

PHU-Series

Multi-Range High Power DC Source

FEATURES

- Voltage Output: 80 V/200 V/500 V/750 V/1000 V/1500 V
- Power Output: 5 kW/10 kW/15 kW
- Maximum Current Output: 510 A
- C.V/C.C Priority Mode
- · Adjustable Voltage/Current Rise and Fall Time
- AWS (Advanced Web Control)
- APC (Adaptive Parallel Connection)
- · Parallel Connection (Maximum 10 Units)
- · High Efficiency and High-power Density
- Bleeder Control Function
- · Internal Resistance Function
- · Panel Lock Function
- · Three Sets of Preset Function
- · Protection: OVP, OCP, OHP, UVL, AC Fail, FAN Fail
- · Standard: USB, LAN, Isolated Analog Control
- Option: RS-232&485 or GPIB or CAN Bus or DeviceNet or Any Bus
- · 3 U Height and 19" Rack Mount Size



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Prestige / Harmony / Universal

The PHU Series is a single channel programmable DC power supply with multi-range output feature which offers a wide range of voltage and current combinations for greater flexibility. The circuit design adopts SiC (silicon carbide) components to achieve high power density characteristics which can generate 15 kW high output and keep the compact size at just 3 U height.

PHU's wide voltage and current range, along with its high-power characteristics, can cover a broader range of testing applications such as photovoltaic systems, electric vehicles (EVs), and automotive electronics, etc. The launch of PHU high-power DC power supplies enhances the completeness of the DC power supply product line of GW Instek, and to provide customers with more comprehensive and integrated solutions.

The AWS (Advanced Web Server) function allows the user to operate devices directly through a web browser, without needing to install any complicated software or drivers. This functionality allows users to complete tasks more efficiently, saving time and increasing productivity.

The unique APC (Adaptive Parallel Connection) feature offers adaptability in parallel connection, allowing users to make the best choice according to their needs. For instance, users can opt for a 15 kW model and a 10 kW model, to combine both to reach a 25 kW capacity within their budget constraints. Up to 10 PHU units can be connected to reach 150 kW without the need for additional power distribution for control.

For industry interface, PHU provides a variety of embedded industrial interface options to meet user needs, eliminating the need for users to prepare additional interfaces. The available ports including EtherCAT, CANopen, Modbus, Profinet and DeviceNet, etc. Except the standard built-in programmable sequence function, PHU also offers a variety optional functions including Datalogger, MPPT (Maximum Power Point Tracking), Solar Array Simulator, AH/WH Meter and Battery Simulation to meet customer's requirements.

There are a total of 18 models, consisting of 3 power capacities (5 kW/10 kW/15 kW) and 6 voltages (80 V/200 V/500 V/750 V/ 1000 V/1500 V) to meet all customer needs.

Mediu	m Vo	ltage		High Voltage				High Current				
Model	٧	Α	w	Model	V	Α	w	Model	V	Α	w	
PHU 500-30	500	30	5 kW	PHU 1000-15	1000	15	5 kW	PHU 80-170	80	170	5 kW	
PHU 500-60	500	60	10 kW	PHU 1000-30	1000	30	10 kW	PHU 80-340	80	340	10 kW	
PHU 500-90	500	90	15 kW	PHU 1000-45	1000	45	15 kW	PHU 80-510	80	510	15 kW	
PHU 750-20	750	20	5 kW	PHU 1500-10	1500	10	5 kW	PHU 200-70	200	70	5 kW	
PHU 750-40	750	40	10 kW	PHU 1500-20	1500	20	10 kW	PHU 200-140	200	140	10 kW	
PHU 750-60	750	60	15 kW	PHU 1500-30	1500	30	15 kW	PHU 200-210	200	210	15 kW	

AWS (ADVANCED WEB SERVER)



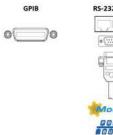


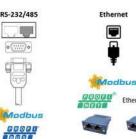




AWS is a powerful function that simplifies operations. With AWS, users can operate devices directly through a web browser, without needing to install any complicated software or drivers. This functionality allows users to complete tasks more efficiently, saving time and increasing productivity. Simply connect to the LAN port, enter the IP address through any web browser, and you can perform tasks such as device control, parameter settings, and function toggling without needing to install or learn any additional software.

INDUSTRY INTERFACE





Raw Socket HISLIP



USB-TMC

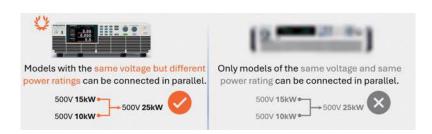






PHU provides a variety of embedded industrial interface options to meet user needs, eliminating the need for users to prepare additional interfaces.

C. APC (ADAPTIVE PARALLEL CONNECTION)

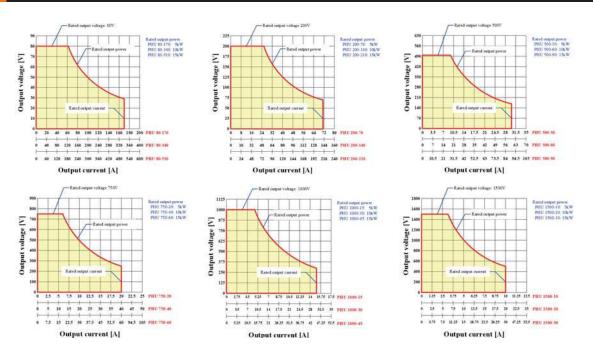


It is easy to set up the master-slave in the parallel connection function.



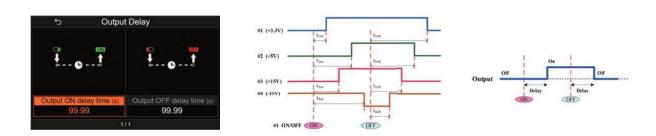
The unique APC (Adaptive Parallel Connection) feature offers adaptability in parallel connection, allowing users to make the best choice according to their needs. For instance, users can opt for a 15 kW model and a 10 kW model, to combine both to reach a 25 kW capacity within their budget constraints. Up to 10 PHU units can be connected to reach 150 kW without the need for additional power distribution for control.

D. MULTI-RANGE OUTPUT



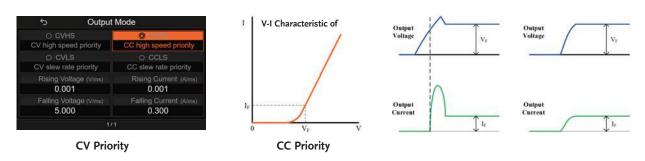
This feature enables the power supply to automatically adapt to higher output voltages when there is a smaller current or handle higher currents when there is a lower voltage. It allows the use of a single source to address multiple voltage and current combinations.

OUTPUT ON/OFF DELAY



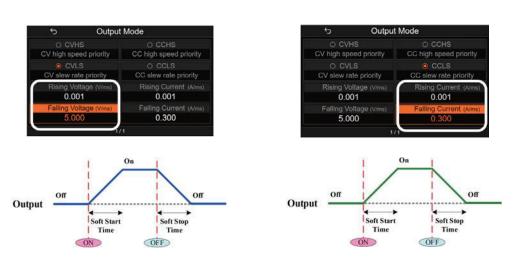
The output ON/OFF delay feature enables the setting of a specific time delay for output on after the power supply output is turned on, and a specific time delay for output off after the power supply output is turned off.

F. CC/CV PRIORITY



The PHU-Series has CV and CC priority modes. The CC priority mode can prevent inrush current and surge voltage from occurring at turn-on to protect DUT.

G. SLEW RATE CONTROL (SOFT START/STOP)



The default voltage (or current) rising speed when starting/stopping the output is set as the highest speed. PHU provides the function for the user to set the speed per their request for applications.

In CVLS (Constant Voltage Low Speed) mode, the user can set the parameter to control the voltage rising when starting the output and the voltage falling when stopping the output.

In CCLS (Constant Current Low Speed) mode, the user can set the parameter to control the current rising when starting the output and the current falling when stopping the output.

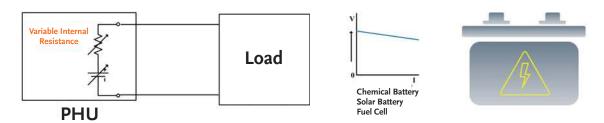
H. BLEED CIRCUIT ON/OFF CONTROL



The bleeder circuit is a power supply circuit designed to discharge the electric charge stored in the power supply filter capacitors when the equipment is turned OFF, primarily for safety reasons to protect the DUT.

The bleed function can be disabled for specific purposes, such as battery applications.

VARIABLE INTERNAL RESISTANCE



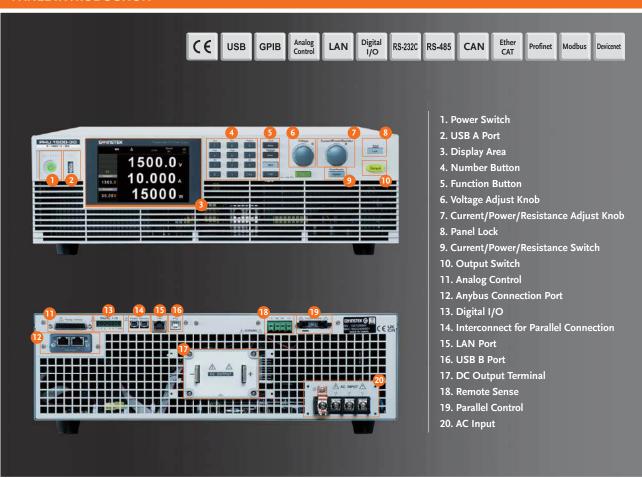
The internal resistance of the power supply can be user-defined in software. When the internal resistance is set it can be seen as a resistance in series with the positive output terminal. This allows the power supply to simulate power sources that have internal resistances such as lead acid batteries.

FUNCTION



Except the standard built-in programmable sequence function, PHU also offers a variety of optional functions including Datalogger, Capacity/Energy, Solar Array Simulator, and Battery Simulation to meet customer's requirements.

PANEL INTRODUCTION



Dever current limit (DCL)	SPECIFICATIONS(PHU-5 kW Series)								
Mail and supply proper Part Par	Model		PHU	80-170	200-70	500-30	750-20	1000-15	1500-10
Brief Implies prompte: Sept. Sep	Rated output voltage (*1)		V	80	200	500	750	1000	1500
Department Dep	Rated output current (*2)		Α	170	70	30	20	15	10
Content Cont	Rated output power		W	5000	5000	5000	5000	5000	5000
Line regulation (17)(2011 N of Vis., seed)	• •		_	2.72	2.8	3	3	3	3
Description ("Fig 102 % or Fixed Port						,	•	,	,
Pigel and rotin (**)			-						
Right and said PG	Load regulation (*4) [0.02 % of Vo_rated]	41.00	-						
Temperature coefficient	Ripple and noise (*5)		-						
Remote compensation voltage 3 x of You Area 10 23 37.3 30 72	T	r.m.s. (*/)						350	400
Read Stant (* 75)		5 % of Vo. rated						50	75
No tender 18	Remote sitese compensation voltage								
Fall Sime 196 Read South Res 50 50 90 90 90 100 120 1	Rise time (*8)								
Transient regions within (**10)									
Constant Mode	Fall time (*9)	No load	ms	1000	1000	1000	1200	1000	1200
Description CPS (DOS % of fix. states	Transient response time (*10)		ms	1.5	1.5	1.5	1.5	1.5	1.5
mak	Constant Current Mode								
	Line regulation (*3) [0.05 % of Io_rated]		mA	85	35	15	10	7.5	5
	Load regulation (*11) [0.1 % of lo_rated]		mA						
Protection Function		r.m.s.(*7)	mA			l		8	8
Setting range V S.00 V is 83.00 V 5.00 V is 20.00 V 5.00 V is 82.00 V 5.00	·		ppm/°C	100 ppm/°C from	n rated output curren	t, following 30 minute	es warm-up		
Setting security Setting security Setting security Setting range A \$00.0 to 150.0 \$0.00 \$1.00	Protection Function	I a		F.00.11. 05.11.	F.00.14:		F 0.1/- 0/		F 0.1/2
Setting range	Over voltage protection (OVP)		-						
Setting security Setting sec		,	_						
Setting range	Over current protection (OCP)								
Over voltage limit (UVL) Setting arange V 0.00 V to 34.00 V 0.00 V to 275.00 V 0.00 V to 787.5 V 0.00 V to 105.00 V 0.00 V to 787.5 V 0.00 V to 787									
Dever voltage limit (DVL)	Over power protection (OPP)								
Under cutrent limit (CUL)	Over voltage limit (OVL)		_						
Dever current limit (DCL)									0.0 V to 1575.0 V
Description Life			Α						0.000 A to 10.500 A
Incorrect sensing connection protection (SENSE) Operation Turn the output off	Under cuttent limit (UCL)		Α	0.00 A to 178.50 A	0.00 A to 73.50 A	0.000 A to 31.500 A	0.000 A to 21.000 A	0.000 A to 15.750 A	0.000 A to 10.500 A
Department Course	Power unit fail (PUF)	Operation		Turn the output of	off				
Shutdown (SD) Operation Turn the output off	Incorrect sensing connection protection (SENSE)	Operation		Turn the output o	off				
Power limit (POWER LIMIT) Operation Value (fixed) Approx. 102 % of rated output power	Low AC input protection (AC-FAIL)	Operation		Turn the output of	off				
Power limit (POWER LIMT) Value (fixed) Approx. 102 % of rated output power	Shutdown (SD)	Operation		Turn the output o	off				
Combinations Voltage Slew Rate Setting range Resolution mV 10 10 10	Power limit (POWER LIMIT)	Operation							
Voltage Slew Rate Setting range V/s 0.01 to 160.00 0.01 to 1600.00 0.1 to 1500.0 0.1 to 1500.0 0.1 to 2000.0 0.0 to 3000.0	·	Value (fixed)		Approx. 102 % of	rated output power				
Voltage Slew Rate	Other Functions	Т .				T		T	1
	Voltage Slew Rate								
Resolution mA 10 10 1 1 1 1 1 1 1			-						
Internal resistance Setting range Ω 0.000 to 0.471 0.000 to 2.857 0.00 to 16.67 0.00 to 37.50 0.0 to 66.7 0.00 to 15.00	Current slew rate		<u> </u>			1	0.001 to 40.000	0.001 to 30.000	1
Internal resistance Resolution mΩ 1 1 10 10 10 100 100 100			_			0.00 to 16.67	0.00 to 37.50	0.0 to 66.7	0.0 to 150.0
Front Panel	Internal resistance		1						
Voltage accuracy [0.1 % of Vo_rated]	Front Panel							1 122	1 122
Voltage accuracy [0.1 % of Vo_rated]	Display			TFT-LCD, 5", 800	pt x 480 pt				
Power accuracy [1 % of Po_rated]			mV			500	750	1000	1500
V 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.001 0.	Current accuracy [0.2 % of Io_rated]		mA	340	140	60	40	30	20
Current resolution			w	50	50	50	50	50	50
Power resolution			_						
Menu, Local, Exit, Clear, Enter, Lock, Current, Shift Output, Numeric Keypad									
Note Turn the knob to increase or decrease the value			w			l .		0.1	0.1
Type A USB connector			<u> </u>				Numeric Keypad		
Programming and Measurement (Digital Interface)	·		-			trie value			
Output voltage programming range 0 % to 105 % V 0 to 84 0 to 210 0 to 525 0 to 787.5 0 to 1050 0 to 1575 Output current programming range 0 % to 105 % A 0 to 178.5 0 to 73.5 0 to 31.5 0 to 21 0 to 15.75 0 to 10.5 Output power programming range 0 % to 102 % W 0 to 5100				Type A USB conn	iectol				
Output current programming range 0 % to 105 % A 0 to 178.5 0 to 73.5 0 to 31.5 0 to 21 0 to 15.75 0 to 10.5 Output power programming range 0 % to 102 % W 0 to 5100 0 to 5100 <th< td=""><td></td><td>0 % to 105 %</td><td>v</td><td>0 to 84</td><td>0 to 210</td><td>0 to 525</td><td>0 to 787 5</td><td>0 to 1050</td><td>0 to 1575</td></th<>		0 % to 105 %	v	0 to 84	0 to 210	0 to 525	0 to 787 5	0 to 1050	0 to 1575
Output power programming range 0 % to 102 % W 0 to 5100									
Output voltage programming accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500 Output current programming accuracy [0.2 % of Io_rated] mA 340 140 60 40 30 20 Output power programming accuracy [1 % of Po_rated] W 50 50 50 50 50 50 Output voltage programming resolution mV 10 10 10 100 100 100 Output current programming resolution mA 10 10 1 1 1 1 1 Output power programming resolution W 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500									
Output current programming accuracy [0.2 % of lo_rated] mA 340 140 60 40 30 20 Output power programming accuracy [1 % of Po_rated] W 50 50 50 50 50 50 Output voltage programming resolution mV 10 10 10 100 100 100 Output current programming resolution mA 10 10 1 1 1 1 1 Output power programming resolution W 0.1 0.1 0.1 0.1 0.1 0.1 0.1 Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500			-						
Output power programming accuracy [1 % of Po_rated] W 50 100 1500 Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500			_						
Output current programming resolution mA 10 10 1 1 1 1 Output power programming resolution W 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500			w	50	50	50	50	50	50
Output power programming resolution W 0.1 0.1 0.1 0.1 0.1 0.1 Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500	Output voltage programming resolution		mV	10	10	10	100	100	100
Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500	Output current programming resolution		mA	10	10	1	1	1	1
	Output power programming resolution		W	0.1	0.1	0.1	0.1		0.1
	Output voltage measurement accuracy [0.1 % of Vo_rated]		mV						
				340	140	60	40	30	20
Output power measurement accuracy [1 % of Po_rated] W 50 50 50 50 50			_						
Output voltage measurement resolution mV 10 10 10 100 100 100			_						
Output current measurement resolution mA 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· ·		_						
Output power measurement resolution W 0.1 0.1 0.1 0.1 0.1 0.1	Output power measurement resolution		w	0.1	0.1	0.1	0.1	0.1	0.1

SPECIFICATIONS(PHU-5 kW Series)			
Input Characteristics for PHU-C Series			
Norminal input rating			Single Phase, 3-Phase, 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac)
Input frequency range			47 Hz to 63 Hz
Maximum input current	200 Vac	Α	32 A (L1, L2)
Inrush current	200 Vac	Α	Less than 50 A
Maximum input power		VA	6000
Power factor	Rated Power		> 0.95
Efficiency (*14)	200 Vac	%	86 to 94
Hold-up time	200 144	7.	10 ms or greater
Input Characteristics for PHU-D Series			1.7.7.4.5.1
Norminal input rating			3-Phase, 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac)
Input frequency range			47 Hz to 63 Hz
Maximum input current	400 Vac	Α	16 A (L1, L2)
Inrush current	400 Vac	Α	Less than 25 A
Maximum input power		VA	6000
Power factor	Rated Power		> 0.95
Efficiency (*14)	400 Vac	%	87 to 94
Hold-up time	.50 140	/0	10 ms or greater
Interface Capabilities			10 m3 of Breater
USB	1	I	Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class)
LAN			MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask
Isolated Analog Control Interface			$V_{\text{set}} / I_{\text{set}} = 0 \text{ V to 5 V or 0 V to 10 V} / V_{\text{mon}} / I_{\text{mon}} = 0 \text{ V to 5 V or 0 V to 10 V}$
Factory Option			RS-232&485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O
Isolated Analog Control Interface			K3-232&463 OF GFTB OF CAIN BUS OF DEVICENCE OF ISOTATED DISTRIBUTION
•		1	0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated V _{out}
Vout voltage programming			, , , , , , , , , , , , , , , , , , , ,
lout voltage programming			0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated I _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated I _{out} 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated P _{out}
Pout voltage programming			
Internal resistance voltage programming			0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{int}
Output voltage monitor			0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %
Output current monitor			0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %
Reference voltage			Voltage reference for 0 V to 5V or 0 V to 10V
Alarm Input			Turn off the PHU output with a High (4.5 V to 5 V)
Output on/off control			Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0 V to 0.5 V) or short-circuit
Alarm clear control			Clear alarms with a High (4.5 V to 5 V)
CV/CC/CP/ALM/PWR ON/OUT ON indicator			Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA
Environmental Conditions			
Operaing temperature			0 °C to 50 °C
Storage temperature			-25 °C to 70 °C
Operating humidity			20 % to 85 % RH; No condensation
Storage humidity			90 % RH or less; No condensation
Altitude			Maximum 2000 m
General Specifications			
Weight	Main unit only	kg	Less than 21 kg
Dimensions (W×H×D)		mm	442 mm × 130 mm × 675 mm
Cooling			Forced air cooling by internal fan
EMC			Complies with the European EMC directive 89/336/EEC for Class A test and measurement products
Safety			Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking
Withstand voltage			Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute

- $\pm 1. Minimum \ voltage$ is guaranteed to maximum 0.2 % of the rated output voltage.

- *2.Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3.At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4.From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
- *5. For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe.
- *6.Measurement frequency bandwidth is 10 Hz to 20 MHz.
- *7.Measurement frequency bandwidth is 5 Hz to 1 MHz.
- $\pm 8. From 10~\%$ to 90 % of rated output voltage, with rated resistive load.
- *9.From 90 % to 10 % of rated output voltage, with rated resistive load.
 *10.Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.
 Voltage set point from 10 % to 100 % of rated output.
- *11.For load voltage change, equal to the unit voltage rating, constant input voltage.
- $\pm 12. The \ ripple$ is measured at 20 % to 100 % output voltage and full output current.
- $\pm 13. For output power change from 10 <math display="inline">\%$ to 90 %, constant input voltage.
- *14.At rated output power.

Medical cologists of wides (PT)	SPECIFICATIONS(PHU-10 kW Series)								
Median display power 19	Model		PHU	80-340	200-140	500-60	750-40	1000-30	1500-20
Month of purphers Mont	Rated output voltage (*1)		V	80	200	500	750	1000	1500
Content Cont	Rated output current (*2)		Α	340	140	60	40	30	20
Content March Marc	Rated output power		w	10000	10000	10000	10000	10000	10000
Line myshorine 7 1 2 2 2 2 2 2 2 2 2	Output power ratio		_	2.72	2.8	3	3	3	3
Second Property	Constant Voltage Mode								
Page 15th distal [7]	Line regulation (*3) [0.01 % of Vo_rated]		mV	8	20	50	75	100	150
Page	Load regulation (*4) [0.02 % of Vo_rated]		mV	16	40	100	150	200	300
Personal confection	Ripple and noise (*5)	p-p (*6)	mV	200	300	350	800	1600	2400
Second concessor compoundation vallage Second Very S	Ripple and noise (3)	r.m.s. (*7)	mV	16	40	70	200	350	400
The rime (**Vi) The load rime (**) The load	Temperature coefficient		ppm/°C	100 ppm/℃ fron	rated output voltage	, following 30 minute	s warm-up.		
No. Seek Ph. No. Seek No.	Remote snese compensation voltage	5 % of Vo_rated	V	4	10	25	37.5	50	75
Part	Rise time (*8)	Rated load	ms	30	30	30	30	30	30
Fall Brain (Ph) No load	inse time (o)	No load	ms	30	30	30	30	30	30
Processor integration for pile Processor Process	Fall time (*9)	Rated load	ms	80	80	80	80	80	80
Contact Field Contact Fiel	()	No load	ms	1000	1000	1000	1200	1000	1200
University 10 10 10 10 10 10 10 1			ms	1.5	1.5	1.5	1.5	1.5	1.5
Load regulation (**PLI_101) % of f	Constant Current Mode								
	Line regulation (*3) [0.05 % of Io_rated]		mA				20		10
Perpendict Perpendict Perpendict Perpendict Perpendict Perpendict Percentage Per									
Processor Survey		r.m.s. (*7)	mA					22	22
Setting range V S. 60 V to 800 V 50 V to 50 00 V 50 V to 50 V to 50 V	<u> </u>		ppm/°C	100 ppm/°C fron	rated output curren	, following 30 minute	s warm-up.		
Setting securacy MV	Protection Function								
Setting range A 1,00 A to 1,140.04 1,000 A to 1,000.04 1,000.04 to 1,000.04 2,000.04 2,000.04 2,000.04 2,000.04 2,000.04 2,000.04 2,000.	Over voltage protection (OVP)								
Setting securately make									
Selling securacy mA	Over current protection (OCP)								
Setting recursery W									
Control to provide mint (OVL)	Over power protection (OPP)								
Under voltage limit (LW)	Over welfage limit (OV)								
Setting range A 0.00 A to 337.00	- ' '								
Under cutted Init (UCL)									
Persecution Final (PUP) Operation Control (ENSES) Operation Turn the output of file	, ,		_						
			A			0.00 A to 63.00 A	0.000 A to 42.000 A	0.000 A to 31.500 A	0.000 A to 21.000 A
Low AC input protection (AC-FALL) Operation Turn the output off		-							
Shutdown (SD) Operation		-							
Power Initit POWER LIMIT Operation Value (fixed) Operation Operatio		-							
Power limit (POWER LIMT) Value (fixed) Approx.102 % of rated output power	Shutdown (SD)	-							
Other Functions Setting range V/s 0.01 to 160.00 0.01 to 160.00 0.1 to 1000.0 0.1 to 2000.0 0.1 to 2000.0 0.1 to 2000.0 0.01 to 2000.0 0.00 to 10.0 0.00 to 10.00 0.00	Power limit (POWER LIMIT)	<u> </u>							
Setting range V/s 0.01 to 160.00 0.01 to 1400.00 0.1 to 1500.00 0.0 to 1500.00 0.0 to 1500.00 0.0 to 160.00 0.0 to	Other Functions	value (fixed)		Арргох. 102 /8 01	rated output power				
Resolution mV 10 10 10 100	Other Functions	Satting range	V/e	0.01 to 160.00	0.01 to 400.00	0.1 to 1000.0	0.1 to 1500.0	0.1 to 2000.0	0.1 to 3000.0
Setting range A/s 0.1 to 680.0 0.01 to 280.00 0.01 to 120.00 0.01 to 80.00 0.001 to 60.00 0.001 to 40.00	Voltage Slew Rate		_						
Resolution MA 100 10 10 10 10 1 1 1									
Setting range Resolution Pacific range	Current slew rate		_						
Internal Passistance								0.00 to 33.33	0.0 to 75.0
Protect Prot	Internal resistance								
Voltage accuracy [0.1 % of Vo_rated]	Front Panel								
Voltage accuracy [0.1 % of Vo_rated]	Display			TFT-LCD, 5", 800	pt x 480 pt				
MA 680 280 120 80 60 40			mV	80	200	500	750	1000	1500
V 0.01 0.01 0.01 0.01 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.001 0.	Current accuracy [0.2 % of lo_rated]		mA	680	280	120	80	60	40
V 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.001 0.	Power accuracy [1 % of Po_rated]		w	100	100	100	100	100	100
Power resolution W	Voltage resolution		V	0.01	0.01	0.01	0.1	0.1	0.1
Menu, Local, Exit, Clear, Enter, Lock, Current, Shift Output, Numeric Keypad	Current resolution		Α	0.01	0.01	0.001	0.001	0.001	0.001
Turn the knob to increase or decrease the value	Power resolution		w	1	1	1	1	1	1
Type A USB connector	Buttons			Menu, Local, Exit	, Clear, Enter, Lock, C	urrent, Shift Output,	Numeric Keypad		
Programming and Measurement (Digital Interface)	Rotary knob			Turn the knob to	increase or decrease	the value			
Output voltage programming range 0 % to 105 % V 0 to 84 0 to 210 0 to 525 0 to 787.5 0 to 1050 0 to 1575 Output current programming range 0 % to 105 % A 0 to 357 0 to 147 0 to 63 0 to 42 0 to 31.5 0 to 21 Output power programming range 0 % to 102 % W 0 to 10200 0 to				Type A USB conr	ector				
Output current programming range 0 % to 105 % A 0 to 357 0 to 147 0 to 63 0 to 42 0 to 31.5 0 to 21 Output power programming range 0 % to 102 % W 0 to 10200 0	Programming and Measurement (Digital Interface)								
Output power programming range 0 % to 102 % W 0 to 10200	Output voltage programming range		V						
Output voltage programming accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500 Output current programming accuracy [0.2 % of lo_rated] mA 680 280 120 80 60 40 Output power programming accuracy [1 % of Po_rated] W 100	Output current programming range								
Output current programming accuracy [0.2 % of lo_rated] mA 680 280 120 80 60 40 Output power programming accuracy [1 % of Po_rated] W 100 <th< td=""><td>Output power programming range</td><td>0 % to 102 %</td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Output power programming range	0 % to 102 %	_						
Output power programming accuracy [1 % of Po_rated] W 100 1500<	Output voltage programming accuracy [0.1 % of Vo_rated]								
Output voltage programming resolution mV 10 10 10 100 100 100 Output current programming resolution mA 10 10 1	Output current programming accuracy [0.2 % of lo_rated]		_						
Output current programming resolution mA 10 10 1 1 1 1 Output power programming resolution W 1	Output power programming accuracy [1 % of Po_rated]								
Output power programming resolution W 1									
Output voltage measurement accuracy [0.1 % of Vo_rated] mV 80 200 500 750 1000 1500 Output current measurement accuracy [0.2 % of lo_rated] mA 680 280 120 80 60 40 Output power measurement accuracy [1 % of Po_rated] W 100 100 100 100 100 100 100 Output voltage measurement resolution mV 10 10 10 100 100 100 100 Output current measurement resolution mA 10 10 1 1 1 1 1									
Output current measurement accuracy [0.2 % of lo_rated] mA 680 280 120 80 60 40 Output power measurement accuracy [1 % of Po_rated] W 100 <td< td=""><td>1 1 1 5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1 1 1 5								
Output power measurement accuracy [1 % of Po_rated] W 100									
Output voltage measurement resolution mV 10 10 10 100 100 100 Output current measurement resolution mA 10 10 1 1 1 1 1									
Output current measurement resolution mA 10 10 1 1 1 1									
· ·	_ · · · · ·								
Output power measurement resolution W I I I I I I I	<u> </u>		_						
	Output power measurement resolution	<u> </u>	l w	l l	1	<u> </u>	<u>'</u>		l l

Property	SPECIFICATIONS(PHU-10 kW Series)			
3-Phase, 20 week 130 Vec to 260 Vec (200 vec) 230 Vec)	, , , , , , , , , , , , , , , , , , , ,			
1994 February range	•			3-Phase 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac)
Maximum Impact sourcest 200 Vec A 55.6 k. [1], 17.8 A [2], 15] Intends current 200 Vec A 55.6 k. [1], 17.8 A [2], 15] Intends current 200 Vec A 12.000 Intends current 200 Vec 200				
Intends current 200 Vice A Less than 100		200 Vos	_	
Maintain impage power	·			
Process Rated Process Sacra Process Sa		200 Vac		
Section Sect	· · ·	Dated Dames	VA	
New York Service Ser			0/	
Input Characteristics for PPU-D Series Nominal Input rating 3. Pinace, 60 V models: 342 Vac to 528 Vac (Covers \$10),400,(415,446),480,Vac) National Input current 400 Vac A 128 A (11), 16 A (12, 15) National Input proces Read Power A 12000 Reservation Filt to 63 Hz Va 12000 Reservation Reflection (P14) 400 Vac A 128 S (11), 16 A (12, 15) Nominal Input proces Read Power B 20 055 Reflection (P14) 400 Vac A 128 S (11), 16 A (12, 15) Nominal Input proces Read Power B 10 75 S or 95 S B 37 to 94 A 12000 A 120		200 Vac	%	
Naminal injust rating	·			10 ms or greater
Interins (processory range) A 27 Hz to 63 Hz Maximum injust current A00 Vac A 28 A (1), 16 A (12, 13) A 12000 A 12	•			3 Phase 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac)
Maximum input current 400 Yac A 28 A (1.1), 16 A (1.2, 1.3) A Less than 50 A A Les				· · · · · · · · · · · · · · · · · · ·
Internate current		400 Vos	_	
Maximum input power Rated Power Rated Power 2-0.95	<u>'</u>			
Power factor Rated Power		400 Vac		
Efficiency (*14) 400 Vac % 87 to \$4 10 ms or greater Interface Capabilities USB SType A. Host, Type B. Slave, Speed: 1.1/2.0, USB Class: CDC (Communications Device Class) USB MC. Address, DISF Paddress, User-Password, Gateway IP Address, Instrument IP Address, Subnet Mask Notited Analog Control Interface Notice of Politics of Paddress, Control Interface Notice of Politics of Paddress, Oster Password, Gateway IP Address, Instrument IP Address, Subnet Mask Notice of Politics of Paddress, Oster Password, Gateway IP Address, Instrument IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Instrument IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, Subnet Mask Notice of Paddress, Oster Password, Gateway IP Address, User Password, Gateway IP Address, Oster Vol Yo V		Data d Daman	VA	
Hold-up time 10 ms or greater			- 0/	
Interface Capabilities Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) AN		400 Vac	%	
Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) ANN MAC. Address, DuSt IP Address, User Password, Caleway IP Address, Instrument IP Address, Subnet Mask Instruction Interface V _{vii} / I _{vii} = Vot 15 v 5 v 6 v 0 to 10 V v 5 v 6 v 0 v 10 To IV v To V to 10 V	·			IU ms or greater
MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask Var I _{1m} = OV to 5 V or 0 V to 10 V Var I _{1m} = OV to 5 V or 0 V to 10 V Var Var I _{1m} = OV to 5 V or 0 V to 10 V Var Va	-	· · · · · · · · · · · · · · · · · · ·	1	
Solated Analog Control Interface				
Factory Option R5-2328.485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O				
Solated Analog Control Interface 0 % to 100 %, 0V to 5 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of rated V _{eot} , or 0 V to 10 V Accuracy: ±1 % of maximum R _{iot} , or 0 V to 10 V				
Volume voltage programming				RS-232&485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O
Sout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated I _{sus} Pout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated I _{sus} 0 or 0 V to 10 V Accuracy: ± 1 % of rated I _{sus} 1 miterial resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} 2 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} 2 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} 3 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} 3 0 % to 100 %, 0 V to 5 V or 0 V to 10 V Accuracy: ± 1 % of maximum R _{out} 4 0 % to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum R _{out} 4 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 5 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum R _{out} 5 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 5 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum R _{out} 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum R _{out} 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum R _{out} 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 5 V or 0 V to 10 V, Accuracy: ± 1 % 6 0 Y to 10 V, Accuracy: ± 1 % 6 0 Y to 10 V to 10 V to 10 V to 10 V to 10		1		
Pout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of raximum R _{int} . 0 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy; ± 1 % of maximum R _{int} . Output voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy; ± 1 % of maximum R _{int} . Output voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 % Reference voltage 1 Voltage reference for 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 % Notage reference for 0 V to 5 V or 0 V to 10 V Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or open-circuit, turn the output off using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5 V) or short-circuit turn the output on using a LOW (0 V to 0.5				
Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of maximum R _{ont} , or 0 V to 10 V Accuracy; ± 1 % of maximum R _{ont} Output voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 % 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 % Over 5 V or 0 V to 10 V, Accuracy; ± 1 % Note of the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a LOW (0 V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Alarm clear control CV/CC/CP/ALM/PWR ON/OUT ON indicator Environmental Conditions Operating humidity O C to 50 ° C Storage temperature O ° C to 50 ° C Operating humidity O % to 85 % RH; No condensation Maximum 2000 m Ceneral Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (WHXD) mm 442 mm x 130 mm x 675 mm Coolling EMC Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking				·
Output voltage monitor Output current monitor Voltage reference for 0 V to 5 V or 0 V to 10V, Accuracy: ± 1 % Voltage reference for 0 V to 5 V or 0 V to 10V Alarm Input Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH	0.0			, , , , , , , , , , , , , , , , , , , ,
Output current monitor Reference voltage Voltage reference for 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 % Voltage reference for 0 V to 5 V or 0 V to 10 V Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or short-circuit Turn the output off using a HIGH (4.5 V to 5 V) or open-circu				, , , , , , , , , , , , , , , , , , , ,
Reference voltage Voltage reference for 0 V to 5V or 0 V to 10V Alarm Input Dutput on/off control Alarm Clear control Alarm clear control Clear alarms with a High (4.5 V to 5 V) or open-circuit, turn the output off using a HICH (4.5 V to 5 V) or open-circuit Turn the output on using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm Clear control Clear alarms with a High (4.5 V to 5 V) or open-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Elevation of turn to using a LOW (0V to 0.5 V) or open-circuit. Turn the output on using a LOW (0V to 0.5 V) or open-circuit. Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Turn the output off using a LOW (0V to 0.5 V) or open-circuit. Turn the output off using a LOW (0V to 0.5 V) or open-circuit. Turn to up up using a LOW (0V to 0.5 V) or open-circuit. Turn turn to using a LOW (0V to 0.5 V) or ope	· · · · · ·			· · · · · · · · · · · · · · · · · · ·
Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Alarm clear control CIclear alarms with a High (4.5 V to 5 V) CV/CC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA Environmental Conditions Operating temperature 0 ° C to 50 ° C Storage temperature 20 % to 85 % RH; No condensation Storage humidity 20 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm ×130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Complies with the European EMC directive 73/23/EEC and carries the CE-marking				
Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit Alarm clear control CIclear alarms with a High (4.5 V to 5 V) CV/CC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA Environmental Conditions Operating temperature O °C to 50 °C Storage temperature O °C to 50 °C Operating humidity Operating humidity Operating humidity Operating humidity Maximum 2000 m Altitude Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking				~
Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Turn the output on using a HIGH (4.5 V to 5 V) or short-circuit. Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V) or short-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA Environmental Conditions Operaing temperature O ° C to 50 ° C Storage temperature O o c to 50 ° C Operating humidity Storage humidity Storage humidity O w R H or less; No condensation Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European EMC directive 89/32/EEC and carries the CE-marking	Alarm Input			, ,
Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA Environmental Conditions Operaing temperature O ° C to 50 ° C Storage temperature O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity O ° C to 50 ° C Operating humidity	Output on/off control			Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0V to 0.5 V)
Environmental Conditions Operaing temperature O °C to 50 °C Storage temperature O °C to 50 °C Storage temperature O °C to 50 °C Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Alarm clear control			Clear alarms with a High (4.5 V to 5 V)
Operating temperature O °C to 50 °C Storage temperature O coperating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Main unit only Main unit only May Main unit only May May May May May May May M	CV/CC/CP/ALM/PWR ON/OUT ON indicator			Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA
Storage temperature -25 °C to 70 °C Operating humidity 20 % to 85 % RH; No condensation 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Main unit only Maximum 2000 m Maximu	Environmental Conditions			
Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (WxHxD) mm 442 mm x 130 mm x 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Operaing temperature			0 °C to 50 °C
Storage humidity 90 % RH or less; No condensation Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Storage temperature			-25 °C to 70 °C
Altitude Maximum 2000 m General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (WxHxD) mm 442 mm x 130 mm x 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Operating humidity			20 % to 85 % RH; No condensation
General Specifications Weight Main unit only kg Less than 30.5 kg Dimensions (WxHxD) mm 442 mm x 130 mm x 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Storage humidity			90 % RH or less; No condensation
Weight Main unit only kg Less than 30.5 kg Dimensions (WxHxD) mm 442 mm x 130 mm x 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Altitude			Maximum 2000 m
Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	General Specifications			
Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Weight	Main unit only	kg	Less than 30.5 kg
Complies with the European EMC directive 89/336/EEC for Class A test and measurement products Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Dimensions (W×H×D)		mm	442 mm × 130 mm × 675 mm
Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking	Cooling			Forced air cooling by internal fan
	EMC			Complies with the European EMC directive 89/336/EEC for Class A test and measurement products
	Safety			Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking
	Withstand voltage			
Insulation resistance Chassis and output terminal; chassis and AC input; AC input and output terminal: $100 \text{ M}\Omega$ or more (DC 500 V)	Insulation resistance			Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 M Ω or more (DC 500 V)

- $\pm 1.$ Minimum voltage is guaranteed to maximum 0.2 % of the rated output voltage.

- *2.Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3.At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4.From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
- *5. For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe.
- *6.Measurement frequency bandwidth is 10 Hz to 20 MHz.
- *7.Measurement frequency bandwidth is 5 Hz to 1 MHz.
- \$8. From 10~% to 90 % of rated output voltage, with rated resistive load.
- *9.From 90 % to 10 % of rated output voltage, with rated resistive load.
 *10.Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.
 Voltage set point from 10 % to 100 % of rated output.
- *11.For load voltage change, equal to the unit voltage rating, constant input voltage.
- $\pm 12. The ripple is measured at 20 % to 100 % output voltage and full output current.$
- $\pm 13. For output power change from 10 \% to 90 %, constant input voltage.$
- *14.At rated output power.

SPECIFICATIONS(PHU-15 kW Series)								
Model		PHU	80-510	200-210	500-90	750-60	1000-45	1500-30
Rated output voltage (*1)		٧	80	200	500	750	1000	1500
Rated output current (*2)		Α	510	210	90	60	45	30
Rated output power		w	15000	15000	15000	15000	15000	15000
Output power ratio		_	2.72	2.8	3	3	3	3
Constant Voltage Mode	1						ı	
Line regulation (*3) [0.01 % of Vo_rated]		mV	8	20	50	75	100	150
Load regulation (*4) [0.02 % of Vo_rated]		mV	16	40	100	150	200	300
Ripple and noise (*5)	p-p (*6)	mV	200	300	350	800	1600	2400
Temperature coefficient	r.m.s. (*7)	mV	16	40	70	200	350	400
Remote snese compensation voltage	5 % of Vo_rated	V ppm/℃	4	10	, following 30 minutes	37.5	50	75
Remote sitese compensation voltage	Rated load	ms	30	30	30	30	30	30
Rise time (*8)	No load	ms	30	30	30	30	30	30
	Rated load	ms	80	80	80	80	80	80
Fall time (*9)	No load	ms	1000	1000	1000	1200	1000	1200
Transient response time (*10)		ms	1.5	1.5	1.5	1.5	1.5	1.5
Constant Current Mode								
Line regulation (*3) [0.05 % of Io_rated]		mA	255	105	45	30	22.5	15
Load regulation (*11) [0.1 % of Io_rated]		mA	510	210	90	60	45	30
Ripple and noise (*12)	r.m.s.	mA	510	150	48	48	26	26
Temperature coefficient		ppm/°C	100 ppm/°C from	rated output current	, following 30 minutes	warm-up.		
Protection Function								
Over voltage protection (OVP)	Setting range	٧	5.00 V to 88.00 V	5.00 V to 220.00 V	5.00 V to 550.00 V	5.0 V to 825.0 V	5.0 V to 1100.0 V	5.0 V to 1650.0 V
, (ov.)	Setting accuracy	mV	80	200	500	750	1000	1500
Over current protection (OCP)	Setting range	Α	5.00 A to 561.00 A	5.00 A to 231.00 A	5.00 A to 99.00 A	5.00 A to 66.00 A	4.5 A to 49.500 A	3 A to 33.000 A
	Setting accuracy	mA	1020	420	180	120	90	60
Over power protection (OPP)	Setting range	w	300 W to 16500 W	300 W to 16500 W	300 W to 16500 W	300 W to 16500 W	300 W to 16500 W	300 W to 16500 W
	Setting accuracy	W	150	150	150	150	150	150
Over voltage limit (OVL)	Setting range	V	0.00 V to 84.00 V	0.00 V to 210.00 V	0.00 V to 525.00 V	0.0 V to 787.5 V	0.0 V to 1050.0 V	0.0 V to 1575.0 V
Under voltage limit (UVL)	Setting range	٧	0.00 V to 84.00 V	0.00 V to 210.00 V	0.00 V to 525.00 V	0.0 V to 787.5 V	0.0 V to 1050.0 V	0.0 V to 1575.0 V
Over current limit (OCL)	Setting range	A	0.00 A to 535.50 A	0.00 A to 220.50 A	0.00 A to 94.50 A	0.00 A to 63.00 A	0.000 A to 47.250 A	0.000 A to 31.500 A
Under cuttent limit (UCL)	Setting range	Α	0.00 A to 535.50 A Turn the output of	0.00 A to 220.50 A	0.00 A to 94.50 A	0.00 A to 63.00 A	0.000 A to 47.250 A	0.000 A to 31.500 A
Power unit fail (PUF) Incorrect sensing connection protection (SENSE)	Operation Operation		Turn the output					
Low AC input protection (AC-FAIL)	Operation		Turn the output					
Shutdown (SD)	Operation		Turn the output					
Situtiowii (3D)	Operation		Over power limit					
Power limit (POWER LIMIT)	Value (fixed)			rated output power				
Other Functions	1							
	Setting range	V/s	0.01 to 160.00	0.01 to 400.00	0.1 to 1000.0	0.1 to 1500.0	0.1 to 2000.0	0.1 to 3000.0
Voltage Slew Rate	Resolution	mV	10	10	100	100	100	100
Current slew rate	Setting range	A/s	0.1 to 1020.0	0.01 to 420.00	0.01 to 180.00	0.01 to 120.00	0.01 to 90.00	0.001 to 60.000
Current siew rate	Resolution	mA	100	10	10	10	10	1
Internal resistance	Setting range	Ω	0.000 to 0.157	0.00 to 0.95	0.00 to 5.56	0.00 to 12.50	0.00 to 22.22	0.0 to 50.0
The Hairesistance	Resolution	$\mathbf{m}\Omega$	1	10	10	10	10	100
Front Panel								
Display			TFT-LCD, 5", 800	· · · · · · · · · · · · · · · · · · ·				
Voltage accuracy [0.1% of Vo_rated]		mV	80	200	500	750	1000	1500
Current accuracy [0.2% of lo_rated]		mA	1020	420	180	120	90	60
Power accuracy [1% of Po_rated]		W	150	150	150	150	150	150
Voltage resolution Current resolution		V	0.01	0.01	0.01	0.1	0.1	0.1
Power resolution		A W	0.01	0.01	0.01	0.001	0.001	0.001
Buttons		w		Clear Enter Lock C	urrent, Shift Output, I	lumeric Keynad	1	1
Rotary knob				increase or decrease		чинтенс кеураа		
USB port			Type A USB conr		такое.			
Programming and Measurement (Digital Interface)			.75	=-				
Output voltage programming range	0 % to 105 %	V	0 to 84	0 to 210	0 to 525	0 to 787.5	0 to 1050	0 to 1575
Output current programming range	0 % to 105 %	A	0 to 535.5	0 to 220.5	0 to 94.5	0 to 63	0 to 47.25	0 to 31.5
Output power programming range	0 % to 102 %	w	0 to 15300	0 to 15300	0 to 15300	0 to 15300	0 to 15300	0 to 15300
Output voltage programming accuracy [0.1 % of Vo_rated]		mV	80	200	500	750	1000	1500
Output current programming accuracy [0.2 % of lo_rated]		mA	1020	420	180	120	90	60
Output power programming accuracy [1 % of Po_rated]		w	150	150	150	150	150	150
Output voltage programming resolution		mV	10	10	10	100	100	100
Output current programming resolution		mA	10	10	10	1	1	1
Output power programming resolution		w	1	1	1	1	1	1
Output voltage measurement accuracy [0.1 % of Vo_rated]		mV	80	200	500	750	1000	1500
Output current measurement accuracy [0.2 % of Io_rated]		mA	1020	420	180	120	90	60
Output power measurement accuracy [1 % of Po_rated]		w	150	150	150	150	150	150
Output voltage measurement resolution		mV	10	10	10	100	100	100
Output current measurement resolution		mA	10	10	10	1	1	1
Output power measurement resolution		W	1	1	1	1	1	1

SPECIFICATIONS(PHU-15 kW Series)			
· · · · · · · · · · · · · · · · · · ·			
Input Characteristics for PHU-C Series	1		
Norminal input rating			3-Phase, 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac)
Input frequency range			47 Hz to 63 Hz
Maximum input current	200 Vac	Α	56 A (L1, L2, L3)
Inrush current	200 Vac	Α	Less than 100 A
Maximum input power		VA	18000
Power factor	Rated Power		> 0.95
Efficiency (*14)	200 Vac	%	86 to 94
Hold-up time			10 ms or greater
Input Characteristics for PHU-D Series			
Norminal input rating			3-Phase, 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac)
Input frequency range			47 Hz to 63 Hz
Maximum input current	400 Vac	Α	28 A (L1, L2, L3)
Inrush current	400 Vac	Α	Less than 50 A
Maximum input power		VA	18000
Power factor	Rated Power		> 0.95
Efficiency (*14)	400 Vac	%	87 to 94
Hold-up time	400 Vac	70	10 ms or greater
Interface Capabilities			10 His of greater
•			Time A. Hash Time D. Clave County 1.1/20 HCD Clave CDC/County in history Device Clave)
USB			Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class)
LAN			MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask
Isolated Analog Control Interface			V _{set} / I _{set} = 0 V to 5 V or 0 V to 10 V V _{mon} / I _{mon} = 0 V to 5 V or 0 V to 10 V
Factory Option			RS-232&485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O
Isolated Analog Control Interface			
Vout voltage programming			0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0~10 V Accuracy: ± 1 % of rated V _{out}
lout voltage programming			0 % to 100 %, 0 V to 5 V Accuracy: \pm 1 % of rated I_{out} or 0 V to 10 V Accuracy: \pm 1 % of rated I_{out}
Pout voltage programming			0 % to 100 %, 0 V to 5 V Accuracy: \pm 1 % of rated P_{out} , or 0 V to 10 V Accuracy: \pm 1 % of rated P_{out}
Internal resistance voltage programming			0 % to 100 %, 0 V to 5 V Accuracy: \pm 1 % of maximum R_{int} , or 0 V to 10 V Accuracy: \pm 1 % of maximum R_{int}
Output voltage monitor			0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %
Output current monitor			0 V to 5 V or 0 to 10 V, Accuracy: ± 1 %
Reference voltage			Voltage reference for 0 V to 5 V or 0 V to 10 V
Alarm Input			Turn off the PHU output with a High (4.5 V to 5 V)
Output on/off control			Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit Turn the output on using a HIGH (4.5 V to 5 V) or open-circuit, turn the output off using a LOW (0 V to 0.5 V) or short-circuit
Alarm clear control			Clear alarms with a High (4.5V to 5V)
CV/CC/CP/ALM/PWR ON/OUT ON indicator			Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA.
Environmental Conditions			
Operaing temperature			0 °C to 50 °C
Storage temperature			-25 °C to 70 °C
Operating humidity			20 % to 85 % RH; No condensation
Storage humidity			90 % RH or less; No condensation
Altitude			Maximum 2000 m
General Specifications			
Weight	Main unit only	kg	Less than 40 kg
Dimensions (W×H×D)	,	mm	442 mm × 130 mm × 675 mm
Cooling			Forced air cooling by internal fan
EMC			Complies with the European EMC directive 89/336/EEC for Class A test and measurement products
Safety			Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking
Withstand voltage			Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute
Insulation resistance			Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 M Ω or more (DC 500 V)

- $\pm 1. Minimum voltage$ is guaranteed to maximum 0.2 % of the rated output voltage.

- *2.Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3.At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4.From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
- *5. For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe.
- *6.Measurement frequency bandwidth is 10 Hz to 20 MHz.
- *7.Measurement frequency bandwidth is 5 Hz to 1 MHz.
- $\pm 8. From 10~\%$ to 90 % of rated output voltage, with rated resistive load.
- *9.From 90 % to 10 % of rated output voltage, with rated resistive load.
 *10.Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.
 Voltage set point from 10 % to 100 % of rated output.
- *11.For load voltage change, equal to the unit voltage rating, constant input voltage.
- $\pm 12. The ripple is measured at 20 % to 100 % output voltage and full output current.$
- $\pm 13. For output power change from 10 % to 90 %, constant input voltage.$
- *14.At rated output power.

ORDERING INFORMATION

	5 kW
	80 V, 170 A, 5000 W Programmable DC Power Supply
PHU 80-170	PHU 80-170-C (Input Voltage 3P3W 200 V)
	PHU 80-170-D (Input Voltage 3P4W 380 V)
	200 V, 70 A, 5000 W Programmable DC Power Supply
PHU 200-70	PHU 200-70-C (Input Voltage 3P3W 200 V)
	PHU 200-70-D (Input Voltage 3P4W 380 V)
	500 V, 30 A, 5000 W Programmable DC Power Supply
PHU 500-30	PHU 500-30-C (Input Voltage 3P3W 200 V)
	PHU 500-30-D (Input Voltage 3P4W 380 V)
	750 V, 20 A, 5000 W Programmable DC Power Supply
PHU 750-20	PHU 750-20-C (Input Voltage 3P3W 200 V)
	PHU 750-20-D (Input Voltage 3P4W 380 V)
	1000 V, 15 A, 5000 W Programmable DC Power Supply
PHU 1000-15	PHU 1000-15-C (Input Voltage 3P3W 200 V)
	PHU 1000-15-D (Input Voltage 3P4W 380 V)
	1500 V, 10 A, 5000 W Programmable DC Power Supply
PHU 1500-10	PHU 1500-10-C (Input Voltage 3P3W 200 V)
	PHU 1500-10-D (Input Voltage 3P4W 380 V)

	10 kW
	80 V, 340 A, 10,000 W Programmable DC Power Supply
PHU 80-340	PHU 80-340-C (Input Voltage 3P3W 200 V)
	PHU 80-340-D (Input Voltage 3P4W 380 V)
	200 V, 140 A, 10,000 W Programmable DC Power Supply
PHU 200-140	PHU 200-140-C (Input Voltage 3P3W 200 V)
	PHU 200-140-D (Input Voltage 3P4W 380 V)
	500 V, 60 A, 10,000 W Programmable DC Power Supply
PHU 500-60	PHU 500-60-C (Input Voltage 3P3W 200 V)
	PHU 500-60-D (Input Voltage 3P4W 380 V)
	750 V, 40 A, 10,000 W Programmable DC Power Supply
PHU 750-40	PHU 750-40-C (Input Voltage 3P3W 200 V)
	PHU 750-40-D (Input Voltage 3P4W 380 V)
	1000 V, 30 A, 10,000 W Programmable DC Power Supply
PHU 1000-30	PHU 1000-30-C (Input Voltage 3P3W 200 V)
	PHU 1000-30-D (Input Voltage 3P4W 380 V)
	1500 V, 20 A, 10,000 W Programmable DC Power Supply
PHU 1500-20	PHU 1500-20-C (Input Voltage 3P3W 200 V)
	PHU 1500-20-D (Input Voltage 3P4W 380 V)

	15 kW
	80 V, 510 A, 15,000 W Programmable DC Power Supply
PHU 80-510	PHU 80-510-C (Input Voltage 3P3W 200 V)
	PHU 80-510-D (Input Voltage 3P4W 380 V)
	200 V, 210 A, 15,000 W Programmable DC Power Supply
PHU 200-210	PHU 200-210-C (Input Voltage 3P3W 200 V)
	PHU 200-210-D (Input Voltage 3P4W 380 V)
	500 V, 90 A, 15,000 W Programmable DC Power Supply
PHU 500-90	PHU 500-90-C (Input Voltage 3P3W 200 V)
	PHU 500-90-D (Input Voltage 3P4W 380 V)
	750 V, 60 A, 15,000 W Programmable DC Power Supply
PHU 750-60	PHU 750-60-C (Input Voltage 3P3W 200 V)
	PHU 750-60-D (Input Voltage 3P4W 380 V)
	1000 V, 45 A, 15,000 W Programmable DC Power Supply
PHU 1000-45	PHU 1000-45-C (Input Voltage 3P3W 200 V)
	PHU 1000-45-D (Input Voltage 3P4W 380 V)
	1500 V, 30 A, 15,000 W Programmable DC Power Supply
PHU 1500-30	PHU 1500-30-C (Input Voltage 3P3W 200 V)
	PHU 1500-30-D (Input Voltage 3P4W 380 V)

 $AC\ Input\ terminal\ cover\ x\ 1,\ DC\ Output\ terminal\ cover\ x\ 1,\ Handle\ x\ 2,\ Sensing\ connector\ x\ 1,\ sensing\ connector\ cover\ x\ 1,\ Sensing\ connector\ x\ 1,\ Sensing\ connector\ cover\ x\ 1,\ Sensing\ connector\ x\ 1,\$ Digital I/O control connector x 1, Parallel control dummy connector x 1, DC Output terminal screws x 2, Safety Guide

PHU-IF01 GPIB interface

RS-232&RS-485 interface card (RJ45) PHU-IF02 PHU-IF03 Isolated Digital interface card PHU-IF04 CANbus interface card PHU-IF05 DeviceNet interface card PHU-IF06 Anybus Riser card

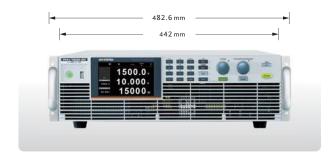
OPTIONAL ACCESSORIES

	Parallel operation cable kit for 2 units x 1 Parallel operation cable kit for 3 units x 1	GTL-133 GTL-218	Load cable, 1.5 m, 100 A Load cable, 1.5 m, 200 A
PHU-PC03	•	GTL-219	Load cable, 3 m, 200 A
PHU-PC04	Parallel operation cable kit for 5 units x 1	GTL-220	Load cable, 1.5 m, 300 A
PHU-PC05	Parallel operation cable kit for 6 units x 1	GTL-221	Load cable, 3 m, 300 A
PHU-PC06	Parallel operation cable kit for 7 units x 1	GTL-222	Load cable, 1.5 m, 400 A
PHU-PC07	Parallel operation cable kit for 8 units x 1	GTL-223	Load cable, 3 m, 400 A
PHU-PC08	Parallel operation cable kit for 9 units x 1		
PHU-PC09	Parallel operation cable kit for 10 units x 1		

GPW-021 Input power cord, 10 AWG/4C, 3 m, UL/CSA (PHU-C-5kW, PHU-D-5kW, PHU-D-10kW, PHU-D-15kW)

GPW-022 Input power cord, 6 AWG/4C, 3 m, UL/CSA (PHU-C-10kW, PHU-C-15kW)

> Specifications subject to change without notice. PHU E BH1-202503



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