voltage rating, constant input voltage.

  \*10: The maximum voltage on the power supply terminals must not exceed the rated voltage.

  \*11: From 10% to 90% of Rated Output Voltage, with rated, resistive load.

  \*12: From 90% to 10% of Rated Output Voltage, with rated, resistive load.

  \*13: For 10V model, the ripple is measured at 20~100% of 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. For other models, the ripple is measured at 10~100% of 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. For other models, the ripple is measured at 10~100% of 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. For other models, the ripple is measured at 10~100% of 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. For other models, the ripple is measured at 10~100% of rated output voltage and rated output current.

# **G**ENESYS<sup>™</sup> 2.7kW SERIES SPECIFICATIONS

					1							
OUTPUT RATING		G	10-265	20-135	30-90	40-68	60-45	80-34	100-27	150-18	300-9	600-4.5
1.Rated output voltage(*1)		V	10	20	30	40	60	80	100	150	300	600
2.Rated output current (*2)		A	265	135	90	68	45	34	27	18	9	4.5
3.Rated output power		w	2650	2700	2700	2720	2700	2720	2700	2700	2700	2700
INPUT CHARACTERISTICS		V	10	20	30	40	60	80	100	150	300	600
					~265Vac, 47~							
1.Input voltage/freg. 3 phase, 3 w	vire + Ground (*4)				2~460Vac, 47~							
imput voltage/freq. 5 phase, 5 w	viic i diodila ( 4)		3-Phase, 480'	/ models: 342	2~528Vac, 47~	63Hz (Covers :	380/400/415/4	40/460/480Va	ic)			
			1-Phase, 200	/ models: 170	~265Vac, 47~	63Hz (Covers 2	200/208/230/2	240Vac)				
	3-Phase, 200V models:		10A @ 200Va	:								
2. Maximum Input current at	3-Phase, 400V models:		5.5A @ 380Va	С								
100% load	3-Phase, 480V models:	1	5.5A @ 380Va									
	1-Phase, 200V models:		16.5A @ 200V									
					30Vac, rated o	itnut nower						
3.Power Factor (Typ)					c, rated outpu							
4.Efficiency (Typ) (*5) (*22)		%	88	89	89.5	90	90	90.5	90.5	90.5	90.5	90.5
5.Inrush current (*6)		A	Less than 50/		05.5	, ,,	, , ,	70.5	70.5	70.5	30.3	70.5
			Less than 507	`								
CONSTANT VOLTAGE MODE		V	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*7)			0.01% of rate	d output volt	age							
2.Max. Load regulation (*8)			0.01% of rate									
3.Ripple and noise (p-p, 20MHz)	(*0)	mV	75	75	75	75	80	80	100	120	200	480
	( ))		8	10	10		15		15			
4.Ripple r.m.s. 5Hz~1MHz (*9)		mV				12		15	15	20	60	100
5.Temperature coefficient		PPM/°C			out voltage, fo							
6.Temperature stability								p. Constant lir		ıp.		
7. Warm-up drift			Less than 0.0	5% of rated o	utput voltage	+2mV over 30	minutes follo	wing power or	n			
8.Remote sense compensation/w	vire (*10)	V	2	2	5	5	5	5	5	5	5	5
9.Up-prog. Response time (*11)		mS	30	30	30	30	50	50	50	50	50	100
	Full load (*11)	mS	50	50	80	80	80	100	100	100	100	200
10.Down-prog.response time:	No load (*12)	mS	450	600	800	900	1100	1300	2100	2000	3200	3100
	110 load ( 12)	1113										
11.Transient response time		mS	10~100% L	out voitage to	recover withi	11 U.5% Of Its 17	ated output fo	or a load chang g 100V. 2mS, f	ge 10~90% of	rated output	current. Outp	ut set-point:
10.0		_			5 (11411 11115, 10	i models up to	and includin	g 100v. 21113, 1	or models ab	ove 100v.		
12.Start up delay		Sec	Less than 6 Se	ec .								
CONSTANT CURRENT MODE		V	10	20	30	40	60	80	100	150	300	600
1.Max. Line regulation (*7)			0.05% of rate			-10	00	00	100	150	300	000
		_										
2.Max. Load regulation (*13)			0.08% of rate									
3.Ripple r.m.s. @ rated voltage. 3-		mA	≤800	≤450	≤300	≤150	≤100	≤70	≤45	≤30	≤12	≤5
4.Ripple r.m.s. @ rated voltage. 1-	-Phase (*14)	mA	≤1200	≤600	≤300	≤300	≤200	≤100	≤60	≤40	≤12	≤8
5 T		PPM/°C	10V~100V	100PPM/°C fi	rom rated out	put current, fo	llowing 30 mi	inutes warm-u	ıp.			
5.Temperature coefficient		PPIVI/ C	150V~600V	70PPM/°C fro	om rated outp	ut current, fol	lowing 30 min	utes warm-up	).			
			0.01% of rate						1 10.			
6.Temperature stability				d lout over 8h	nrs, interval fo	llowina 30 mir	nutes warm-u	p. Constant lin	ne. Ioad & tem	perature.		
6.Temperature stability					nrs. interval fo					•		
6. Temperature stability 7. Warm-up drift			10V~100V mo	del: Less tha	n +/-0.25% of	rated output o	current over 30	0 minutes follo	owing power	•		
			10V~100V mo	del: Less tha	n +/-0.25% of	rated output o	current over 30		owing power	•		
	MONITORING (ISOLATED		10V~100V mo 150V~600V: L	del: Less tha	n +/-0.25% of	rated output o	current over 30	0 minutes follo	owing power	•		
7. Warm-up drift	MONITORING (ISOLATED		10V~100V mo 150V~600V: L THE OUTPUT)	odel: Less than ess than +/-0	n +/-0.25% of 0.15% of rated	rated output o	t over 30 minu	0 minutes follo	owing power power on.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1. Vout voltage programming		 O FROM	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5	odel: Less than ess than +/-0 V or 0~10V, u	n +/-0.25% of 0.15% of rated ser selectable	rated output output output curren	t over 30 minut t inearity: +/-	0 minutes folloutes following 0.15% of rated	owing power power on. Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1. Vout voltage programming 2. lout voltage programming (*15		FROM	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5	odel: Less than .ess than +/-0 V or 0~10V, u: V or 0~10V, u:	n +/-0.25% of 0.15% of rated ser selectable ser selectable	output curren  Accuracy and	t over 30 minut d linearity: +/-0 l linearity: +/-0	0 minutes folloutes following 0.15% of rated 0.4% of rated I	power on.  Vout. out.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND N 1. Vout voltage programming 2. lout voltage programming (*15 3. Vout resistor programming	5)	 D FROM <sup>1</sup> 	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5	odel: Less than .ess than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel	nated output of output curren . Accuracy and . Accuracy and ectable. Accur	t over 30 minu I linearity: +/-0 I linearity: +/-0 racy and linea	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o	owing power power on.  Vout. out. frated Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming (*15 3.Vout resistor programming (*15 4.lout resistor programming (*15	5)	 D FROM <sup>*</sup>  	10V~100V mc 150V~600V: L  THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5	odel: Less than .ess than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full /10Kohm full	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel	Accuracy and Accuracy and Accuracy and ectable. Accuracy ectable. Accuracy	t over 30 minu I linearity: +/-0 I linearity: +/-0 racy and linea	0 minutes folloutes following 0.15% of rated 0.4% of rated I	owing power power on.  Vout. out. frated Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1. Vout voltage programming 2. lout voltage programming 3. Vout resistor programming 4. lout resistor programming 6. lout resistor programming 7. Soutput voltage monitor	5)	 D FROM <sup>1</sup>  	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10	odel: Less than Less than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full /10Kohm full V, user select	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel scale, user sel	Accuracy and ectable. Accuracy and ectable. Accuracy are ectable. Accuracy extended a county: +/-0.5%.	t over 30 minu I linearity: +/-0 I linearity: +/-0 racy and linea	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o	owing power power on.  Vout. out. frated Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming (*15 3.Vout resistor programming (*15 4.lout resistor programming (*15	5)	 D FROM <sup>*</sup>  	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10	odel: Less than Less than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full /10Kohm full V, user select	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel	Accuracy and ectable. Accuracy and ectable. Accuracy are ectable. Accuracy extended a county: +/-0.5%.	t over 30 minu I linearity: +/-0 I linearity: +/-0 racy and linea	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o	owing power power on.  Vout. out. frated Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 3.Vout resistor programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)	5)	 D FROM 1	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10	odel: Less than Less than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full /10Kohm full V, user select	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel scale, user sel	Accuracy and ectable. Accuracy and ectable. Accuracy are ectable. Accuracy extended a county: +/-0.5%.	t over 30 minu I linearity: +/-0 I linearity: +/-0 racy and linea	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o	owing power power on. Vout. out. or rated Vout.	•		
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 3.Vout resistor programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOLA)	5)	D FROM T	10V~100V md 150V~600V: LI THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10	odel: Less than Less than +/-0 V or 0~10V, u: V or 0~10V, u: /10Kohm full V, user select V, user select	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel able. Accuracy able. Accuracy	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +/- racy and linea racy and linea	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o	owing power power on.  Vout. out. frated Vout. frated lout.	on.	num Sink Curr	rent: 10mA
7. Warm-up drift  ANALOG PROGRAMMING AND M 1. Vout voltage programming 2. lout voltage programming (*15 3. Vout resistor programming (*15 5. Output voltage monitor 6. Output voltage monitor 6. Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal	5)	D FROM T	10V~100V md 150V~600V: LI THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10	odel: Less than Less than +/-0 V or 0~10V, u: V or 0~10V, u: V or 0~10Kohm full V ouser select V, user select V output mon	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel able. Accuracy able. Accuracy itor. Open coll	Accuracy and Accur	t over 30 minut linearity: +/- linearity: +/- racy and linearacy and lin	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o ut Off: Off. Ma	vout.  Vout. out. out. if rated Vout. frated lout.	on. ge: 30V, Maxin		rent: 10mA.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming (*15 3.Vout resistor programming (*15 5.Output voltage monitor 6.Output voltage monitor 6.Output current monitor (*15) SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal 2. CV/CC signal	S)  ATED FROM THE OUTPU	DFROM 1 T)	10V~100V mo 150V~600V: L FHE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 Power supply	odel: Less than +/-0 V or 0~10V, u: V or 0~10V, u: V or 0~10V, u: V/10Kohm full V/10Kohm full V, user select V, user select V output mon or. Open colle	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel able. Accuracy able. Accuracy itor. Open coll	Accuracy and Accur	Il linearity: +/-( Il linearity: -/-( Il linearity:	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o ut Off: Off. Ma	Vout. out. out. if rated Vout. frated lout. eximum Volta	ge: 30V, Maxin Sink Current:	10mA.	
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/I 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog control	ATED FROM THE OUTPU	DFROM 1 T)	10V~100V mo 150V~600V: L THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 Power supply CV/CC Monite Enable/Disab	odel: Less than +/-0 V or 0~10V, us	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel able. Accuracy able. Accuracy itor. Open coll ector. CC mode ogramming co	Accuracy and Accuracy and Accuracy and Accuracy and Ectable. Accuracy and Ectable. Accuracy :+/-0.5%. y:+/-0.5%.	I linearity: +/-4 I linearity: +/-4 I linearity: +/-4 I linearity: +/-0 I linearity: -/-0 I linearity:	0 minutes following 0.15% of rated 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o ut Off: Off. Ma um Voltage: 30 dry contact. Re	Vout. out. frated Vout. frated lout. frated lout. frated lout. frated lout.	ge: 30V, Maxin Sink Current: V or short. Loc	10mA. :al: 2~30V or o	pen.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog control 4. LOCAL/REMOTE Analog signal	ATED FROM THE OUTPU	D FROM * T)	10V~100V mo 150V~600V: 1 THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 Power supply CV/CC Monitt Enable/Disal analog progra	odel: Less than +/-0  V or 0~10V, us  V or 0~10V, us  V10Kohm full  V10Kohm full  V10Kohm full  V2, user select  V3, user select  V4 output mon  V5, Open colle  ule analog prosumming contr	n +/-0.25% of 0.15% of rated ser selectable ser selectable scale, user sel scale, user sel able. Accurac able. Accurac citor. Open coll ector. CC mode oggramming co ol monitor sig	Accuracy and Accur	t over 30 minut I linearity: +/-( I linearity: +/-( I linearity: -/-( I linearity: -	0 minutes following 0.15% of rated 0.4% of rated 1 rity: +/-0.5% o rity: +/-0.5% o ut Off: Off. Ma um Voltage: 30 dry contact. Re On. Local: Off.	owing power on.  Vout. out. of rated Vout. If rated lout.  Aximum Volta DV, Maximum emote: 0~0.6 Maximum Vo	ge: 30V, Maxir Sink Current: V or short. Loo	10mA. :al: 2~30V or o ximum Sink Cu	pen.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog contro 4. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal	ATED FROM THE OUTPU	DFROM 1 T)	10V~100V mc 150V~600V: L  THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10  Power supply CV/CC Monite Enable/Disat analog progra	odel: Less than +/-0 V or 0~10V, u: V over select V, user select V, user select V, user select V, user select V output mon oile analog pro mming control ile PS output	n +/-0.25% of 0.15% of rated ser selectable ser selectable ser selectable scale, user sel scale, user sel scale, Accurac able. Accurac cable. Accurac or of pen coll cotor. CC mode or of monitor sig by electrical s	Accuracy and Accur	t over 30 minuted linearity: +/-( linearity: +/-( linearity: +/-( racy and linearacy a	0 minutes following 0.15% of rated 0.4% of rated 0.4% of rated rity: +/-0.5% o rity: +/-0.5% o ut Off: Off. Ma um Voltage: 30 dry contact. Re On. Local: Off.	owing power power on.  Vout. out. if rated Vout. frated lout.  wiximum Volta by, Maximum Modarimum Volvo Vor open. U	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Ma ser selectable	10mA. :al: 2~30V or o ximum Sink Cu	pen.
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7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming 4.lout resistor programming 4.lout resistor programming 6.Output voltage monitor 6.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/1) 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6.INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBA RS232/485, Optional IEEE(*19	ACK (USB, LAN, 0)(*20) Interfaces)	T)	10V-100V mc 150V-600V: I 150V-600V: I 150V-600V: I 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 0~5V or 0~10 0~5V or 0~10 Enable/Disab analog progra Maximum la edge trigge By electrical 1 4~5V=OK, 0V Possible. Up l Possible. Two Power suppli Limits the ou Emulates seri	odel: Less than +/-0 V or 0~10V, use V or 0~10V, use V or 0~10V, use volume to the learning of	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable scale, user sel sca	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the  front panel.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming 4.lout resistor programming 4.lout resistor programming 6.Dutput voltage monitor 6.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog contro 4. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBE RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1) 2. lout programming accuracy (*1)	ACK (USB, LAN, 0)(*20) Interfaces)	T)	10V-100V mc 150V-600V: I 150V-600V: I 150V-600V: I 100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 Power supply CV/CC Monitt Enable/Disak analog progr. Enable/Disak Two open dra Maximum In ledge trigge By electrical \(^1\) 4~5V=OK, 0\(^1\) Possible. Up I Possible. Up I Possible. Two Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up  10 0.05% of rate 0.1% of actual	odel: Less than ess than +/-0  V or 0~10V, us	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable scale, user sel sca	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the  front panel.
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7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming (*15 3.Vout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL) 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBA RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1 2. Iout programming accuracy (*1 3. Vout programming resolution 4. Iout programming resolution	ACK (USB, LAN, 0)(*20) Interfaces)	D FROM*	10V-100V mo 150V-600V: I THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 0~5V or 0~10 Enable/Disatanalog programable Enable/Disatanalog programable Up possible. Up possible. Two Power supplis Limits the ou Emulates seri Programmab 10 0.05% of rate 0.002% of rat	odel: Less than ess than +/-0  V or 0~10V, us  V output mon  Jone colle  Relea nalog pro  Jone colle  Jele PS output the  Jele PS output us  Jele PS output us  Jele PS output no  Jele PS output of  Jele PS output of  Jele PS output of  Jele PS output of  Jele PS output to  J	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable ser selectable scale, user sel scal	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the  front panel.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming 4.lout resistor programming 4.lout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/ 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog control 4. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBA RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1 2.lout programming accuracy (*1 2.lout programming accuracy (*1 3.Vout programming acc	ACK (USB, LAN, 0)(*20) Interfaces)	D FROM*	10V~100V mod 150V~600V: 1  THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~10 0~10 0~10 0~10 0~10 0~10 0~1	odel: Less than +/-0 V or 0~10V, us	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable ser selectable scale, user sel scal	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the  front panel.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 4.lout resistor programming (*15 3.Vout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL) 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBA RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1 2. Iout programming accuracy (*1 3. Vout programming resolution 4. Iout programming resolution	ACK (USB, LAN, 0)(*20) Interfaces)	D FROM*	10V~100V mod 150V~600V: 1  THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~10 0~10 0~10 0~10 0~10 0~10 0~1	odel: Less than ess than +/-0  V or 0~10V, us  V output mon  Jone colle  Relea nalog pro  Jone colle  Jele PS output the  Jele PS output us  Jele PS output	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable ser selectable scale, user sel scal	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the  front panel.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.Jout voltage programming 4.Jout voltage programming 4.Jout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/I 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB/RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1) 2. Jout programming resolution 4. Jout programming resolution 5. Vout readback accuracy 1. Vout vout readback accuracy 1. Vout	ACK (USB, LAN, 0)(*20) Interfaces)	T)	10V~100V mod 150V~600V: 1  THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~10 0~10 0~10 0~10 0~10 0~10 0~1	odel: Less than +/-0 V or 0~10V, us	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable ser selectable scale, user sel scal	Accuracy and Accur	t over 30 minut d linearity: +/-d linearity: +	o minutes following  0.15% of rated 0.4% of rated I 0.4% of rated I 0.4% of rated I rity: +/-0.5% o rity: +/-0.5% o rity: +/-0.5% o  ut Off: Off. Ma am Voltage: 30 dry contact. Re On. Local: Off. or short, 2~30 e: 0~0.6V or sh imum sink cur input voltag lay between  uction manual ir turn-on and a the commun ning via the co range: 0.0001-	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vy, Maximum Volta Vy, Vy, Maximum Volta Vy,	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Maser selectable -30V or open. Shunted by 27 aximum high ss.	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  . Programmin orts or by the	epen.  Irrent: 10mA.  = 5V positive  ag via the  front panel.
7. Warm-up drift  ANALOG PROGRAMMING AND M 1.Vout voltage programming 2.lout voltage programming 3.Vout resistor programming (*15 5.Output voltage monitor 6.Output current monitor (*15)  SIGNALS AND CONTROLS (ISOL/1) 1. Power supply OK #1 signal 2. CV/CC signal 3. LOCAL/REMOTE Analog signal 5. ENABLE/DISABLE signal 6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sign 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB/ RS232/485, Optional IEEE(*19 1.Vout programming accuracy (*1) 3. Vout programming resolution 4. lout programming resolution 5. Vout readback accuracy 6. lout read accura	ACK (USB, LAN, 0)(*20) Interfaces) 16) 15)	T)	10V-100V mc 150V-600V: I THE OUTPUT) 0~100%, 0~5 0~100%, 0~5 0~100%, 0~5 0~5V or 0~10 0~5V or 0~10 0~5V or 0~10 Enable/Disatanalog progra Enable/Dis	odel: Less than #/-0 V or 0~10V, us	n +/-0.25% of n.15% of rated  ser selectable ser selectable ser selectable scale, user sel sca	Accuracy and Accuracy and Accuracy and Accuracy and Ectable. Accure ectable. A	t over 30 minut I linearity: +/-( I linearity: +/-( I linearity: +/-( I linearity: +/-( I linearity: -/-( I linearity: -	0 minutes following 0.15% of rated 0.4% of rated 1 0.5% of rated 1 0.4% of rated 1 0.5% of rated 1 0.6% of rat	owing power power on.  Vout. out. if rated Vout. if rated lout.  Vight and the control of the co	ge: 30V, Maxir Sink Current: V or short. Loc Itage: 30V, Ma ser selectable 30V or open. Shunted by 27 aximum high s.  or the front p n ports or the Gec. or A/mSec	10mA.  cal: 2~30V or o ximum Sink Cu logic.  V zener)  level input =  anel.  front panel.  c. Programmin  orts or by the	epen.  Irrent: 10mA.  = 5V positive  Ing via the front panel.  600

# **G**ENESYS<sup>™</sup> 3.4kW SERIES SPECIFICATIONS

State of captor (correct?)	OUTPUT RATING		G	10-340	20-170	30-112	40-85	60-56	80-42	100-34	150-22.5	300-11.5	600-5.6
A Medical Company   A   39073   790   112   85   56   42   34   225   115   55   130   300   300   310   310   310   300   310   310   300   300   310   310   310   300   310   3													
Page													
The plane of the plane of the Price of the													
Phase, a district mode is a control of sear	INPUT CHARACTERISTICS		V						80	100	150	300	600
MADISTRICATION (1970)   Color   Colo	1.Input voltage/freq. 3 phase, 3 w			3-Phase, 400 3-Phase, 480 1-Phase, 200	V models: 342 V models: 342 V models: 170	~460Vac, 47~( ~528Vac, 47~6	63Hz (Covers 53Hz (Covers :	380/400/415\ 380/400/415/4	40/460/480Va	ac)			
Fig. 1   Final Cont   190   20   30   40   60   80   100   150   30   40   40   40   40   40   40   4	2. Maximum Input current at 100% load	3-Phase, 400V models: 3-Phase, 480V models:		6.5A @ 380Va 6.5A @ 380Va	IC								
### ### ### ### ### ### ### ### ### ##	3 Power Factor (Typ)												
Stands content (**Pi	, ,		0/						00.5	00.5	00.5	00.5	00.5
CORSTANT CURSENT MODE   V   10   20   59   40   60   80   100   150   350   600   600   100   120   200   480	7 . 7,1					89.5	90	90	90.5	90.5	90.5	90.5	90.5
Max. Line regulation (?)													
2							40	60	80	100	150	300	600
Steple and noise     -     20   20   40   50   10   10   20   40   40   50   50   50   50   50   5													
Register.sp. SHMiNE(*9)		(*O)				_	75	00	00	100	120	200	400
		(*9)											
Comparative stability										15	20	00	100
West han a 0.05% of Tated output victings - 2m/d west 30 minutes following power on.	<u> </u>									na load & tam	ın.		
Billiond (**Till)											γ.		
Supplement   File   Incompression   File   Fi		vire (*10)						r			5	5	5
10.Down-progresponse time	-											_	
10.00mm-proj.epsporte Ennies		Full load (*11)											
10-100%_Local sense. Less than 1nS, for models up to and including 100%_ZmS, for models above 100%_TS_2 and including 100%_ZmS_2 and inclu	10.Down-prog.response time:										2000	3000	
10-100%_Local sense. Less than 1nS, for models up to and including 100%_ZmS, for models above 100%_TS_2 and including 100%_ZmS_2 and inclu	11 Transient response time			Time for outp	out voltage to	recover within	n 0.5% of its ra	ted output fo	or a load chang	ge 10~90% of	rated output		
CONSTANT CURRENT MODE				10~100%, Lo	cal sense. Les	than 1mS, for	models up to	and includin	g 100V. 2mS, f	or models ab	ove 100V.	<u>'</u>	-
Likes: Line regulation (**?)	12.Start up delay		Sec	Less than 6 Se	ec								
2. Abas Load regulation (**) 3	CONSTANT CURRENT MODE	,	V	10	20	30	40	60	80	100	150	300	600
All	1.Max. Line regulation (*7)			0.05% of rate	d output curr	ent.							
ARppler m. @ rated voltage. 1-Phase (*14)	2.Max. Load regulation (*13)			0.08% of rate	d output curr	ent.							
10V-100V   100PPM/C from a tested output current, following 30 minutes warm-up.	3.Ripple r.m.s. @ rated voltage. 3-	Phase (*14)	mA	≤800	≤450	≤300	≤150	≤100	≤70	≤45	≤30	≤12	≤5
Simperature coefficient   PPW/C   Commerce   PPW/C   PP	4.Ripple r.m.s. @ rated voltage. 1-	Phase (*14)	mA	≤1200	≤600	≤300	≤300	≤200	≤100	≤60	≤40	≤12	≤8
5.Temperature stability	5 Temperature coefficient		DDM/°C	10V~100V	100PPM/°C fr	om rated outp	out current, fo	llowing 30 m	inutes warm-u	ıp.			
2. Warm-up drift													
ANALOG PROGRAMMING AND MONITORING (ISOLATED FROM THE CUTPUT)  1. TOUR voltage programming	6.Temperature stability												
ANALOG PROGRAMMING AND MONITORING (ISOLATED FROM THE DUTPUT)  1/Yout voltage programming	7. Warm-up drift										on.		
1.10out voltage programming				150V~600V: L	ess than +/-0	.15% of rated o	output curren	t over 30 mini	utes following	power on.			
0-100%, 0-5 / 0 r 0 - 10 / 0, user selectable. Accuracy and linearity: +/-0.5% of rated lout.	ANALOG PROGRAMMING AND I	MONITORING (ISOLATED	FROM 1	HE OUTPUT)									
O-100%, 0-5/10Kohm full scale, user selectable. Accuracy and linearity: +/-0.5% of rated vout.	1.Vout voltage programming			0~100%, 0~5	V or 0~10V, us	er selectable.	Accuracy and	l linearity: +/-	0.15% of rated	Vout.			
4.50ut per voltage monitor		5)											
Soutput voitage monitor   Soutput voitage monitor   Soutput voitage monitor   Soutput current monitor (*15)   SiGNALS AND CONTROLS (ISOLATED FROM THE OUTPUT)	3.Vout resistor programming			0~100%, 0~5	/10Kohm full	scale, user sele	ectable. Accui	racy and linea	rity: +/-0.5% c	f rated Vout.			
SIGNALS AND CONTROL (ISOLATED FROM THE OUTPUT)		5)						racy and linea	rity: +/-0.5% o	f rated lout.			
SIGNALS AND CONTROLS (ISOLATED FROM THE OUTPUT)  1. Power supply OK #1 signal													
1. Power supply OK #1 signal	6.Output current monitor (*15)			0~5V or 0~10	V, user select	able. Accuracy	r: +/-0.5%.						
2. CV/CC Monitor. Open collector. CC mode: On. CV mode: Off. Maximum Voltage: 30V, Maximum Sink Current: 10mA. 3. LOCAL/REMOTE Analog signal 4. LOCAL/REMOTE Analog signal 5. CNABLE Signal 6. InterDisable analog programming control by electrical signal or dry contact. Remote: 0-0.6V or short. Local: 2-30V or open. 5. ENABLE/DISABLE signal 6. InterDisable PS output by electrical signal or dry contact. De. 6V or short. Local: 2-30V or open. User selectable logic. 6. INTERLOCK (ILC) control 7. Programmed signals 7. Two open drain programmable signals was in maximum voltage 25V, Maximum sink current: 10mA. Shunted by 27V zener) 8. TRIGGER IN / TRIGGER OUT signals 8. TRIGGER IN / TRIGGER OUT signals 9. DAISY_IN/SO control signal 1. DAISY_OUT/PS_OK #2 signal 1. DAISY	SIGNALS AND CONTROLS (ISOL	ATED FROM THE OUTPU	T)										
3. LOCAL/REMOTE Analog control	1. Power supply OK #1 signal			Power supply	output moni	itor. Open coll	ector. Output	On: On. Outp	ut Off: Off. Ma	ximum Volta	ge: 30V, Maxin	num Sink Curre	ent: 10mA.
4. LOCAL/REMOTE Analog signal	2. CV/CC signal			CV/CC Monite	or. Open colle	ctor. CC mode	: On. CV mod	e: Off. Maximu	um Voltage: 30	V, Maximum	Sink Current:	10mA.	
5. ENABLE/DISABLE signal		l											
6. INTERLOCK (ILC) control 7. Programmed signals 7. Programmed signals 7. Programmed signals 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT signals 8. TRIGGER OUT signals 9. DAISY_IN/SO control signal 9. DAISY_IN/SO control signal 9. By electrical Voltage: 0-0.6V/2-30V or dry contact. 10. DAISY_OUT/PS_OK #2 signal 9. Possible. Up to 4 identical units in Master/Slave mode. Refer to instruction manual. 9. Desire soperation 9. Desire soperation 9. Dever supplies can be connected in Daisy chain to synchronize their turn-on and turn-off. 9. Constant power control 9. Limits the output power to a programmed value. Programming via the communication ports or the front panel. 9. Frought resistance control 9. Can be control 9. Can be control 9. Can be supplied scan be sorted in 4 memory cells. Activation by command via the communication ports or the front panel. 9. Programmable Output rise and Output fall slew rate. Programming range: 0.0001~999.99 V/mSec. or A/mSec. Programming via the communication ports or the front panel. 9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel. 9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel. 9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel. 9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel. 9. O.05% of rated output voltage 9. O.05% of rated output voltage 9. O.05% of rated output voltage 9. O.005% of rated output voltage 9				5, 5									rrent: 10mA.
7. Programmed signals	5. ENABLE/DISABLE signal											logic.	
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,If=1 us Maximum, Min delay between 2 pulses 1ms.  9. DAISY_IN/SO control signal							gnal or dry co	ntact. Remot	e: 0~0.6V or sh		30V or open.		
edge trigger: tw=10us minimum. Tr,Tf=1us Maximum, Min delay between 2 pulses 1ms.    Possible   Very   Very	7. Programmed signals			iwo open dra	ain programm	anie signals A	American 1	251/ **			Character 11 cm	11/ 1	
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 (5000hm impedance)=Fail  FUNCTIONS AND FEATURES  1. Parallel operation Possible. Up to 4 identical units in Master/Slave mode. Refer to instruction manual.  2. Series operation Possible. Two identical units. Refer to instruction manual.  3. Daisy chain Power supplies can be connected in Daisy chain to synchronize their turn-on and turn-off.  4. Constant power control Limits the output power to a proggrammed value. Programming via the communication ports or the front panel.  5. Output resistance control Emulates series resistance. Resistance ange: 1~1000mΩ. Programming via the communication ports or the front panel.  6. Slew rate control Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  7. Arbitrary waveforms Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  PROGRAMMING AND READBACK (USB, LAN, RS.232/485, Optional IEEE(*19)(*2.0) Interfaces) 0.05% of rated output voltage  2. Lout programming accuracy (*16) 0.05% of rated output voltage  2. Lout programming accuracy (*15) 0.05% of rated output current  3. Vout programming resolution 0.002% of rated output current  5. Vout readback accuracy (*15) 0.2% of rated output current  7. Vout readback resolution (of rated output voltage) 0.05% of rated output current  8. On the date output voltage 0.05% of rated output current  9. On the date output current  9. On the date output voltage  9. On the date output current  9. On the date outp					and the Co								EV :::
10. DAISY_OUT/PS_OK #2 signal	8. TRIGGER IN / TRIGGER OUT sign	nals		Maximum lo	ow level inpu	ut voltage = 0	).8V,Minimu	m high level	input voltac	je = 2.5V, Ma	ximum high		5V positive
FUNCTIONS AND FEATURES  1. Parallel operation		nals		Maximum lo edge trigge	r: tw=10us n	ut voltage = ( ninimum. Tr,1	).8V,Minimu f=1us Maxir	m high level	input voltac	je = 2.5V, Ma	ximum high		5V positive
1. Parallel operation	9. DAISY_IN/SO control signal	nals		Maximum lo edge trigge By electrical <sup>1</sup>	r: tw=10us n Voltage: 0~0.6	ut voltage = 0 ninimum. Tr,1 5V/2~30V or di	).8V,Minimu f=1us Maxir	m high level	input voltac	je = 2.5V, Ma	ximum high		5V positive
2. Series operation	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal	nals		Maximum lo edge trigge By electrical <sup>1</sup>	r: tw=10us n Voltage: 0~0.6	ut voltage = 0 ninimum. Tr,1 5V/2~30V or di	).8V,Minimu f=1us Maxir	m high level	input voltac	je = 2.5V, Ma	ximum high		5V positive
3. Daisy chain	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES	nals		Maximum lo edge trigge By electrical 4~5V=OK, 0V	r: tw=10us n Voltage: 0~0.6 V (500ohm imp	ut voltage = ( ninimum. Tr,7 6V/2~30V or di pedance)=Fail	).8V,Minimu f=1us Maxir ry contact.	m high level num, Min de	input voltag lay between	ge = 2.5V, Ma 2 pulses 1m	ximum high		5V positive
4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms Programmable Output rise and Output fall slew rate. Programming via the communication ports or the front panel. Programmable Output rise and Output fall slew rate. Programming range: 0.0001~999.99 V/mSec. or A/mSec. Programming via the communication ports or the front panel. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE(*19)(*20) Interfaces) 1. Vout programming accuracy (*16) 2. Iout programming accuracy (*15) 3. Vout programming resolution 4. Iout programming resolution 4. Iout programming resolution 4. Iout programming resolution 5. Output current 5. Output current 6. Slew rate. Programming via the communication ports or the front panel.  V 10 20 30 40 60 80 100 150 300 600 1. Vout programming accuracy (*15) 3. Vout readback accuracy 4. Iout programming resolution 4. Iout programming resolution 5. Output current 6. Slew rate output voltage 6. Iout readback accuracy 6. Iout readback accuracy (*15) 7. Vout readback resolution (of rated output voltage) 8. Output current 7. Arbitrary waveforms 9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or the front panel.  9. Output programming range: 0.0001 ~ 999.99 V/mSec. or A/mSec. Programming via the communication ports or the front panel.  9. Output programming resolution by command via the communication ports or the front panel.  9. Output programming resolution to the front panel.  9. O	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation	nals		Maximum kedge trigge By electrical 4~5V=OK, OV  Possible. Up 1	r: tw=10us n Voltage: 0~0.6 (500ohm imp to 4 identical	ut voltage = ( ninimum. Tr,7 5V/2~30V or dr pedance)=Fail units in Master	D.8V,Minimu f=1us Maxir ry contact. r/Slave mode.	m high level num, Min de Refer to instr	input voltag lay between	ge = 2.5V, Ma 2 pulses 1m	ximum high		5V positive
5. Output resistance control  6. Slew rate control  7. Arbitrary waveforms  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Profiles of up to 100 steps can be stored in 4 memory cells. Activation by command via the communication ports or by the front panel.  9. Outprogramming accuracy (*16)  1. Outprogramming accuracy (*15)  1. Outprogramming accuracy (*15)  1. Outprogramming resolution  1. Outprogramming resolution  1. Outprogramming resolution  2. Outprogramming resolution  3. Vout readback accuracy  6. Outprogramming resolution  1. Outprogramming resolution  1. Outprogramming resolution  2. Outprogramming resolution  3. Outprogramming resolution  3. Outprogramming resolution  4. Outprogramming resolution  5. Outprogramming resolution  6. Step in the communication ports or high front panel.  9. Outprogramming resolution (or frated output current)  9. Outprogramming resolution	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation	nals	  	Maximum kedge trigge By electrical 4~5V=OK, OV Possible. Up 1 Possible. Two	r: tw=10us n Voltage: 0~0.6 V (500ohm imp to 4 identical uni	ut voltage = ( ninimum. Tr,7 6V/2~30V or dr pedance)=Fail units in Master ts. Refer to ins	0.8V,Minimu f=1us Maxir ry contact. r/Slave mode. truction man	Refer to instr	input voltag lay between uction manua	ge = 2.5V, Ma 2 pulses 1m	ximum high		5V positive
6. Slew rate control	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain	nals	   	Maximum le edge trigge By electrical ' 4~5V=OK, OV Possible. Up to Possible. Two Power suppli	r: tw=10us n Voltage: 0~0.6 V(500ohm imp to 4 identical uni es can be con	ut voltage = ( ninimum. Tr, 1 6V/2~30V or dr pedance)=Fail  units in Master ts. Refer to ins nected in Dais	D.8V,Minimu  f=1us Maxir  y contact.  r/Slave mode. truction manicy chain to syr	m high level num, Min de Refer to instr ual. nchronize thei	input voltag lay between uction manua ir turn-on and	ge = 2.5V, Ma 2 pulses 1m	ximum high s.	level input =	5V positive
Communication ports or the front panel.	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control	nals	    	Maximum le edge trigge By electrical '4~5V=OK, 0V Possible. Up to Possible. Two Power suppli Limits the ou	r: tw=10us n Voltage: 0~0.6 V (5000hm imp to 4 identical uni es can be con tput power to	ut voltage = ( ninimum. Tr, I 5V/2~30V or di pedance)=Fail  units in Master ts. Refer to ins nected in Dais a proggramn	0.8V,Minimu rf=1us Maxir ry contact. r/Slave mode. truction maning chain to syr ned value. Pro	m high level num, Min de Refer to instr ual. nchronize thei gramming via	input voltag lay between uction manua ir turn-on and a the commun	ge = 2.5V, Ma 2 pulses 1m	ximum high s.	level input =	5V positive
PROGRAMMING AND READBACK (USB, LAN, RS232/485, Optional IEEE(*19)(*20) Interfaces)   V   10   20   30   40   60   80   100   150   300   600	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control	nals	    	Maximum le edge trigge By electrical \(^14 \simple 5V = OK, 0V \) Possible. Up \(^14 \simple 5V = OK, 0V \) Possible. Two \(^14 \simple 5V = OK, 0V \) Power suppli \(^14 \simple 5V = OK, 0V \) Limits the ou \(^14 \simple 5V = OK, 0V \) Emulates seri	r: tw=10us n Voltage: 0~0.6 Voltage:	art voltage = ( ninimum. Tr,T 5V/2~30V or dr pedance)=Fail units in Master ts. Refer to ins nected in Dais a proggramm Resistance rai	D.8V,Minimu rf=1us Maxir ry contact.  r/Slave mode. truction mani ry chain to syr ned value. Pro nge: 1~1000n	m high level num, Min de Refer to instr ual. nchronize thei gramming via nΩ. Programn	input voltag lay between uction manua ir turn-on and a the commun ning via the cc	ge = 2.5V, Ma 2 pulses 1m l. turn-off. ication ports	or the front pa	level input =	
Nout programming accuracy (*15)   Nout readback accuracy (*15)   Nout readback accuracy (*15)   Nout readback resolution (of rated output voltage   Nout readback resolutio	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control	nals	    	Maximum le edge trigge By electrical \(^2\) 4~5V=OK, 0V Possible. Up \(^2\) Possible. Two Power suppli Limits the ou Emulates seri Programmab communicati	r: tw=10us n Voltage: 0~0.6 Voltage:	at voltage = 0 ninimum. Tr,T SV/2~30V or di pedance)=Fail units in Master ts. Refer to ins nected in Dais a proggram Resistance rai a and Output fa er front panel.	0.8V,Minimu rf=1us Maxir ry contact.  r/Slave mode. truction manir ry chain to syr ned value. Pro nge: 1~1000n all slew rate. F	m high level num, Min de num, Min de Refer to instrual. Inchronize their ogramming via programming programming	input voltagilay between  uction manua ir turn-on and a the commun ning via the co	ge = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports pmmunicatior ~999.99 V/mS	or the front pa	anel. front panel. . Programming	y via the
2.lout programming accuracy (*15) 0.1% of actual output current+0.2% of rated output current  3.Vout programming resolution 0.002% of rated output voltage  4.lout programming resolution 0.002% of rated output current  5.Vout readback accuracy (*15) 0.2% of rated output current  7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control	nals	     	Maximum le edge trigge By electrical \(^2\) 4~5V=OK, 0V Possible. Up \(^2\) Possible. Two Power suppli Limits the ou Emulates seri Programmab communicati	r: tw=10us n Voltage: 0~0.6 Voltage:	at voltage = 0 ninimum. Tr,T SV/2~30V or di pedance)=Fail units in Master ts. Refer to ins nected in Dais a proggram Resistance rai a and Output fa er front panel.	0.8V,Minimu rf=1us Maxir ry contact.  r/Slave mode. truction manir ry chain to syr ned value. Pro nge: 1~1000n all slew rate. F	m high level num, Min de num, Min de Refer to instrual. Inchronize their ogramming via programming programming	input voltagilay between  uction manua ir turn-on and a the commun ning via the co	ge = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports pmmunicatior ~999.99 V/mS	or the front pa	anel. front panel. . Programming	y via the
3.Vout programming resolution 0.002% of rated output voltage  4.lout programming resolution 0.002% of rated output current  5.Vout readback accuracy (*15) 0.2% of rated output voltage  6.lout readback accuracy (*15) 0.2% of rated output current  7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB, RS232/485, Optional IEEE(*19	ACK (USB, LAN, )(*20) Interfaces)	     V	Maximum le edge trigge By electrical '4~5V=OK, OV Possible. Up Possible. Two Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up	r: tw=10us n Voltage: 0~0.0 (5000hm imp to 4 identical uni es can be con tput power to ies resistance. Ile Output rise ion ports or th to 100 steps o	at voltage = ( art voltage = ( art voltage = ( by/2~30V or di pedance)=Fail  units in Master ts. Refer to ins nected in Dais a proggramm Resistance rar and Output f ine front panel. can be stored	D.8V,Minimu rf=1us Maxir ry contact.  r/Slave mode. truction manir ry chain to syr ned value. Pro nge: 1~1000n all slew rate. F	m high level num, Min de num,	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
4.lout programming resolution 0.002% of rated output current  5.Vout readback accuracy 0.05% of rated output voltage  6.lout readback accuracy (*15) 0.2% of rated output current  7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB/ RS232/485, Optional IEEE(*19 1. Vout programming accuracy (**	ACK (USB, LAN, )(*20) Interfaces)		Maximum le edge trigge By electrical '4-5V=OK, 0V Possible. Up i Possible. Two Power suppli Limits the ou Emulates ser Emulates ser Programmab communicati Profiles of up 10 0.05% of rate	r: tw=10us n Voltage: 0~0.0 (5000hm imp to 4 identical uni es can be con tput power to tes resistance. le Output rise ion ports or th to 100 steps d output volt.	at voltage = ( aninimum. Tr, TsV/2~30V or di pedance)=Fail  units in Mastei ts. Refer to ins nected in Dais a proggramn Resistance rar a and Output fiel front panel. can be stored	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction mani y chain to syr ned value. Pro nge: 1~1000n all slew rate. F. in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via frogramming via frogramming via frogramming dells. Activation	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
5.Vout readback accuracy 0.05% of rated output voltage 6.lout readback accuracy (*15) 0.2% of rated output current 7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB/ RS232/485, Optional IEEE(*19 1. Vout programming accuracy (*) 2. lout programming accuracy (*)	ACK (USB, LAN, )(*20) Interfaces)		Maximum le edge trigge By electrical '4-5V=OK, 0V Possible. Up i Possible. Two Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 10 0.05% of rate 0.1% of actual	r: tw=10us n voltage: 0~0.1 ((5000hm imp to 4 identical uni es can be con tput power te eis resistance. le Output rise to 100 steps  20 d output volt. l output volt.	art voltage = ( art voltage = ( art voltage = ( by/2~30V or dr by/	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction mani y chain to syr ned value. Pro nge: 1~1000n all slew rate. F. in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via frogramming via frogramming via frogramming dells. Activation	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
6.lout readback accuracy (*15) 0.2% of rated output current 7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms PROGRAMMING AND READB/RS232/485, Optional IEEE(*19) 1. Vout programming accuracy (* 2. lout programming accuracy (* 3. Vout programming resolution	ACK (USB, LAN, )(*20) Interfaces)		Maximum le edge trigge By electrical 14 4-5V=OK, OV Possible. Up 1 Possible. Twe Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 10 .0.05% of rate 0.1% of actual 0.002% of rat	r: tw=10us n voltage: 0~0.1/ (/500ohm imp to 4 identical i identical uni es can be con tput power te es resistance. lee Output rise to 100 steps 20 d output volt. l output curre ed output volre ed output volre	art voltage = ( ininimum. Tr, 1 ininimum. Tr, 2 ininimum. Tr,	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction mani y chain to syr ned value. Pro nge: 1~1000n all slew rate. F. in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via frogramming via frogramming via frogramming dells. Activation	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
7.Vout readback resolution (of rated output voltage) % 0.011% 0.006% 0.004% 0.003% 0.002% 0.002% 0.011% 0.007% 0.004% 0.002%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms PROGRAMMING AND READB, RS232/485, Optional IEEE(*19 1.Vout programming accuracy (* 2.lout programming accuracy (* 3. Vout programming resolution 4. Jout programming resolution 4. Jout programming resolution	ACK (USB, LAN, )(*20) Interfaces)		Maximum le edge trigge By electrical '4-5Y=OK, 00 Possible. Up i Possible. Two Power suppli Limits the ou Emulates ser Programmab communicat Profiles of up 10 0.05% of rate 0.002% of rat 0.002% of r	r: tw=10us n voltage: 0~0.0 ([500ohm im] to 4 identical i identical uni es can be con typut power to es resistance. ele Output rise on ports or ti to 100 steps o d output volt l output curre ed output vol ed output vol ed output curre ed output out ed output curre ed output out ed output curre ed output out ed output curre ed output vol ed output curre	art voltage = ( art voltage = ( brinimum. Tr, 1 brinimum. Tr,	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction mani y chain to syr ned value. Pro nge: 1~1000n all slew rate. F. in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via frogramming via frogramming via frogramming dells. Activation	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms PROGRAMMING AND READBARS232/485, Optional IEEE(*19 1. Vout programming accuracy (*) 2. Iout programming resolution 4. Jout programming resolution 5. Vout readback accuracy	ACK (USB, LAN, )(*20) Interfaces)		Maximum le edge trigge By electrical '4-5V=OK, 0\) Possible. Up i Possible. Two Power suppli Limits the ou Emulates ser Programmab communicat Profiles of up 10 .0.5% of rate 0.01% of actua 0.002% of rate 0.002% of rate 0.002% of rate 0.002% of rate 0.005% of rate 0.05% of rate 0.05	r: tw=10us n voltage: 0~0.0 ((5000hm im) to 4 identical in identical uni es can be con typut power to es resistance. le Output roit to 100 steps  20 d output volt l output curre ed output curre ed output volt ed outp	art voltage = ( art voltage = ( arinimum. Tr, T  SV/2~30V or dr  pedance)=Fail  units in Master  ts. Refer to ins nected in Dais a proggramm  Resistance ran and Output fr ie front panel. can be stored  30  age ent+0.2% of ra tage trent	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction mani y chain to syr ned value. Pro nge: 1~1000n all slew rate. F. in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via frogramming via frogramming via frogramming dells. Activation	uction manua ir turn-on and a the commun ning via the co range: 0.0001	Je = 2.5V, Ma 2 pulses 1m 1. turn-off. ication ports ommunication ~999.99 V/mS	or the front part ports or the lec. or A/mSec	anel. front panel Programming	y via the front panel.
	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB/RS232/485, Optional IEEE(*19 1. Vout programming accuracy (* 2. Jour programming resolution 4. Jout programming resolution 4. Jout programming resolution 5. Vout readback accuracy 6. Jout readback accuracy 6. Jour readback	ACK (USB, LAN, )(*20) Interfaces) 16)		Maximum le edge trigge By electrical '4-5V=OK, 0V Possible. Up i Possible. Two Power suppli Limits the ou Emulates services and the communicati Profiles of up 10 0.05% of rate 0.002% of rat 0.002% of rate 0.005% of rate 0.2% o	r: tw=10us n voltage: 0~0.1c ((5000hm imp to 4 identical uni es can be con tput power te es resistance. le Output rise to 10 utput volt. l output volt. l output volt. l output curre ed output vol utd output curre ed output curre utput curre	art voltage = ( art voltage = ( arinimum. Tr, TsV/2~30V or di pedance)=Fail  units in Mastei ts. Refer to ins nected in Dais a proggramn Resistance rar a and Output fae front panel. can be stored  30 age ent+0.2% of ra tage rerent rage int	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction many y chain to syr ned value. Pro nge: 1~1000 all slew rate. F in 4 memory of	m high level num, Min de Refer to instrual. Refer to instrual. Inchronize their gramming via gramming via rogramming via cells. Activation 60	uction manua ir turn-on and a the commun ning via the co range: 0.0001	ge = 2.5V, Ma 2 pulses 1m l. turn-off. ication ports mmunicatior -999.99 V/mS d via the com	or the front p. or the front p. or the lec. or A/mSec munication p	anel. front panel. Programming	y via the front panel.
8.lout readback resolution (of rated output current)) % 0.004% 0.007% 0.010% 0.002% 0.003% 0.004% 0.004% 0.006% 0.010% 0.003%	9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms PROGRAMMING AND READB/RS232/485, Optional IEEE(*19) 1.Vout programming accuracy (* 3. Vout programming resolution 4. Jout programming resolution 5. Vout readback accuracy (*15) 7. Vout readback accuracy (*15) 7. Vout readback resolution (of ra	ACK (USB, LAN, )(*20) Interfaces) (6) (5)		Maximum le edge trigge By electrical 14 - 5V=OK, 0V Possible. Up 1 Possible. Twe Power suppli Limits the ou Emulates seri Programmab communicati Profiles of up 10 .0.05% of rate 0.002% of rate 0.002% of rate 0.02% of rate 0.02% of rate 0.02% of rate 0.02% of rate 0.01%	r: tw=10us n voltage: 0~0.1 ((5000hm imp to 4 identical i identical uni es can be con tput power te ise resistance. le Output rise to 100 steps  20 d output volt. l output curre ed output vol output cure ed output vol output cure output vol output cure	art voltage = ( ininimum. Tr, 1 ininimum. Tr, 2 ininimum. Tr,	0.8V,Minimu f=1us Maxir y contact.  //Slave mode. truction manu y chain to syr ned value. Pro nge: 1~1000n all slew rate. F in 4 memory of ted output cu 0.003%	m high level num, Min de Refer to instrual.	uction manua ir turn-on and a the commun ning via the co range: 0.0001 on by comman	ge = 2.5V, Ma 2 pulses 1m I. turn-off. iication ports ommunication -999.99 V/mS id via the com	or the front p. p ports or the lec. or A/mSec munication p  150	anel. front panel Programming orts or by the	g via the front panel.

# **G**ENESYS<sup>™</sup> 5kW SERIES SPECIFICATIONS

OUTPUT RATING		c	10 500	20.250	30 170	40 125	50 100	60.05	80 CE	100 50	150 24	200.25	300 17	A00 12	500.10	600 0 7
1.Rated output voltage(*1)		G V	10-500	20-250	30-170 30	40-125	50-100 50	60-85	80-65 80	100-50	150-34 150	200-25	300-17 300	400-13 400	500-10 500	600-8.5
2.Rated output voitage(*1)		A	500 (*3)	250	170	125	100	85	65	50	34	25	17	13	10	8.5
3.Rated output power		W	5000	5000	5100	5000	5000	5100	5200	5000	5100	5000	5100	5200	5000	5100
INPUT CHARACTERISTICS		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
INPOT CHARACTERISTICS		V			dels: 170~2					100	150	200	300	400	300	000
1.Input voltage/freq. 3 phase, 3 v	wire + Ground (*4)				dels: 342~4					ac)						
imput voitage/freq. 5 phase, 5 v	wite i diodila ( 4)				dels: 342~!						30Vac)					
2.44	3-Phase, 200V models:		17.5A @ 2			,	,									
Maximum Input current at     100% load	3-Phase, 400V models:		9.2A @ 38													
	3-Phase, 480V models:		9.2A @ 38													
3.Power Factor (Typ)					, rated ou											
4.Efficiency (Typ) (*5) (*22)		%	89 (*21)		91	91	90	91	91	91	91	91	92	92	92	92
5.Inrush current (*6)		Α	Less than	50A												
CONSTANT VOLTAGE MODE		٧	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*7)			0.01% of	rated out	put voltag	e										
2.Max. Load regulation (*8)			0.01% of	rated out	put voltag	e +5mV										
3.Ripple and noise (p-p, 20MHz)	(*9)	mV	75	75	75	75	75	75	80	90	120	200	200	400	450	480
4.Ripple r.m.s. 5Hz~1MHz (*9)		mV	8	10	12	12	12	12	15	15	20	45	60	80	80	100
5.Temperature coefficient		PPM/°C	-		ed output											
6.Temperature stability					t over 8hr						nt line Ina	d & temn				
7. Warm-up drift					rated out							a a temp.				
8.Remote sense compensation/v	wire (*10)	V	2	2	5	5	5	5	5	7 5	5	5	5	5	5	5
	WIIC ( 10)	mS	30	30	30	30	50	50	50	50	50	50	50	100	100	100
9.Up-prog. Response time (*11)	Full load (*11)															
10.Down-prog.response time:	Full load (*11)	mS c	50	50	80	80	80	80	100	1000	100	100	100	150	200	200
	No load (*12)	mS	300	600	800	900	950	1000	1200	1900	2000	2500	3000	4000	4000	3000
11.Transient response time		mS	10~100%	output vo	ltage to re nse. Less t	cover wit	nın 0.5% c	or its rated	i output fo d includin	or a load cl	nange 10~	yu% of ra dels above	itea outpu e 100V	it current.	Output se	er-point:
12.Start up delay	-	Sec	Less than		c. LC33 l	11113,	or models	up to all	ciduill	9 1001.21	.5, 101 1110	aci3 a00V	C 100V.			
CONSTANT CURRENT MODE		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*7)					put currer											
2.Max. Load regulation (*13)					put currer	_										
3.Ripple r.m.s. @ rated voltage. B	.W 5Hz~1MHz (*14)	mA	≤1200	≤600	≤300	≤150	≤130	≤100	≤70	≤45	≤45	≤45	≤15	≤12	≤10	≤8
5.Temperature coefficient		PPM/°C	10V~100\	/ 100P	PM/°C fro	m rated o	itput curre	ent, follov	ving 30 m	nutes war	m-up.					
5.Temperature coefficient		TTWI/ C	150V~60	0V 70PP	M/°C from	rated out	put curre	nt, followi	ing 30 mir	utes warn	n-up.					
6.Temperature stability			0.01% of	rated lout	over 8hrs	. interval i	ollowing:	30 minute	es warm-u	p. Constar	nt line, loa	d & tempe	erature.			
7 W			10V~100\	/ model: l	ess than +	⊦/-0.25% c	f rated ou	tput curre	ent over 3	0 minutes	following	power on	١.			
7. Warm-up drift			150V~60	0V: Less tl	nan +/-0.15	5% of rate	d output c	urrent ov	er 30 mini	ites follov	ing powe	r on.				
ANALOG PROGRAMMING AND	MONITORING (ISOLATED	EDOM T	UE OLITRI	IT\												
	MONTORING (ISOLATED				101/ 1150	r coloctab	lo Assura	n, and lin	00 ritu	150/ of v	tad Vaut					
1.Vout voltage programming (*1)	E)				)~10V, use )~10V, use											
2.lout voltage programming (*1	5)											11/				
3.Vout resistor programming	F)				hm full sc											
4.lout resistor programming (*15	5)				hm full sc					rity: +/-0.5	% of rate	lout.				
5.Output voltage monitor					er selectab											
6.Output current monitor (*15)			0~5V or 0	)~10V, us€	er selectab	le. Accura	cy: +/-0.5	% of rated	l lout.							
SIGNALS AND CONTROLS (ISOL	ATED FROM THE OUTPUT	)				-										
1. Power supply OK #1 signal			Power su	pply outp	ut monito	r. Open c	ollector. O	utput On:	On. Outp	ut Off: Off	. Maximui	n Voltage	: 30V, Max	imum Sin	k Current:	10mA.
2. CV/CC signal			CV/CC Mc	onitor. Op	en collect	or. CC mo	de On CV			ım Voltag	201/ Ma		ale Currant			
3. LOCAL/REMOTE Analog contro	ol		Enable/D	isable an	alog progi			mode: 0	ff. Maxımı	iiii voitay	z. Juv, ivia	ximum Sir	ik Curreni	: 10mA.		
4. LOCAL/REMOTE Analog signal						ramming (									V or open	
							ontrol by	electrical	signal or	dry contac	t. Remote	: 0~0.6V c	or short. Lo	ocal: 2~30	V or open	
<ol><li>ENABLE/DISABLE signal</li></ol>			analog pr	ogrammi	ng control output by	monitor s	ontrol by ignal. Ope	electrical n collecto	signal or r. Remote:	dry contac On. Local:	t. Remote Off. Maxir	: 0~0.6V c num Volta	or short. Lo ige: 30V, M	ocal: 2~30 aximum S		
ENABLE/DISABLE signal     INTERLOCK (ILC) control			analog pr Enable/D	ogrammi isable PS	ng control output by	monitor s electrical	control by ignal. Ope signal or	electrical n collecto dry conta	signal or r. Remote: ct. 0~0.6V	dry contac On. Local: or short, 2	t. Remote Off. Maxir 2~30V or c	:: 0~0.6V o num Volta open. User	or short. Lo ige: 30V, M r selectabl	ocal: 2~30 aximum S e logic.		
6. INTERLOCK (ILC) control			analog pr Enable/D Enable/D	ogrammi isable PS isable PS	ng control output by output by	monitor s electrical electrical	control by ignal. Ope signal or signal or	electrical n collecto dry conta dry conta	r. Remote: ct. 0~0.6V ct. Remote	or short, 2 0~0.6V o	t. Remote Off. Maxir 2~30V or cor short. L	:: 0~0.6V c num Volta pen. User ocal: 2~30	or short. Lo ige: 30V, M r selectabl IV or open	ocal: 2~30 aximum S e logic.	ink Curren	
6. INTERLOCK (ILC) control 7. Programmed signals			analog pr Enable/D Enable/D Two oper	ogrammi isable PS isable PS n drain pr	ng control output by output by ogrammal	monitor s electrical electrical ble signal	control by ignal. Ope signal or signal or s. Maximu	electrical n collecto dry conta dry conta m voltage	r. Remote: ct. 0~0.6V ct. Remote 25V, Max	dry contact On. Local: or short, 2 e: 0~0.6V of imum sink	ct. Remote Off. Maxir 2~30V or cor or short. Lot current 1	:: 0~0.6V c num Volta pen. User ocal: 2~30 00mA (Sh	or short. Lo ge: 30V, M r selectabl IV or open unted by 2	ocal: 2~30 aximum S e logic. 27V zener	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control			analog pr Enable/D Enable/D Two oper Maximu	ogrammi isable PS isable PS n drain pr m low le	ng control output by output by	monitor s electrical electrical ble signal voltage	ignal. Ope signal or signal or signal or Maximu = 0.8V, Mi	electrical n collecto dry conta dry conta m voltage nimum h	r. Remote: ct. 0~0.6V ct. Remote 25V, Max nigh level	dry contact On. Local: or short, 2 e: 0~0.6V of imum sink input vo	ct. Remote Off. Maxir 2~30V or cor short. Locations to current 1 Itage = 2	:: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi	or short. Lo ge: 30V, M r selectabl IV or open unted by 2 mum hig	ocal: 2~30 aximum S e logic. 27V zener	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals			analog pr Enable/D Enable/D Two oper Maximu positive	ogrammi isable PS isable PS n drain pr m low le edge tri	ng control output by output by ogrammal vel input	monitor s electrical electrical ble signals voltage = 10us mir	ignal. Ope signal or signal or signal or s. Maximu = 0.8V,Mi nimum. Ti	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us N	r. Remote: ct. 0~0.6V ct. Remote 25V, Max nigh level	dry contact On. Local: or short, 2 e: 0~0.6V of imum sink input vo	ct. Remote Off. Maxir 2~30V or cor short. Locations to current 1 Itage = 2	:: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi	or short. Lo ge: 30V, M r selectabl IV or open unted by 2 mum hig	ocal: 2~30 aximum S e logic. 27V zener	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig			analog pr Enable/D Enable/D Two oper Maximu positive By electri	ogrammi isable PS isable PS drain pr m low le edge tri cal Voltag	ng control output by output by ogrammal vel input gger: tw=	monitor s electrical electrical ble signals voltage : =10us mir //2~30V or	ignal. Ope signal or signal or signa	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us N	r. Remote: ct. 0~0.6V ct. Remote 25V, Max nigh level	dry contact On. Local: or short, 2 e: 0~0.6V of imum sink input vo	ct. Remote Off. Maxir 2~30V or cor short. Locations to current 1 Itage = 2	:: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi	or short. Lo ge: 30V, M r selectabl IV or open unted by 2 mum hig	ocal: 2~30 aximum S e logic. 27V zener	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal		  	analog pr Enable/D Enable/D Two oper Maximu positive By electri	ogrammi isable PS isable PS drain pr m low le edge tri cal Voltag	ng control output by output by ogrammal vel input gger: tw= ge: 0~0.6V	monitor s electrical electrical ble signals voltage : =10us mir //2~30V or	ignal. Ope signal or signal or signa	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us N	r. Remote: ct. 0~0.6V ct. Remote 25V, Max nigh level	dry contact On. Local: or short, 2 e: 0~0.6V c imum sink input vo	ct. Remote Off. Maxir 2~30V or cor short. Locations to current 1 Itage = 2	:: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi	or short. Lo ge: 30V, M r selectabl IV or open unted by 2 mum hig	ocal: 2~30 aximum S e logic. 27V zener	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES			analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=Oh	ogrammi isable PS isable PS n drain pr m low le edge tri cal Voltaç (, 0V (500	ng control output by output by ogrammal vel input gger: tw= ge: 0~0.6V ohm impe	monitor s r electrical electrical ble signals voltage = =10us mir //2~30V or dance)=F	ignal. Ope signal or signal or signa	electrical n collecto dry conta dry conta m voltage nr,Tf=1us I ct.	signal or r. Remote: ct. 0~0.6V ct. Remote 2 25V, Max nigh level Maximun	dry contact On. Local: or short, 2: 0~0.6V ( imum sink input vo n, Min del	ct. Remote Off. Maxir 2~30V or cor or short. Lot current 1 Itage = 2 ay betwe	:: 0~0.6V c num Volta ppen. User ocal: 2~30 00mA (Sh .5V, Maxi een 2 pul:	or short. Lor ige: 30V, M r selectabl iV or open unted by i mum hig ses 1ms.	ocal: 2~30 aximum S e logic. 27V zener h level ir	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation			analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=Oh	ogrammi isable PS isable PS n drain pr m low le edge tri cal Voltag (, oV (500 Up to 4 ic	ng control output by output by ogrammal vel input gger: tw= ge: 0~0.6V ohm impe	monitor s relectrical relectrical ble signals voltage = 10us mir /2~30V or dance)=F	ignal. Ope signal or usignal or u	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us h ct.	signal or r. Remote: ct. 0~0.6V ct. Remote 2 25V, Max nigh level Maximun	dry contact On. Local: or short, 2: 0~0.6V ( imum sink input vo n, Min del	ct. Remote Off. Maxir 2~30V or cor or short. Lot current 1 Itage = 2 ay betwe	:: 0~0.6V c num Volta ppen. User ocal: 2~30 00mA (Sh .5V, Maxi een 2 pul:	or short. Lor ige: 30V, M r selectabl iV or open unted by i mum hig ses 1ms.	ocal: 2~30 aximum S e logic. 27V zener h level ir	ink Curren	t: 10mA.
6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation			analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=OH	ogrammi isable PS isable PS n drain pr m low le edge tri cal Voltaç (, oV (500) Up to 4 ic Two iden	ng control output by output by ogrammal vel input gger: tw= ge: 0~0.6V ohm impe	monitor s r electrical r electrical ble signals voltage e =10us mir /2~30V or dance)=F	control by ignal. Ope signal or sign	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us l ct.	signal or r. Remote: ct. 0~0.6V ct. Remote 2 25V, Max nigh level Maximun	dry contact On. Local: or short, i e: 0~0.6V c imum sink input vo n, Min del	ct. Remote Off. Maxin 2~30V or c or short. L: current 1 Itage = 2 ay betwee	:: 0~0.6V c num Volta ppen. User ocal: 2~30 00mA (Sh .5V, Maxi een 2 pul:	or short. Lor ige: 30V, M r selectabl iV or open unted by i mum hig ses 1ms.	ocal: 2~30 aximum S e logic. 27V zener h level ir	ink Curren	t: 10mA.
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6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control			analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=Oh Possible. Possible. Power su Limits the	ogrammi isable PS isable PS n drain pr m low lee edge tri- cal Voltaç X, OV (500 Up to 4 ic Two iden pplies car e output p	ng control output by output by output by output by ogrammal vel input tygger: tw=gge: 0~0.6V ohm impedentical untical units. h be connected to a connected t	monitor s r electrical electrical ble signals voltage :=10us mii //2~30V or dance)=F: sits in Mas Refer to i ected in D proggran	control by ignal. Ope signal or control by signal by	electrical n collecto dry conta dry conta m voltage nimum h r,Tf=1us h ct.  node. Ref n manual. to synchr ie. Progra	signal or r. Remote: ct. 0~0.6V ct. Remote: 2 25V, Max high level Maximun er to instr onize thei mming via	dry contact On. Local: or short, 2: e: 0~0.6V of imum sink input vo n, Min del uction ma r turn-on in the comi	ct. Remote ct. Remote Off. Maxir 2~30V or co or short. Le current 1 Itage = 2 ay betwee nual. For r nual. For r	e: 0~0.6V conum Volta ppen. User pocal: 2~30 00mA (Sh .5V, Maxi pen 2 pul: pnore power poff. n ports or	or short. Luge: 30V, Mr selectabl V or open unted by mum hig ses 1ms.	ocal: 2~30 aximum S e logic. 27V zener th level ir consult wi	) nput = 5V	t: 10mA.
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6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READB. RS323/485, Optional IEEE(*11) 1. Vout programming accuracy (* 2. lout programming accuracy (* 3. Vout programming resolution 4. lout programming resolution	ACK (USB, LAN, 9)(*20) Interfaces)		analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=Oh  Possible. Power su Limits the Emulates Programic commun Profiles o  10 0.05% of 0.002% o 0.002% o 0.005% of	ogrammi isable PS isable P	ng control output by output by output by output by ogrammal vel input yel input gger: tw= ge: 0~0.6V ohm impe  lentical units. n be conne ower to a sistance. R tput rise a orts or the 0 steps ca  30 put voltag out curren utput voltag ttput voltag ttput voltag ttput voltag	monitor s electrical electrical electrical electrical ble signal voltage = 10us mir //~30V or dance)=F.  hits in Mas Refer to i ected in D proggrar esistance nd Outpu front pan n be store  40  je t+0.2% of gge ent gge	control by ignal. Ope signal or resignal or restruction aisy chain named valurange: 1~ t fall slew el. d in 4 mer	electrical n collecto dry conta dry conta dry conta dry conta n voltage nimum h r,Tf=1us h ct.  mode. Ref n manual. to synchr le. Progra 1000mΩ. rate. Prog mory cells	signal or r. Remote: ct. 0 - 0.69V ct. Remote: 2 25V, Max iigh level Waximun er to instruction onize their mming via: Programm iramming si. Activatic	dry contact On. Local: or short, 2: 0~0.6V c imum sink input vo n, Min del  uction ma r turn-on in the comining via th range: 0.0 in by comi	ct. Remote Off. Maxir 2~30V or c or short. L current 1 Itage = 2 ay betwee  nual. For r and turn-e nunicatio e commu 001~999.9	e: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi open 2 pul: onore power off. on ports or onication p 99 V/mSec	or short. Logge: 30V, Mr selectable V or open unted by imum hig ses 1ms.  er please of the front corts or the	coal: 2~30 aximum S e logic 27V zener th level ir consult wi panel. e front pa ec. Progra	ink Curren  input = 5V  ith Factory  nel.  mming via	t: 10mA.
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6. INTERLOCK (ILC) control 7. Programmed signals 8. TRIGGER IN / TRIGGER OUT sig 9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms PROGRAMMING AND READB, RS232/485, Optional IEEE(*15*1.) Vout programming accuracy (*2. Lout programming accuracy (*3. Vout programming resolution 4. lout programming resolution 5. Vout readback accuracy	ACK (USB, LAN, 9)(*20) Interfaces) 16) 15)		analog pr Enable/D Enable/D Two oper Maximu positive By electri 4~5V=Oh  Possible. Power su Limits the Emulates Programic commun Profiles o  10 0.05% of 0.002% o 0.002% o 0.005% of	ogrammi isable PS isable P	ng control output by output by output by output by output by ogrammal vel input tigger: tw=ge: 0-0.6V ohm impellentical units. In be connected to be connected to sistance. Reput rise a ports or the 0 steps caught output voltagent currentiput currentiput currentiput currentiput currentiput currentiput voltagut v	monitor s electrical electrical electrical electrical ble signal voltage = 10us mir //~30V or dance)=F.  hits in Mas Refer to i ected in D proggrar esistance nd Outpu front pan n be store  40  je t+0.2% of gge ent gge	control by ignal. Ope signal or resignal or restruction aisy chain named valurange: 1~ t fall slew el. d in 4 mer	electrical n collecto dry conta dry conta dry conta dry conta n voltage nimum h r,Tf=1us h ct.  mode. Ref n manual. to synchr le. Progra 1000mΩ. rate. Prog mory cells	signal or r. Remote: ct. 0 - 0.69V ct. Remote: 2 25V, Max iigh level Waximun er to instruction onize their mming via: Programm iramming si. Activatic	dry contact On. Local: or short, 2: 0~0.6V c imum sink input vo n, Min del  uction ma r turn-on in the comining via th range: 0.0 in by comi	ct. Remote Off. Maxir 2~30V or c or short. L current 1 Itage = 2 ay betwee  nual. For r and turn-e nunicatio e commu 001~999.9	e: 0~0.6V conum Volta open. User ocal: 2~30 00mA (Sh .5V, Maxi open 2 pul: onore power off. on ports or onication p 99 V/mSec	or short. Logge: 30V, Mr selectable V or open unted by imum hig ses 1ms.  er please of the front corts or the	coal: 2~30 aximum S e logic 27V zener th level ir consult wi panel. e front pa ec. Progra	ink Curren  input = 5V  ith Factory  nel.  mming via	t: 10mA.

# GENESYS™ 2.7kW/3.4kW/5kW SERIES SPECIFICATIONS

PROTECTIVE FUNCTIONS		٧	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1. Foldback protection							y changes i ycle in auto									
2.Over-voltage protection (OVP)			Output sh	ut-down	Reset by	AC input	recycle in a	utostart n	node, by 0	OUTPUT bu	tton, by re	ear panel	or by com	municatio	n.	
3.Over -voltage programming rar	nge	V	0.5~12	1~24	2~36	2~44.1	55-55.125	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.
4. Over-voltage programming acc	curacy		+/-1% of r	ated outp	ut voltag	e										
5.Output under voltage limit (UVI	L)		Prevents	rom adju	sting Vou	t below lii	nit. Does n	ot apply i	n analog p	rogrammii	ng. Preset	by front p	oanel or co	mmunica	ation port.	
6.Over temperature protection			Shuts dov	vn the ou	tput. Auto	recovery	by autosta	rt mode.								
7. Output under voltage limit (UV	L)		Prevents	adjustme	nt of Vout	below lin	nit.									
8. Output under voltage protection	on (UVP)		Prevents mode, by	adjustme Power Sv	nt of Vout vitch, by O	below lin UTPUT b	nit. P.S outp utton, by re	out turns ( ar panel c	Off during or by com	under volt nunication	age condi	tion. Rese	t by AC in	put recyc	le in autos	art
FRONT PANEL																
1.Control functions			Multiple	ptions w	ith 2 Enco	ders										
			Vout/lout	/Power Li	mit manu	al adjust										
			OVP/UVL	UVP man	ual adjust											
			Protectio	n Functio	ns - OVP, L	JVL,UVP, F	oldback, O	CL, ENA, I	LC							
			Commun	cation Fu	nctions - :	Selection	of LAN,IEEI	,RS232,R	S485,USB	or Optiona	commun	ication in	terface.			
			Output O	N/OFF. Fr	ont Panel	Lock.										
			Commun	cation Fu	nctions - :	Selection	of Baud Ra	te. Addres	s. IP and o	ommunica	tion lang	uage.				
							/oltage/res						7			
							of Voltage/									
2.Display							output vo									
							utput curre									
3.Front Panel Buttons Indications							OMMUNIC			N,CONFIGU	RATION, S	YSTEM, S	EQUENCE	R.		
4. Front Panel Display Indications			Voltage, (	urrent, Po	ower, CV, 0	CC, CP, Ext	ternal Volta	ige, Exteri	nal Curren er, Load/S	t, Address, tore Cell.	LFP, Auto	start, Safe	tstart, Fol	dback V/I	, Remote	
ENVIRONMENTAL CONDITIONS																
1.Operating temperature			0~50°C, 1	00% load												
			-30~85°C	00 /0 IOau											-	
2.Storage temperature																
3.Operating humidity		%	20~90% F													
4.Storage humidity		%	10~95% F													
5.Altitude (*17)			Operating	: 10000ft	(3000m),	output cu	rrent derat	ing 2%/10	0m or Ta	derating 1°0	C/100m al	ove 2000	m. Non o	perating: 4	10000ft (12	.000m).
MECHANICAL										-						
1.Cooling			Forced air	cooling l	y interna	l fans. Air	flow direct	ion: from	Front pan	el to powe	supply re	ear				
2.Weight		kg	2.7kW/3.4	kW - Less	than 6.25	ka.			5kW - Le	ss than 7.5	ka.					
3.Dimensions (WxHxD)		mm	W: 423, I	l: 43.6, [	): 441.5 (\	Without	busbars a				Outline	drawing	).			
4.Vibration							est conditi			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
5.Shock							s unpacked		C - 2.1.3.1					-		
3.3110CK			Less man	200, 11411	sine, min.	sec. Unit i	s unpacked	1.								
SAFETY/EMC																
1. Applicable standards:	Safety		UL61010-	, CSA22.2	No.61010	)-1, IEC610	010-1, EN61	010-1.								
1.1. Interface classification			Vout ≤40' 60≤ Vout	/ Models: ≤ 600V N	Output, J lodels: Ou	1,J2,J3,J4, tput, J8 (s	J5,J6,J7,J8 sense) are h	(sense) an azardous	d ,J9 (com , J1,J2,J3,J	municatio 4,J5,J6,J7 a	n options) nd J9 (cor	are SELV. nmunicat	ion optior	ns) are SEL	V	
1.2 Withstand voltage			Vout ≤40 60V≤Vou Output - 100 <vou< td=""><td>V Models t≤100V N Ground: t≤600V N</td><td>s: Input - Models: In 1500VDC</td><td>Output (S put - Out 1 1 min, In</td><td>SELV): 4242\ put: 4242\ put - Grou tput: 4242\ put - Grou</td><td>2VDC 1m /DC 1mir nd: 2835 /DC 1mir</td><td>nin, Input n, Input - VDC 1mir n, Input -</td><td>- Ground: SELV: 424 n. SELV: 424</td><td>2835VD0 2VDC 1m</td><td>C 1min. nin, Outpu</td><td>ut - SELV</td><td>: 850VDC</td><td>1min,</td><td></td></vou<>	V Models t≤100V N Ground: t≤600V N	s: Input - Models: In 1500VDC	Output (S put - Out 1 1 min, In	SELV): 4242\ put: 4242\ put - Grou tput: 4242\ put - Grou	2VDC 1m /DC 1mir nd: 2835 /DC 1mir	nin, Input n, Input - VDC 1mir n, Input -	- Ground: SELV: 424 n. SELV: 424	2835VD0 2VDC 1m	C 1min. nin, Outpu	ut - SELV	: 850VDC	1min,	
1.3 Insulation resistance	1		<del></del>				Ground 50									
			_						FCC D	F A VCC			_			
2.Conducted emmision							, Annex H t									
3.Radiated emission							, Annex H t	able H.3	and H4, F0	C Part 15-	I, VCCI-A					
4. EMC compliance	EMC(*18)		IEC/EN612	204-3 Ind	ustrial env	rironment										

Unless otherwise noted, specifications are warranted over the ambient temperature range of  $0^\circ$  to  $50^\circ$  C.

# **G**ENESYS<sup>™</sup> **GSP10kW SERIES SPECIFICATIONS**

OUTPUT RATING		GSP	10-1000	20-500	30-340	40-250	50-200	60-170	80-130	100-100	150-68	200-50	300-34	400-26	500-20	600-17
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	1000 (*3)	500	340	250	200	170	130	100	68	50	34	26	20	17
3.Rated output power		kW	10	10	10.2	10	10	10.2	10.4	10	10.2	10	10.2	10.4	10	10.2
INPUT CHARACTERISTICS		٧	10	20	30	40	50	60	80	100	150	200	300	400	500	600
IN OTCHARACTERISTICS		•						vers 200/2		100	150	200	300	1 400	300	000
1.Input voltage/freq. 3 phase, 3 wi	ire + Ground (*4)							overs 380/		ac)						
limput voitage/freq. 5 phase, 5 wi	ire i diouna ( 4)							vers 380/			ROVac)					
	3-Phase, 200V models:		35A @ 20						,, .	,,	,					
2. Maximum Input current at	3-Phase, 400V models:		18.4A @ 3													
100% load	3-Phase, 480V models:		18.4A @ 3													
3.Power Factor (Typ)	5 Thase, loov models.		_		rated out	put powe	r.									
4.Efficiency (Typ) (*5) (*22)		%	89 (*21)		91	91	91	91	91	91	91	91	92	92	91	92
5.Inrush current (*6)		A	Less than													
6.AC line phase imbalance		%	< 5%													
											450					100
CONSTANT VOLTAGE MODE		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*7)				rated outr												
2.Max. Load regulation (*8)			<del></del>	rated outp		1										
3.Ripple and noise (p-p, 20MHz) (*	*9)	mV	75	75	75	75	75	75	80	90	120	200	200	400	450	480
4.Ripple r.m.s. 5Hz~1MHz (*9)		mV	8	10	12	12	12	12	15	15	20	45	60	80	80	100
5.Temperature coefficient		PPM/°C						30 minute								
6.Temperature stability											nt line, load	l & temp.				
7. Warm-up drift			Less than	0.05% of	rated out	out voltag	e+2mV ov	er 30 mini	utes follov	ving pow						
8.Remote sense compensation/wi	ire (*10)	V	2	2	5	5	5	5	5	5	5	5	5	5	5	5
9.Up-prog. Response time (*11)		mS	30	30	30	30	50	50	50	50	50	50	50	100	100	100
10.Down-prog.response time:	Full load (*11)	mS	50	50	80	80	80	80	100	100	100	100	100	150	200	200
progresponse time.	No load (*12)	mS	300	600	800	900	950	1000	1200	1900	2000	2500	3000	4000	4000	3000
11.Transient response time		mS	Time for	output vo	Itage to re	cover witl	hin 0.5% c	fits rated	output fo	r a load ch	nange 10~	90% of rat	ed output	current. (	Output set	-point:
					nse. Less tl	nan 1mS, f	or models	up to and	including	g 100V. 2n	nS, for mod	tels above	100V.			
12.Start up delay		Sec	Less than	7 Sec												
CONSTANT CURRENT MODE																
1.Max. Line regulation (*7)			0.05% of	rated out	out curren	t										
2.Max. Load regulation (*13)				rated out												
3.Ripple r.m.s. @ 10% rated voltage	e R W 5Hz~1MHz (*14)	mA	1500	1200	600	300	200	150	100	70	45	45	15	15	12	10
4.Ripple r.m.s. @ 100% rated voltage.		mA	1200	700	300	150	100	75	50	35	23	23	7.5	7.5	8	6
4.htppie i.iii.s. @ 100% rated voltage.	. D.W JIIZ~IIVIIIZ. (IAZJ C)	IIIA	10V~100					ent, follow				23	7.5	7.3	0	_ 0
5.Temperature coefficient		PPM/°C						nt, followi								
6 Tomporature stability											nt line, loac	10 tompo	ratura			
6.Temperature stability																
7. Warm-up drift											following					
			1500~60	uv: Less th	ian +/-0.15	% or rated	a output c	urrent ove	er 30 minu	tes rollow	ing power	on.				
ANALOG PROGRAMMING AND M	IONITORING (ISOLATED	FROM T	HE OUTP	JT)												
1.Vout voltage programming			0~100%,	0~5V or 0	~10V, user	selectabl	e. Accurac	y and line	arity: +/-0	.15% of ra	ted Vout.					
2.lout voltage programming (*15)	)		0~100%,	0~5V or 0	~10V, user	selectabl	e. Accurac	y and line	arity: +/-0	.4% of rat	ed lout.					
3.Vout resistor programming			0~100%,	0~5/10Ko	hm full sc	ale, user se	electable.	Accuracy	and linear	ity: +/-0.5	% of rated	Vout.				
4.lout resistor programming (*15)			0~100%,	0~5/10Ko	hm full sc	ale, user se	electable.	Accuracy	and linear	ity: +/-0.5	% of rated	lout.				
5.Output voltage monitor			0~5V or 0	~10V, use	r selectab	le. Accura	cy: +/-0.5	%. Of rated	d Vout.							
6.Output current monitor (*15)			0~5V or 0	~10V, use	r selectab	le. Accura	cy: +/-0.5	%. Of rated	d lout.							
SIGNALS AND CONTROLS (ISOLA	TED FROM THE OUTPUT		1_							- 44 - 44						
1. Power supply OK #1 signal				,							. Maximun				Current: 1	0mA.
2. CV/CC signal											e: 30V, Max					
3. LOCAL/REMOTE Analog control										,	t. Remote:					
4. LOCAL/REMOTE Analog signal											: Off. Maxir				ınk Currer	t: 10mA.
5. ENABLE/DISABLE signal								dry contac	t. 0~0.6V	or short, 2	2~30V or o	nan Hear	calactable			
6. INTERLOCK (ILC) control			IEnable/D	isable PS		electrical								logic.		
7. Programmed signals				1 1							or short. Lo	cal: 2~30\	or open.			
8. TRIGGER IN / TRIGGER OUT signs			Two oper			ole signals	. Maximu	m voltage	25V, Maxi	mum sink	or short. Lo current 10	cal: 2~30\ 00mA (Shu	/ or open. Inted by 2	7V zener)		
	als		Two oper	m low lev	el input	ole signals voltage =	. Maximui = 0.8V,Mi	m voltage nimum h	25V, Maxi igh level	mum sink input vo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V <sub>I</sub>	oositive
IN INDICA INICA control signal	als		Two oper Maximu edge tri	m low lev gger: tw=	vel input =10us mir	ole signals voltage = nimum. T	. Maximui = 0.8V,Mi r,Tf=1us /	m voltage nimum h Maximum	25V, Maxi igh level	mum sink input vo	or short. Lo current 10	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V	oositive
9. DAISY_IN/SO control signal	als		Two oper Maximu edge tri By electr	m low lev gger: tw= cal Voltag	vel input =10us mir e: 0~0.6V	ole signals voltage = nimum. T /2~30V or	. Maximui = 0.8V,Mi r,Tf=1us I dry conta	m voltage nimum h Maximum	25V, Maxi igh level	mum sink input vo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V	oositive
9. DAISY_IN/SO control signal 10. DAISY_OUT/PS_OK #2 signal	als		Two oper Maximu edge tri By electr	m low lev gger: tw= cal Voltag	vel input =10us mir e: 0~0.6V	ole signals voltage = nimum. T	. Maximui = 0.8V,Mi r,Tf=1us I dry conta	m voltage nimum h Maximum	25V, Maxi igh level	mum sink input vo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V	positive
	als		Two oper Maximu edge tri By electr	m low lev gger: tw= cal Voltag	vel input =10us mir e: 0~0.6V	ole signals voltage = nimum. T /2~30V or	. Maximui = 0.8V,Mi r,Tf=1us I dry conta	m voltage nimum h Maximum	25V, Maxi igh level	mum sink input vo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V	positive
10. DAISY_OUT/PS_OK #2 signal	als		Two open Maximu edge tri By electri 4~5V=Oh	m low lev gger: tw= cal Voltag K, 0V (500d	vel input =10us mir le: 0~0.6V ohm impe	ole signals voltage = nimum. T /2~30V or dance)=Fa	. Maximui = 0.8V,Mi r,Tf=1us I dry conta ail	m voltage nimum h Maximum	25V, Maxi igh Ievel n, Min del	mum sink input vo ay betwo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V	positive
10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES	als	  	Two open Maximu edge tri By electri 4~5V=Oh	m low lev gger: tw= cal Voltag K, 0V (500d	vel input =10us mir je: 0~0.6V, ohm impe units. For r	ole signals voltage = nimum. T /2~30V or dance)=Fa	. Maximui = 0.8V,Mi r,Tf=1us I dry conta ail	m voltage nimum h Maximum ct.	25V, Maxi igh Ievel n, Min del	mum sink input vo ay betwo	or short. Lo current 10 ltage = 2.	cal: 2~30\ 00mA (Shu 5V, Maxir	/ or open. Inted by 2	7V zener)	out = 5V <sub>I</sub>	positive
10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation	als	  	Two open Maximu edge tri By electri 4~5V=Oh  Two iden Consult v	m low lev gger: tw= cal Voltag K, OV (500 o tical GSP u	vel input =10us mir ie: 0~0.6V, ohm impe units. For r	ole signals voltage = nimum. T /2~30V or dance)=Fa more pow	. Maximui = 0.8V,Mi r,Tf=1us / dry conta ail er please (	m voltage nimum h Maximum ct.	25V, Maxi igh level n, Min del th Factory	mum sink input vo ay betwo	or short. Lo current 10 ltage = 2. een 2 puls	ocal: 2~30V 00mA (Shu 5V, Maxir ses 1ms.	/ or open. Inted by 2	7V zener)	out = 5V	positive
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10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES 1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control	als	   	Two open Maximu edge tri By electri 4~5V=Oh  Two iden Consult v Power su Limits the	m low lever gger: tweet cal Voltage (5, 0V (500 colors) with Factor pplies can be output p	vel input =10us mir pe: 0~0.6V, phm impe units. For r ry i be conne	ole signals voltage = nimum. T /2~30V or dance)=Fa more powe ected in Da proggram	. Maximui = 0.8V,Mi r,Tf=1us / dry conta ail er please o aisy chain	m voltage nimum hi Maximum ct.  consult wi to synchro	25V, Maxi igh level n, Min del th Factory onize their	mum sink input vo ay betwo	or short. Lo current 10 ltage = 2. een 2 puls and turn-o munication	cal: 2~30\ 00mA (Shu 5V, Maxir ses 1ms.	/ or open. inted by 2 num high	7V zener) n level inp		oositive
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10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES  1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK RS232/485, Optional IEEE (*19)(* 1. Vout programming accuracy (*16 2. lout programming aresolution 4. lout programming resolution 4. lout programming resolution 5. Vout readback accuracy	( (USB, LAN, '20) Interfaces)		Two open Maximu edge tri By electri 4~5V=Ol  Two iden Consult v Power su Limits th Emulates Program: commun Profiles c  10 0.05% of 0.3% of r 0.002% o 0.002% o 0.002% o 0.005% of	m low lee gger: tw= cal Voltag (, 0V (500c  tical GSP ( with Facto pplies can e output p series res mable Out ication po f up to 100  20  rated output f rated out f rated out	vel input 10us mir ie: 0~0.6V, ohm impe  units. For r ry ib be conne iower to a istance. Ri tput rise a rts or the 0 steps cal  30  uut current tput voltag ttput voltag ttput curre put voltag	ole signals voltage = inum. T /2~30V or dance)=Fz more pow ected in Da proggram esistance in nd Output front pane n be store  40 e ge nt	. Maximui  = 0.8V,Mi  r,Tf=1us I  dry conta  aii  er please e  aisy chain  med valu  range: 1~  t fall slew el.  d in 4 mer	m voltage nimum h Maximum ct.  consult wi to synchro e. Prograr 1000mΩ. F rate. Progra mory cells.	25V, Maxi igh level h, Min del th Factory onize thein ming via Programm ramming r	mum sinki input vo ay betwo turn-on a the comr ing via th ange: 0.0	or short. Lo current 10 Itage = 2. een 2 puls and turn-o nunication e commun 001~999.9 mand via t	cal: 2~30\ 00mA (Shu 5V, Maxir ses 1ms.  ff. ports or t ilication pc 9 V/mSec.	of or open.  Inted by 2  mum high  the front ports or the or A/mSe	7V zener) n level inp panel. front pan c. Progran	el. nming via	the panel.
10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES  1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK RS232/485, Optional IEEE (*19)(* 1. Vout programming accuracy (*16 2. lout programming resolution 4. lout programming resolution 5. Vout readback accuracy 6. lout readback accuracy 6. lout readback accuracy (*15)	(USB, LAN, (20) Interfaces) 6) 5)		Two open Maximu edge tri By electri 4~5V=Ol  Two iden Consult v Power su Limits the Emulates Program commun Profiles of 0.3% of r 0.002% of 0.002% of 0.005% of 0.2% of 0.2% of of 0.2%	m low lever the second of the	vel input 10us mir 10us mir 1e: 0~0.6V, ohm impe  units. For r r r y units. For r r r r r y units. For r r r r y units. For r r r r r r r r r r r r r r r r r r r	ole signals voltage = nimum. T /2~30V or dance)=Fa more pow. ected in Da proggram esistance i nd Output front pane n be store 40 e ge nt je	. Maximur = 0.8V,Mir ,rTf=1us h dry conta ail er please c aisy chain nmed valu range: 1~ t fall slew el. d in 4 mer	m voltage nimum h Maximum ct.  consult wi to synchro ie. Prograr 1000mΩ. F rate. Progra mory cells.	25V, Maxi igh level ,, Min del  th Factory  onize their mming via Programm ramming r  Activatio	turn-on: the comring via th ange: 0.0  100	and turn-o munication e commun control munication e commun control munication e commun control munication e to	cal: 2~30\ 10mA (Shus) 10mA (S	or open. Inted by 2 Inum high Interferent ports or the or A/mSe- unication p 300	oanel. front pan c. Program	el. nming via r the front 500	the panel.
10. DAISY_OUT/PS_OK #2 signal  FUNCTIONS AND FEATURES  1. Parallel operation 2. Series operation 3. Daisy chain 4. Constant power control 5. Output resistance control 6. Slew rate control 7. Arbitrary waveforms  PROGRAMMING AND READBACK RS232/485, Optional IEEE (*19)(* 1. Vout programming accuracy (*16 2. lout programming aresolution 4. lout programming resolution 4. lout programming resolution 5. Vout readback accuracy	(USB, LAN, '20) Interfaces) 6) 5)		Two open Maximu edge tri By electri 4~5V=Ol  Two iden Consult v Power su Limits th Emulates Program: commun Profiles c  10 0.05% of 0.3% of r 0.002% o 0.002% o 0.002% o 0.005% of	m low lee gger: tw= cal Voltag (, 0V (500c  tical GSP ( with Facto pplies can e output p series res mable Out ication po f up to 100  20  rated output f rated out f rated out	vel input 10us mir ie: 0~0.6V, ohm impe  units. For r ry ib be conne iower to a istance. Ri tput rise a rts or the 0 steps cal  30  uut current tput voltag ttput voltag ttput curre put voltag	ole signals voltage = inum. T /2~30V or dance)=Fz more pow ected in Da proggram esistance in nd Output front pane n be store  40 e ge nt	. Maximur = 0.8V,Mir ,rTf=1us h dry conta ail er please c aisy chain nmed valu range: 1~ t fall slew el. d in 4 mer	m voltage nimum h Maximum ct.  consult wi to synchro e. Prograr 1000mΩ. F rate. Progra mory cells.	25V, Maxi igh level h, Min del th Factory onize thein ming via Programm ramming r	mum sinki input vo ay betwo turn-on a the comr ing via th ange: 0.0	or short. Lo current 10 Itage = 2. een 2 puls and turn-o nunication e commun 001~999.9 mand via t	cal: 2~30\ 00mA (Shu 5V, Maxir ses 1ms.  ff. ports or t ilication pc 9 V/mSec.	of or open.  Inted by 2  mum high  the front ports or the or A/mSe	7V zener) n level inp panel. front pan c. Progran	el. nming via	the panel.

# **G**ENESYS<sup>™</sup> **G**SP15kW SERIES SPECIFICATIONS

OUTPUT RATING		GSP	10-1500	20-750	30-510	40-375	50-300	60-255	80-195	100-150	150-102	200-75	300-51	400-39	300-51	600-25.5
1.Rated output voltage(*1)		V	10	20	30	40	50	60	80	100	150	200	300	400	300	600
2.Rated output current (*2)		A	1500 (*3)	750	510	375	300	255	195	150	102	75	51	39	51	25.5
3.Rated output power		kW	15	15	15.3	15	15	15.3	15.6	15	15.3	15	15.3	15.6	15.3	15.3
INPUT CHARACTERISTICS		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
IN OT CIDADIC PERISTICS			3-Phase, 2							100	150	200	300	100	300	000
1.Input voltage/freg. 3 phase, 3 w	ire + Ground (*4)		3-Phase, 4							ac)						
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,	1	3-Phase, 4								0Vac)					
2 Mariana landa amana at	3-Phase, 200V models:		52.5A @ 20	00Vac												
2. Maximum Input current at 100% load	3-Phase, 400V models:		27.6A @ 38													
	3-Phase, 480V models:	<u> </u>	27.6A @ 38													
3.Power Factor (Typ)			0.94 @ 200										T			
4.Efficiency (Typ) (*5) (*22)		%	89 (*21)	90	91	91	91	91	91	91	91	91	92	92	91	92
5.Inrush current (*6) 6.AC line phase imbalance		A %	Less than	ISUA								-				-
o.Ac life priase imbalance			\ J70													
CONSTANT VOLTAGE MODE		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*7)			0.01% of ra	ated outp	ut voltage	!										
2.Max. Load regulation (*8)			0.01% of ra	ated outp	ut voltage	+5mV										
3.Ripple and noise (p-p, 20MHz) (	*9)	mV	75	75	75	75	75	75	80	90	120	200	200	400	450	480
4.Ripple r.m.s. 5Hz~1MHz (*9)		mV	8	10	12	12	12	12	15	15	20	45	60	80	80	100
5.Temperature coefficient		PPM/°C	50PPM/°C	from rate	d output	voltage, fo	llowing 3	0 minutes	warm-up							
6.Temperature stability			0.01% of ra	ated Vout	over 8hrs	interval fo	ollowing 3	0 minutes	s warm-up	. Constan	t line, load	d & temp.				
7. Warm-up drift			Less than	0.05% of r	ated outp	ut voltage	+2mV ove	er 30 minu	ites follow	ing powe	r on.					
8.Remote sense compensation/w	ire (*10)	V	2	2	5	5	5	5	5	5	5	5	5	5	5	5
9.Up-prog. Response time (*11)		mS	30	30	30	30	50	50	50	50	50	50	50	100	100	100
10.Down-prog.response time:	Full load (*11)	mS	50	50	80	80	80	80	100	100	100	100	100	150	200	200
progresponse time.	No load (*12)	mS	300	600	800	900	950	1000	1200	1900	2000	2500	3000	4000	4000	3000
11.Transient response time		mS	Time for o											t current.	Output se	t-point:
· .			10~100%,		se. Less th	an ims, fo	nodels.	up to and	incluaing	100V. 2m	s, for mod	ueis above	e 100V.			
12Start up delay		Sec	Less than 2	/ Sec												
CONSTANT CURRENT MODE		٧	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1.Max. Line regulation (*7)			0.05% of ra	ated outp	ut current											
2.Max. Load regulation (*13)			0.08% of r	ated outp	ut current											
3.Ripple r.m.s. @ 10% rated voltag	e B.W 5Hz~1MHz. (*14)	mA	2000	1200	600	300	250	180	100	70	45	45	15	15	12	10
4.Ripple r.m.s. @ 100% rated voltage	B.W 5Hz~1MHz. (TA 25°C)	mA	1200	700	300	150	130	90	60	35	23	23	7.5	7.5	8	6
5.Temperature coefficient		PPM/°C	10V~100V	100PP	M/°C from	rated out	tput curre	nt, follow	ing 30 mir	nutes warr	n-up.					
5. remperature coefficient		1111/1/	150V~600													
6.Temperature stability			0.01% of ra													
7. Warm-up drift			10V~100V													
			150V~600	V: Less tha	an +/-0.15	% of rated	output cu	urrent ove	r 30 minu	tes follow	ing powe	r on.				
ANALOG PROGRAMMING AND N	IONITORING (ISOLATED	FROM T	HE OUTPU	T)												
1.Vout voltage programming			0~100%, 0	~5V or 0~	-10V, user	selectable	. Accurac	y and line	arity: +/-0.	.15% of rat	ted Vout.					
2.lout voltage programming (*15	)		0~100%, 0													
3.Vout resistor programming			0~100%, 0									l Vout.				
4.lout resistor programming (*15)	)		0~100%, 0													
5.Output voltage monitor (*23)			0~5V or 0	~10V, user	selectabl	e. Accurac	y: +/-0.5%	6 of rated	Vout.							
6.Output current monitor (*15) (*.	23)		0~5V or 0	~10V, user	selectabl	e. Accurac	y: +/-0.5%	6. of rated	lout.							
SIGNALS AND CONTROLS (ISOLA	TED EDOM THE OUTDUIT	r)														
1. Power supply OK #1 signal	ILD I NOW THE COTT OF		Power sup	nly outpu	ıt monitor	Open col	llector Or	itnut On: (	On Outnu	t Off: Off	Mavimun	n Voltage	30V May	imum Sink	Current	10m Δ
2. CV/CC signal			CV/CC Mo												Current.	TOTTIA.
3. LOCAL/REMOTE Analog control			Enable/Di												/ or onen	
4. LOCAL/REMOTE Analog control			analog pro													
5. ENABLE/DISABLE Signal			Enable/Di													
6. INTERLOCK (ILC) control			Enable/Di		. ,											
7. Programmed signals			Two open													
	ale		Maximum												sitive eda	e trigger:
8. TRIGGER IN / TRIGGER OUT sign	ais		tw=10us n	ninimum.	Tr,Tf=1us	Maximum	, Min dela	y betweei			,		р			
9. DAISY_IN/SO control signal			By electric					t.								
10. DAISY_OUT/PS_OK #2 signal			4~5V=OK,	0V (500o	hm imped	lance)=Fai	il									
FUNCTIONS AND FEATURES																
1. Parallel operation			Two ident	ical GSP II	nits. For m	nore powe	r please o	onsult wit	th Factory							
2. Series operation			Consult w			20170	p. 2000 C			-					-	-
3. Daisy chain			Power sup			cted in Da	isv chain t	o synchro	nize their	turn-on a	nd turn-∩	off.			-	-
4. Constant power control			Limits the										the front	oanel.		
5. Output resistance control			Emulates												el.	
6. Slew rate control			Programm	nable Out	put rise an	d Output	fall slew r									the
			communic	cation por	ts or the f	ront pane	l.									
7. Arbitrary waveforms			Profiles of	up to 100	steps can	be stored	in 4 mem	nory cells.	Activation	n by comn	nand via t	he comm	unication	ports or b	y the fron	t panel.
PROGRAMMING AND READBACK	(USB, LAN,	V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
RS232/485, Optional IEEE (*19)(*							30	30	30	100	130	200	300	400	300	000
1.Vout programming accuracy (*1			0.05% of r			2										
2.lout programming accuracy (*1	5)		0.3% of ra													
			10.002% of		put voltag											
3.Vout programming resolution																
4.lout programming resolution			0.002% of													
4.lout programming resolution 5.Vout readback accuracy			0.002% of 0.05% of r	ated outp	out voltag											
4.lout programming resolution 5.Vout readback accuracy 6.lout readback accuracy (*15)			0.002% of 0.05% of r 0.2% of ra	ated outputed	out voltag it current	e	0.0000		0.0000	0.0555	0.00=0:	1000===	100000		0.0000	100000
4.lout programming resolution 5.Vout readback accuracy			0.002% of 0.05% of r	ated outputed	out voltag		0.003%	0.002%	0.002%	0.011%	0.007%	0.005% 0.002%	0.004%	0.003%	0.003%	0.002% 0.005%

# GENESYS™ GSP10kW/15kW SERIES SPECIFICATIONS

PROTECTIVE FUNCTIONS		V	10	20	30	40	50	60	80	100	150	200	300	400	500	600
1. Foldback protection			Output sl User pres	nut-down etable. Re	when po	wer suppl	y changes ycle in aut	mode from	m CV or P de, by Po	ower Limit wer Switch	to CC mod , by OUTP	de or fron UT buttor	n CC or Po	wer Limit oanel or b	to CV mod y commun	e. ication.
2.Over-voltage protection (OVP	)									OUTPUT b						
3.Over -voltage programming r		V					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 a				ated outp												
5.Output under voltage limit (U	VL)								n analog	programm	ning. Prese	t by front	panel or o	communi	ation port	
6.Over temperature protection							by autost	art mode.								
7. Output under voltage limit (L	VL)		Prevents	adjustme	nt of Vout	below lin	nit.									
8. Output under voltage protec	tion (UVP)		Prevents mode, by	adjustme Power Sv	nt of Vout vitch, by C	below lim	nit. P.S out utton, by r	out turns ( ear panel (	Off during or by com	g under vo municatio	ltage cond n.	lition. Res	set by AC i	nput recy	cle in auto	start
FRONT PANEL																
1.Control functions			Multiple	options w	ith 2 Enco	ders										
				t/Power Li												
			OVP/UVL	/UVP man	ual adjus	t										
			Protectio	n Functio	ns - OVP, l	JVL,UVP, F	oldback, 0	CL, ENA,	ILC							
			Commun	ication Fu	nctions -	Selection	of LAN,IEE	E,RS232,R	S485,USE	or Option	al commu	nication i	nterface.			
			Output C	N/OFF. Fr	ont Panel	Lock.										
										communic						
										g, 5V/10V,	5K/10K pro	ogrammir	ng			
							of Voltage,			g 5V/10V.						
2.Display							output vo									
							utput curr									
3.Front Panel Buttons Indication	ns		OUTPUT	ON, ALAR	M, PREVIE	W, FINE, C	OMMUNIC	ATION, PE	ROTECTIC	N,CONFIG	URATION,	SYSTEM,	SEQUENC	ER.		
4. Front Panel Display Indication	ns		Voltage, (commun	Current, Polication), F	ower, CV, RS/USB/L <i>F</i>	CC, CP, Ext AN/IEEE co	ternal Volt mmunicat	age, Exter ion, Trigg	nal Curre er, Load/S	nt, Addres Store Cell.	s, LFP, Auto	ostart, Sal	fetstart, Fo	oldback V	I, Remote	
ENVIRONMENTAL CONDITION	S															
1.Operating temperature			0~50°C, 1	00% load												
2.Storage temperature			-30~85°C													
3.Operating humidity		%	-	RH (no cor	ndancatio	(n)										
, ,		%					-									
4.Storage humidity		90	-	RH (no cor				. 20//4/	20 T	1	06/100	1 200	- N		100000(: /1	2000 \
5.Altitude (*17)			Operatin	g: 10000ft	(3000m),	output cu	rrent dera	ting 2%/10	Jum or 1a	derating i	*C/100m a	bove 200	ium. Non c	perating:	40000ft (1	2000m).
MECHANICAL																
1.Cooling			Forced ai	r cooling l	oy interna	al fans. Air	flow direc	tion: from	Front par	nel to pow	er supply r	rear				
2.Weight	GSP 10kW	kg	Less than	15.5kg.												
3.Dimensions (WxHxD)	GSP 10kW	mm	W: 423, H W: 423, H	l: 88, D: 44 l: 88, D: 64	1.5 (Witho	out busbar ng busbar	s and busb s and busb	ars cover), ars cover, a	and strain	relief) (Ref	er to Outlir	ne drawin	g).			
2.Weight	GSP 15kW	kg	Less than	23.5kg.												
3.Dimensions (WxHxD)	GSP 15kW	mm					sbars and sbars and			strain relief	(Refer to	Outline o	drawing).			
4.Vibration			MIL-810G	, method	514.6, Pro	cedure I, t	est condit	ion Annex	C - 2.1.3.	1						
5.Shock			Less than	20G, half	sine, 11m	Sec. Unit i	s unpacke	d.								
				,	.,		,									
SAFETY/EMC																
	T .		1111 (1010	1 (( ) ) )												
1.Applicable standards:	Safety		OLGIUIU-	I, CSAZZ.	2 NO.L610	10-1, IECL€	51010-1, EN	IL61010-1.								
1.Applicable standards:     1.1. Interface classification	Safety		Vout ≤40	V Models:	Output, J	11,J2,J3,J4,	J5,J6,J7,J8	(sense) ar	nd ,J9 (cor	nmunicati J4,J5,J6,J7	on options and J9 (co	s) are SEL\	V. ation optic	ons) are SE	LV	
	Safety		Vout ≤40 60≤ Vout Vout ≤40 60V≤Vou Output -	V Models: ≤ 600V M V Models It≤100V M Ground: It≤600V M	Output, J lodels: Ou s: Input - Models: Ir 1500VDC	I1,J2,J3,J4, utput, J8 (s Output (S nput - Out C 1min, In	J5,J6,J7,J8 sense) are l SELV): 424 tput: 4242 put - Grou tput: 4242	(sense) ar nazardous 42VDC 1rri VDC 1mii Ind: 2835 VDC 1mi	nd ,J9 (cor s, J1,J2,J3, min, Inpu n, Input - SVDC 1m n, Input -	J4,J5,J6,J7 t - Ground SELV: 42 in. SELV: 42	and J9 (co l: 2835VD 42VDC 1r	mmunica C 1min. min, Outp	ation option	/: 850VD	C 1min,	
1.1. Interface classification     1.2 Withstand voltage	Safety		Vout ≤40 60≤ Vout Vout ≤40 60V≤Vou Output - 100 <vou Output -</vou 	V Models: ≤ 600V M IV Models It≤100V M Ground: It≤600V M Ground:	Output, J lodels: Ou s: Input - Models: Ir 1500VDC Models: Ir 2500VDC	I1,J2,J3,J4, utput, J8 (s Output (S nput - Out O 1min, In nput - Out O 1min, In	J5,J6,J7,J8 sense) are l SELV): 424 tput: 4242 put - Grou tput: 4242 put - Grou	(sense) ar nazardous 12VDC 1ri VDC 1mii Ind: 2835 VDC 1mi Ind: 2835	nd ,J9 (cor s, J1,J2,J3, min, Input n, Input - SVDC 1m n, Input - SVDC 1m	J4,J5,J6,J7 t - Ground SELV: 42 in. SELV: 42 in.	and J9 (co l: 2835VD 42VDC 1r	mmunica C 1min. min, Outp	ation option	/: 850VD	C 1min,	
1.1. Interface classification     1.2 Withstand voltage     1.3 Insulation resistance	Safety		Vout ≤40 60≤ Vout Vout ≤40 60V≤Vou Output - 100 <vou Output - GSP10kW</vou 	V Models: ≤ 600V M V Models at≤100V M Ground: at≤600V M Ground: √15kW: 60	Output, J lodels: Ou s: Input - Models: Ir 1500VDC Models: II 2500VDC	I1,J2,J3,J4, utput, J8 (s Output (S nput - Out C 1min, In nput - Out C 1min, In t 25°C, 709	J5,J6,J7,J8 sense) are l SELV): 424 tput: 4242 put - Grou tput: 4242 put - Grou 6RH. Outp	(sense) ar nazardous P2VDC 1r VDC 1mi Ind: 2835 VDC 1mi Ind: 2835 ut to Grou	nd ,J9 (cor s, J1,J2,J3, min, Inpu n, Input - sVDC 1m n, Input - sVDC 1m und 500\	J4,J5,J6,J7 t - Ground SELV: 42 in. SELV: 42 in.	and J9 (co l: 2835VD 42VDC 1r 42VDC 11	mmunica C 1min. min, Outp	ation option	/: 850VD	C 1min,	
1.1. Interface classification     1.2 Withstand voltage	Safety		Vout ≤40 60≤ Vout Vout ≤40 60V≤Vou Output - 100 <vou Output - GSP10kW</vou 	V Models: ≤ 600V M V Models at≤100V M Ground: at≤600V M Ground: √15kW: 60	Output, J lodels: Ou s: Input - Models: Ir 1500VDC Models: II 2500VDC	I1,J2,J3,J4, utput, J8 (s Output (S nput - Out C 1min, In nput - Out C 1min, In t 25°C, 709	J5,J6,J7,J8 sense) are l SELV): 424 tput: 4242 put - Grou tput: 4242 put - Grou 6RH. Outp	(sense) ar nazardous P2VDC 1r VDC 1mi Ind: 2835 VDC 1mi Ind: 2835 ut to Grou	nd ,J9 (cor s, J1,J2,J3, min, Inpu n, Input - sVDC 1m n, Input - sVDC 1m und 500\	J4,J5,J6,J7 t - Ground SELV: 42 in. SELV: 42 in.	and J9 (co l: 2835VD 42VDC 1r 42VDC 11	mmunica C 1min. min, Outp	ation option	/: 850VD	C 1min,	
1.1. Interface classification     1.2 Withstand voltage     1.3 Insulation resistance	Safety		Vout ≤40 60≤ Vout Vout ≤40 60V≤Vou Output - 100 <vou Output - GSP10kW IEC/EN61</vou 	V Models: ≤ 600V M V Models tt≤100V M Ground: tt≤600V M Ground: √15kW: 60 204-3 Indi	Output, J lodels: Ou s: Input - Models: Ir 1500VDC Models: Ir 2500VDC Mohm at ustrial en	I1,J2,J3,J4, utput, J8 (s Output (S nput - Out C 1min, In nput - Out C 1min, In t 25°C, 70% vironment	J5,J6,J7,J8 sense) are l SELV): 424 tput: 4242 put - Grou tput: 4242 put - Grou 6RH. Outp c, Annex H	(sense) ar nazardous 42VDC 1mi VDC 1mi Ind: 2835 VDC 1mi Ind: 2835 ut to Grou table H.1,	nd ,J9 (cor s, J1,J2,J3, min, Input - NDC 1m n, Input - NDC 1m tVDC 1m und 500\ FCC Part	J4,J5,J6,J7 t - Ground SELV: 42 in. SELV: 42 in.	and J9 (co I: 2835VD 42VDC 1r 42VDC 1r -A.	mmunica IC 1min. min, Outp	ation option	/: 850VD	C 1min,	

Unless otherwise noted, specifications are warranted over the ambient temperature range of  $0^{\circ}$  to  $50^{\circ}$  C.

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

  \*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: GSP 10kW: Derate 10A/1°C above 40°C. GSP 15kW: Derate 15A/1°C above 40°C.

  \*4: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase \*4: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase \*5: 3-Phase 200V models: At 200Vac input voltage, 3-Phase 400/480V: At 380Vac input voltage. With rated output power.

  \*6: Not including Blf filter inrush current, Iess than 0.2m Sec.

  \*7: 3-Phase 200V models: 170-265Vac, 3-Phase 400V models: 342~460Vac, 3-Phase 480V models: 342~528Vac. Constant load.

  \*8: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.

  \*9: For 10V-150V models: Measured with JEITA RC-913IC (1:1) probe. For 300-600V models: Measured with 100:1 probe.

  \*10: The maximum voltage on the power supply terminals must not exceed the rated voltage.

  \*11: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated, resistive load.

  \*12: From 90% to 10% of Rated Output Voltage, constant input voltage.

  \*13: For load voltage change, equal to the unit voltage rating, constant input voltage.

  \*14: For 10V model the ripple is measured at 2V and rated output current. For other models, the ripple is measured at 10% of rated output voltage. B.W 5Hz~1MHz.

  \*16: Measured at the sensing point.

  \*17: For 10V model Ta derating 2°C/100m."

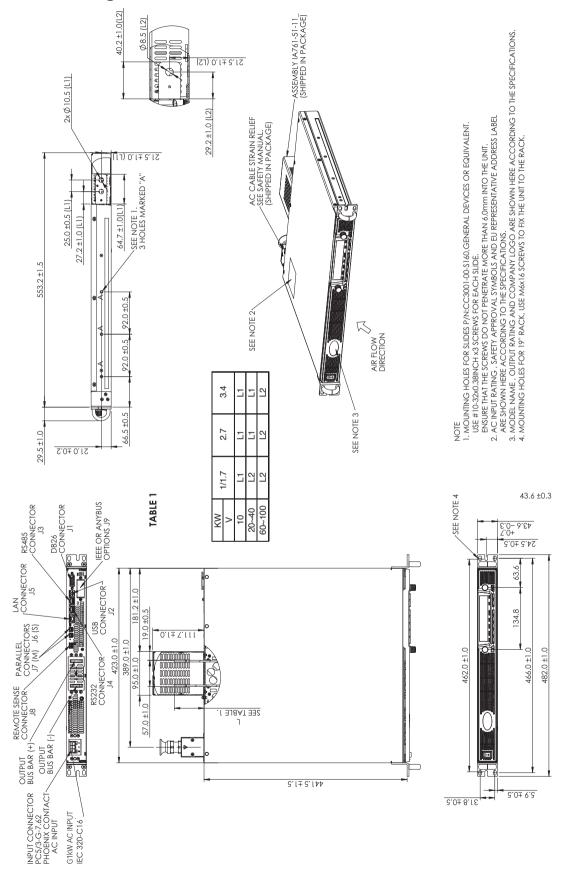
  \*18: Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.

  \*19: Max. ambient temperature for using IEEE is 40°C.

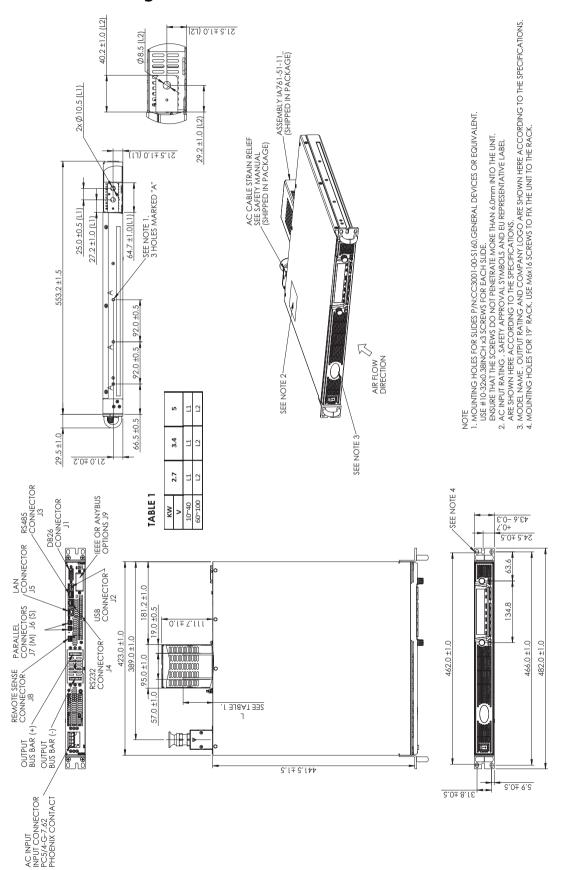
  \*20: GSP10kW For 10V model only: Max. output current for using IEEE is 1200A up to 40°C and 1350A up to 30°C.

  \*21: For 10V model only

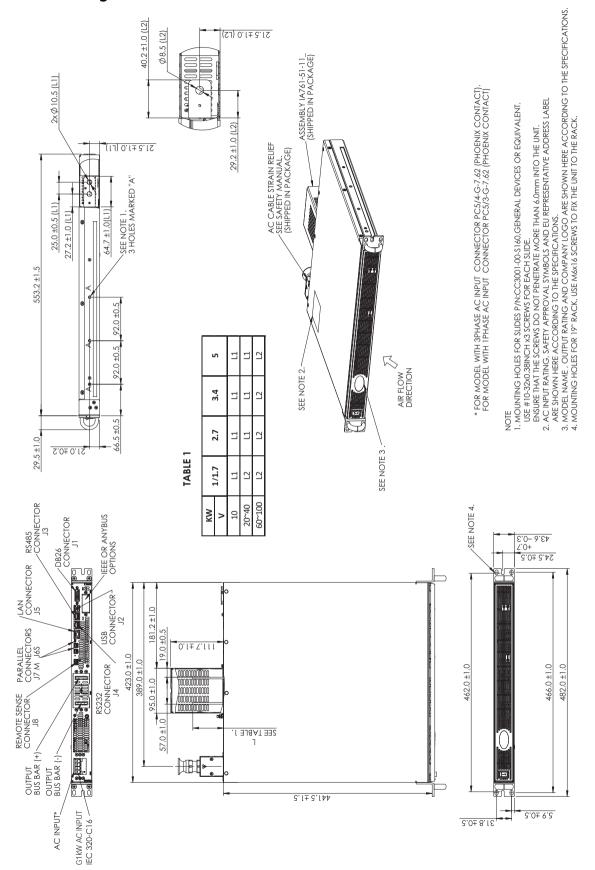
# Outline Drawing GENESYS™ G1kW/1.7kW/2.7kW/3.4kW - 1-Phase



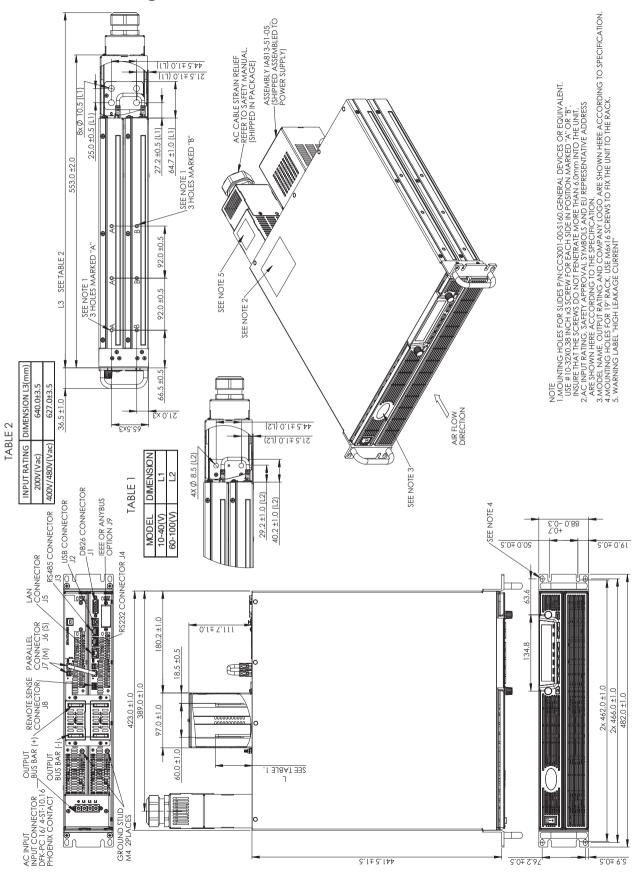
# Outline Drawing GENESYS™ G2.7kW/G3.4kW/G5kW - 3-Phase



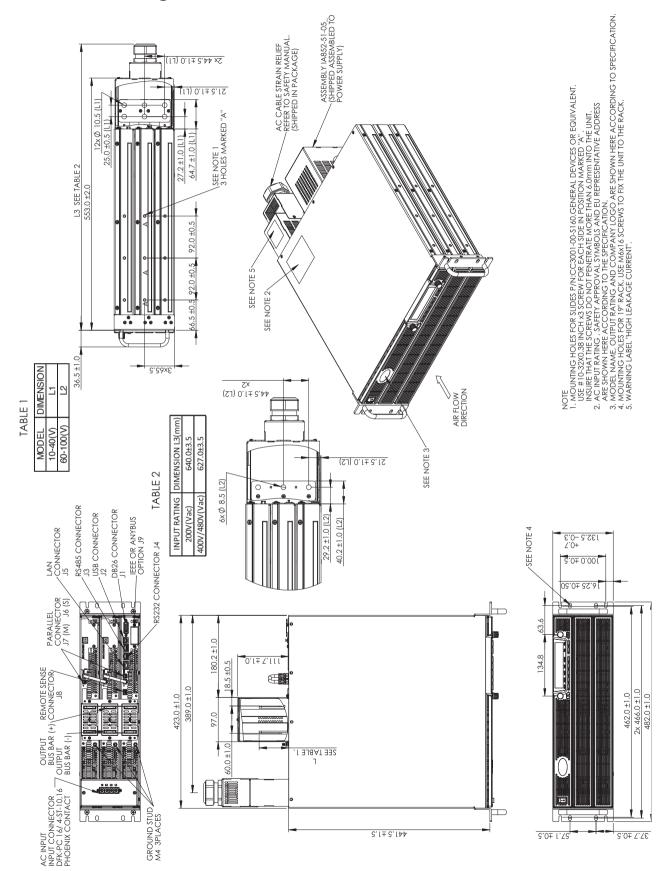
# Outline Drawing GENESYS™ GB1kW/1.7kW/GB2.7kW/GB3.4kW/GB5kW - ATE Version



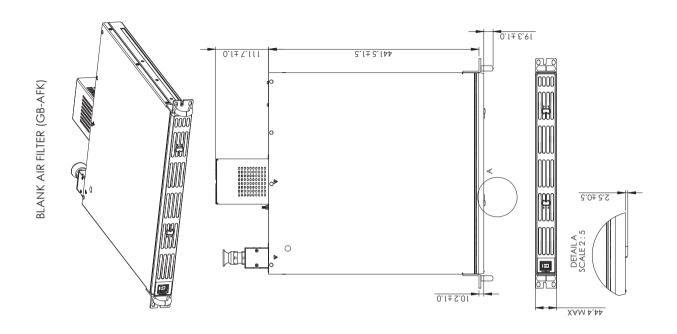
# Outline Drawing GENESYS™ GSP10kW

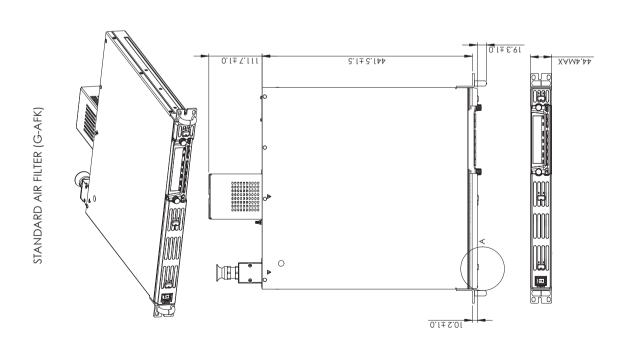


# Outline Drawing GENESYS™ GSP15kW



# Outline Drawing **GENESYS™** Air Filter Kit





# Front Panel Air Filter Assembly

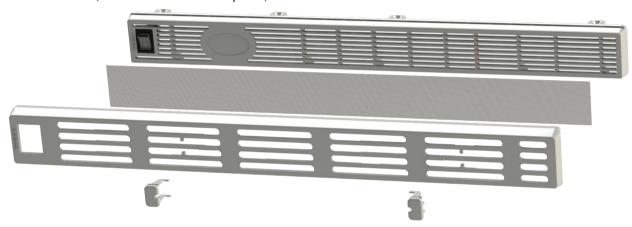
Front panel dust cover is available for dusty air environment applications

Dust cover is removable snap-in filter (for easy maintenance)

• Part Number (for standard unit) : G-AFK



• Part Number (for unit with blank front panel): GB-AFK



For GSP 10kW/15kW series order part number: GSP10kW-AFK / GSP15kW-AFK

# **Accessories**

1. Front Panel dust filter / Field installation kit:

# Technical Specifications: Unit with Air Filter Assembly Installed

- · Derating (environmental):
- · Operating Temperature
- For all models (except 10V): 0°C to +40°C full load; For 10V model: 0°C to +30°C, derate 5A/°C for 30°C < Ta < +40°C
- Altitude
- For all models (except 10V): derate 2°C/100m or 2% of load/100m (above 2000m)
- For 10V model: derate 1°C/100m or 2% of load/100m (above 2000m)

# **Filter Foam Technical Specifications**

- · Material: reticulated polyurethane foam
- Thickness:3.8 mm
- · Porosity: 45ppi
- Operating Temperature Range: 0°C to +60°C
- Storage Temperature Range: -40°C to +85°C
- Humidity: 95% RH

# Air Filter Assembly Components

Standard Unit (P/N: G-AFK)

- Air Filter Cover (two pieces)
- Slide Button #1 (two locations: near AC ON/OFF switch and near left-hand side of front panel display)
- Slide Button #2 (one location: right-hand side of front panel display)
- · Filter foam (two pieces)

# Blank Front Panel Unit (P/N: GB-AFK)

- · Air Filter Cover (one piece)
- · Slide Button #1 (two locations) · Filter foam (one piece)

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