

ASR-6000 Series

4.5kVA/6.5kVA High-Performance AC/DC Power Supply

FEATURES

- Adopts Third-generation Semiconductor Silicon Carbide (SiC) Technology to Create a 4U 6kVA High-performance AC/DC Power Source with High Power Density
- AC Input Supports Single-phase and Three-phase, Phase Voltage 200V to 240V±10% (Delta or Y Connection)
- 10 output Modes: Including External Input Signal Frequency and Mains Synchronization(SYNC), External Voltage Controlled Internal Amplifier Output (VCA)
- Multi-channel Output Function
- Supports AC 1P2W, 1P3W, 3P4W Output
- AC Maximum Output Phase Voltage: 350Vrms Line Voltage: 700Vrms
- AC Balanced and Unbalanced Three-phase, Phase Failure Output Functions
- Programmable Output Impedance Adjustment
- Dual-channel Voltage/Current Output Monitoring Function
- Voltage Output Rise Time Can be Adjusted in Three Ranges
- Supports Sequence Editing and Emulation Output Mode
- Powerful Arbitrary Waveform Editing and Output Function, Built-in Over 40 Types of Arbitrary Waveform Outputs
- Advanced Web Server Control to Support Data Acquisition and Data Logger Both Functions
- 100th Order Harmonic Measurement Function
- Support External Parallel Connection to Increase Output Power
- Support Diverse Interface: RS-232C(Std), USB(Std), LAN(Std), CAN BUS(Opt), DeviceNet(Opt), GPIB(Opt)



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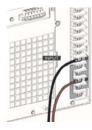
dataTec AG E-Mail: info@datatec.eu >>> www.datatec.eu



From the very moment Alpha Go defeated the human chess champion with its ultra-high-speed computing capability, artificial intelligence technology (AI) has developed rapidly around the world. Today, servers with advanced AI functions process tremendous amounts of data under the high-speed computing architecture of 2 CPUs + 8 GPUs. servers require a huge amount of power to maintain high-speed computing! In order to meet this demand, the power, density and efficiency of server power supplies have been greatly improved. High-power server power modules require high-efficiency conversion and saving of power consumption. AC single-phase input, HVDC 400V input or increased DC voltage output designs can be utilized to achieve this purpose. In order to ensure power stability when high-power servers are operating, power modules with hot-swappable redundant power supply specifications (such as CRPS) have been widely applied in server racks. Power modules with redundant functions require testing of multiple power modules at a time to ensure that all modules can maintain normal operation during high power output. Due to the rapid changes in the development of server power supplies GW Instek developed the brand new flagship model ASR-6000 series to meet customer needs. ASR-6000 series series has two models - ASR-6450 AC/DC 4.5kVA and ASR-6600 series AC/DC 6kVA.

ASR-6000 series is the first stand-alone unit from GW Instek that supports AC single/three-phase input and output, and has rated DC power output. The series employs third-generation semiconductor silicon carbide (SiC) technology to create a 4U 6kVA high power density and high-performance AC/DC power source ASR-6000 series has the ability to emulate more diverse power environment changes, such as balanced three-phase and unbalanced three-phase, phase failure, and features multi-channel output function in threephase output mode, programmable output impedance adjustment, and up to tens of thousands of arbitrary waveform outputs. The invincible launch of GW Instek flagship model ASR-6000 series demonstrates that GW Instek can provide a complete test solution for high-power AC sources. ASR-6000 series is the MVP of GW Instek power sources.

A SINGLE UNIT PROVIDES AC SINGLE/THREE-PHASE INPUT FUNCTION



ASR-6000 AC One-phase Input

ASR-6000 AC Three-phase Input (Delta Connection)

The ASR-6000 series is GW Instek's first programmable AC/DC power source that supports AC single/three-phase input.

AC three-phase input supports delta (Delta) and star (Y) wiring methods Advantages:

a .ASR-6000 can use mains in most countries around the world (ex. Mainland China, Southeast. Asia, India, Europe...)AC single-phase 220V input can help test software development engineers work with the ASR-6000 on mains in the office. No additional three-phase power source is required.

ASR-6000 AC Three-phase Input (Y Connection)

AC+DC-ADD AC & DC Additional output

AC+DC-Svnc AC & DC Svnchronal output

AC-VCA AC Voltage Control Amplifier output

AC-ADD AC Additional output

AC-Sync AC Synchronal output

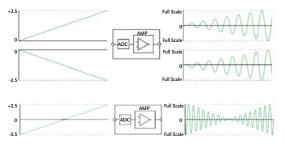
the world and is not affected by differences in power grids in different countries.

Note: 1. The AC input three-phase Y connection method must be connected to the N wire, otherwise the ASR-6000 cannot be turned on. 2. ASR-6000 AC voltage input range AC 200V ~ AC240V.

10 OUTPUT MODES R.



ASR-6000 Has 10 Output Modes



AC-VCA Output Mode

Output Phase	Output Mode	Signal Source						
		INT	EXT	ADO	Sync.	VCA		
19	AC+DC	AC+DC-INT	AC+DC-EXT	AC+DC-ADD	AC+DC-Sync.	N/A		
	AC	AC-INT	AC-EXT	AC-ADD	AC-Sync.	AC-VCA		
	DC .	DC-INT	N/A	N/A	N/A	N/A		
1P3W	AC+DC	AC+DC-INT	AC+DC-EXT	AC+DC-ADD	AC+DC-Sync.	N/A		
	AC	AC-INT	AC-EXT	AC-ADD	AC-Sync.	AC-VCA		
	DC	DC-INT	N/A	N/A	N/A	N/A		
3P	AC+DC	AC+DC-INT	AC+DC-EXT	AC+DC-ADD	AC+DC-Sync.	N/A		
	AC	AC-INT	AC-EXT	AC-ADD	AC-Sync.	AC-VCA		
	DC	DC-INT	N/A	N/A	N/A	N/A		

AC+DC-INT AC & DC Internal output

- AC-INT AC Internal output
- DC-INT DC Internal output
- AC+DC-EXT AC & DC External output AC-EXT AC External output

A high-performance AC power source = amplifier + signal source

It has: internal output + external input signal to control internal output + amplify external input signal. and output, and other diversified output functions. ASR-6000 has up to 10 output modes, including :

- 1.Internal output (INT)
- 2.External input controls internal output (EXT)

3.Sum output of external and internal signal sources (ADD)

- 4. Mains frequency synchronous output (SYNC)
- 5.External DC signal controls internal AC amplitude (VCA)

b. ASR-6000 can be used immediately in various regions around

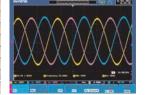
AC SINGLE/THREE-PHASE OUTPUT + MULTI-CHANNEL OUTPUT FUNCTION

04	(558)	DAME (DAL)	areas Acces	-
11000	12(111)	USCINE	PHASE EL	
350.0	350.0	350.0	MODE AGEDC BIT	in the
4.29	4.29	4.29	CCV +0.00 Vds	None of
1500	1500	1500	FREQ. 2008/016 ISN: 7.86A	anal and
		1.000	Unhalance	
1.000	1.000	1.000	9	
AN 350.0	350.0	350.0	1250	
eev 0.00-	0.00	0.00		論
	2000.0 -	2000.0 -	Y N	HOLD

The ASR-6000 series has diverse output functions, including three modes: 1P2W, 1P3W and 3P4W. The maximum output for phase voltage is 350Vrms and the maximum output for line voltage is 700Vrms. In AC three-phase output (3P4W) mode, each phase supports independent output settings. Taking ASR-6600 as an example, The maximum output of each phase reaches 2kVA, supporting power supply testing of up to three DUTs to meet the needs of server power modules, Testing requirements for high-power AC power products such as electric vehicle chargers and uninterruptible power supply systems.independent output settings. Taking ASR-6600 as an example, The maximum output of each phase reaches 2kVA, supporting power supply testing of up to three DUTs to meet the needs of server power modules, Testing requirements for high-power AC power products such as electric vehicle chargers and uninterruptible power supply systems.

AC BALANCED/UNBALANCED THREE-PHASE OUTPUT MODES D.





220.0 240.0 180.0 0.00 0.00 0.00 nn nn nn

AC Balanced Three-phase

The ASR-6000 series has unbalanced and balanced three-phase output modes. In the AC three-phase output mode, users can set the phase angles of L1, L2 and L3 for control.

OUTPUT IMPEDANCE ADJUSTMENT FUNCTION

ASR-6000 has an output impedance adjustment function, which is mainly used to change the output inductance value and output impedance value of each phase to emulate the output voltage drop of each phase due to line loss. The adjustable range of the output impedance of ASR-6000 is as follows:

0.000	0.000	0.000	Unbalance	TEMB 0	P		/	X		
220.0 	240.0	180.0		Harts.				1.00	••••===	-
۹50.00	50.00~	50.00	- P	WOLD IN			-	01000	-	-
		AC U	nbalance	ed Th	ree-pha	se				

Main applications: Three-phase input power supply products, when emulating unbalanced three-phase input and phase loss, the ability of three-phase power input products to restore balanced three-phase.

L1, L2, L3 Output Inductance	0.0 ~ 2000 μH
L1, L2, L3 Output Resistance	0.0 ~ 1 Ω

Note: This function only supports stand-alone applications. This function is automatically turned off in external parallel connection.

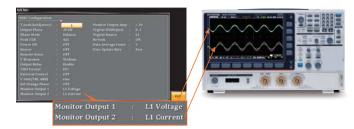
OUTPUT VOLTAGE RISE TIME IS ADJUSTABLE



In order to meet the test requirements of different DUT output voltages, it is necessary to adjust the rise time of different output voltages. The ASR-6000 offers users up to three adjustable settings: typical values are fast (50 microseconds), medium (100 microseconds) and slow (300 microseconds). ASR-6000 is initially set to medium speed.

Note: When using 1P2W output, impedance adjustment or external parallel connection, the fast range setting will be automatically turned off. Application: It can output high-speed arbitrary waveforms to emulate various changes in the power system caused by transient high-speed rising voltage, etc.

VOLTAGE AND CURRENT OUTPUT MONITORING FUNCTIONS



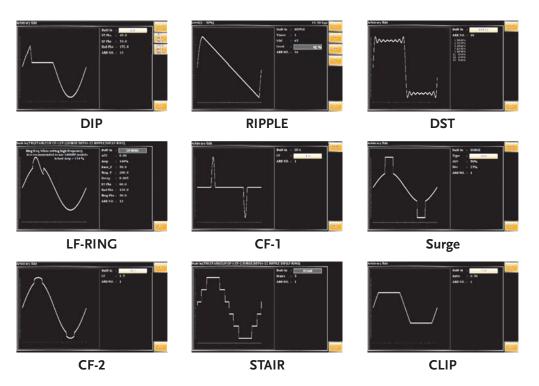
ASR-6000 provides dual-channel voltage and current monitoring, allowing instant output of voltage and current signals of each phase to an oscilloscope for measurement.

ADVANCED WEB SERVER CONTROL FEATURES н.

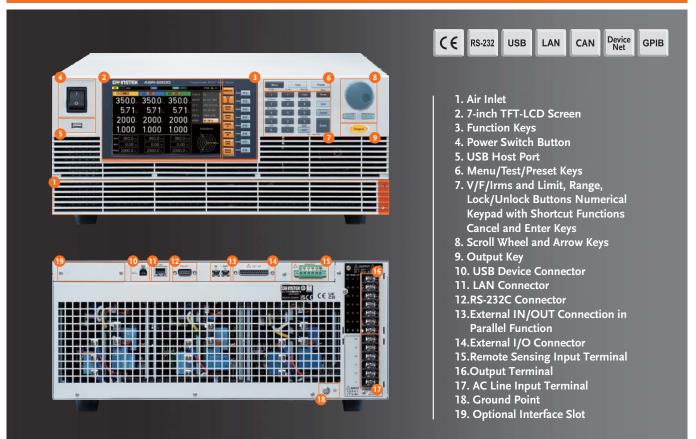


ASR-6000 provides a full range of web control functions, including:

- * View system and information, and network configuration
- * Monitor measurements
- * Set/Operate ASR-6000
- * Sequence Function/Simulate Function/Edit Waveform
- * Data logger function



ASR-6000 provides more than 40 built-in waveforms, including: TRI, STAIR, CLIP, CF-1, CF-2, SURGE, DST01-22, RIPPLE, DIP, LF-RING. Each waveform also provides a change setting function, which can modulate thousands of combined waveforms and quickly emulate different AC output environments. Users can adjust the required waveform type through the panel (the screen is displayed simultaneously), then load it into the ARB 1~16 waveform register through the access step, and return to the main menu output mode to perform ARB Waveform output. Users can also edit waveform through ASR-6000 software and then import it into ASR-6000 for execution.



PANEL INTRODUCTION

Model Input Ratings									
Unput Ratings		ASR-6	450	ASR	-6600				
Input Ratings Power type		Single-phase ; Three-phase, Delta or Y connection selectable							
Voltage range ^{°1}		200 Vac to 240 Vac ±10 % phase vo							
Frequency range		47 Hz to 63 Hz	(Denu: E E, 1: E H)						
Power factor ^{*2}		0.95 or higher (typ.)							
Efficiency ^{*2}		80 % or higher							
Maximum power consum	nption	6 kVA or lower		8 kVA or lower					
AC Output									
Multi-phase output		Single-phase output	Polyphase output	Single-phase output	Polyphase output				
Output capacity		4.5 kVA	1P3W: 3 kVA ; 3P4W: 4.5 kVA	6 kVA	1P3W: 4 kVA ; 3P4W: 6 kVA				
Mode		1P2W	1P3W ; 3P4W (Y-connection)	1P2W	1P3W ; 3P4W (Y-connection)				
Setting mode ^{*3}			Independ, Balanced		Independ, Balanced				
	Setting Range ^{*4}	0.00 V to 175.0 V / 0.0 V to 350.0 V							
Phase voltage	Accuracy ^{*5}	0.00 Vpp to 500.0 Vpp / 0.00 Vpp to ±(0.3 % of set + 0.5 V / 1 V)	o 1000 Vpp (triangle and arbitrary w	ave), Setting Resolution: 0.01 Vpp	/ 0.1 Vpp / 1 Vpp				
Line voltage setting range Maximum current ^{*7} Maximum peak current ^{*8}	e° ⁶	 45 A / 22.5 A Four times of the maximum RMS c		 60 A / 30 A	1P3W: 0.00 V to 350.0 V / 0.00 V to 700.0 V 3P4W: 0.00 V to 303.1 V / 0.00 V to 606.2 V (sine and square wave) Setting Resolution: 0.01 V / 0.1 V 1P3W: 0.00 Vpp to 1000 Vpp / 0.00 Vpp to 2000 Vpp 3P4W: 0.00 Vpp to 866.0 Vpp / 0.00 Vpp to 1732 Vpp (triangle and arbitrary wave) Setting Resolution: 0.01 Vpp / 0.1 Vpp / 1 Vpp 20 A / 10 A				
Load power factor*9		0 to 1 (leading phase or lagging phase, 45 Hz to 65Hz)							
	Setting range	AC Mode: 15.00 Hz to 2000.0 Hz, A	C+DC Mode: 1.00 Hz to 2000.0 Hz	, Setting resolution: 0.01 Hz / 0.1 H	lz				
Frequency	Accuracy	± 0.01% of set							
	Stability ^{*10}	± 0.005%							
Output on phase setting		. ,	0.0° to 359.9° variable (Free / Fix selectable), 0.1° (1 Hz to 500 Hz), 1° (500 Hz to 2000 Hz)						
Output off phase setting	range ^{***}	0.0° to 359.9° variable (Free / Fix se		(500 Hz to 2000 Hz)					
Setting range of the phase angle ^{°12}			1P3W: L2 phase: 0° to 359.9° 3P4W: L2 phase: 0° to 359.9° L3 phase: 0° to 359.9° Setting Resolution: 0.1°		1P3W: L2 phase: 0° to 359.9° 3P4W: L2 phase: 0° to 359.9° L3 phase: 0° to 359.9° Setting Resolution: 0.1°				
Phase angle accuracy ^{*13}			45 Hz to 65 Hz: ±1.0°		45 Hz to 65 Hz: ±1.0°				
DC offset ^{*14}		± 20 mV (typ.)	15 Hz to 2000 Hz: ±2.0°		15 Hz to 2000 Hz: ±2.0°				
DC Output (Only Single	le Phase Output)	(()+)							
Output capacity		4.5 k	X/	6	kW				
Mode				0	K W				
	Setting Range	Floating output, the N terminal can be grounded -250.0 V to +250.0 V / -500.0 V to +500.0 V, Setting Resolution: 0.01 V / 0.1 V							
Voltage	Accuracy ^{*15}	±([0.3 % of set] + 0.3 V / 0.6 V)							
Maximum current ^{*16}	(tecorrec)	45 A / 22.5 A 60 A / 30 A							
Maximum peak current*13	7	Four times of the maximum current							
Output Stability, Total	Harmonic Distortion, Output V	oltage Rising Time and Ripple Noise	•						
Line regulation	· · · · · · · · · · · · · · · · · · ·	±0.1% or less (Phase voltage)							
Load regulation ^{°18}		±0.1 V / ±0.2 V, @DC (only single-phase output) ±0.1 V / ±0.2 V, @45 Hz to 65 Hz (phase voltage, 0 to 100%, via output terminal) ±0.5 V / ±1.0 V, @all other frequencies (phase voltage, 0 to 100%, via output terminal) <0.3 % @1Hz to 100Hz, <0.5 % @100.1 Hz to 500 Hz, <1 % @500.1 Hz to 2000 Hz							
Output voltage response	time ²⁰	Fast: 50 µs (typ.) ; Middle:100µs (ty	rp.) ; Slow: 300 μs (typ.)						
Ripple noise ^{*21}		0.5 Vrms / 1 Vrms (TYP)							
*2. In the case of AC-INT mo *3. Can be only set in polyph *4. For phase voltage setting	ode, the rate output voltage, resistance lo hase mode. g in polyphase output. In balance mode al	ase, four-wire. (Accessories will be provided) d at maximum output current,45 Hz to 65 Hz phase are collectively set and in unbalance m	de each phase are individually set.	d 23°C ± 5°C. For phase voltage setting in	the polyphase output.				
*6. Line voltage only can be *7. If the output voltage is hi or 400 Hz or higher, and *8. With respect to the capax *9. External power injection *16. If the output voltage is l is 40 degree or higher, th *17. Instantaneous within 3 *18. For an output voltage of *19. 50 % or higher of the ra *20. For an output voltage of *21. For 5 Hz to 1 MHz com	set in balance mode. sigher than rated value, this is limited to sat ligher than rated value, this is limited to sat that the ambient temperature is 40 degre cictor-input rectifying load. Limited by the 10 or regeneration which is over short revers higher than rated value, this is limited to satisfied the maximum current may decrease. ms, limited by the maximum current at of 75 V to 175 V / 150 V to 350 V, a load po ated output voltage, the maximum current of 100 V / 200 V, a load power factor of 1, v nponents in DC mode using the output tem	tisfy the power capacity. If there is the DC supe e or higher, the maximum current may decreas naximum current. e power flow capacity is not available. atisfy the power capacity. If there is the AC sup ated output voltage. wer factor of 1,stepwise change from an outpu or lower, AC and AC+DC modes, THD+N. For ith respect to stepwise change from an output minal on the rear panel.	rimmpositions, the active current of AC+ erimmpositions , the active current of AC- current of 0 A to maximum current (or its the polyphase it is a specification for phas current of 0 A to the maximum current (o	-DC satisfies the maximum current. And t reverse), using the output terminal on th e voltage setting.	he ambient temperature e rear panel.				
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 *6. Line voltage only can be = *7. If the output voltage is hi or 400 Hz or higher, and *8. With respect to the capax *9. External power injection *16. If the output voltage is 1 is 40 degree or higher, th *17. Instantaneous within 3 *18. For an output voltage of *19. 50 % or higher of the ra *20. For an output voltage of *21. For 5 Hz to 1 MHz com 	set in balance mode. sigher than rated value, this is limited to sat that the ambient temperature is 40 degre citor-input rectifying load. Limited by the I or regeneration which is over short revers higher than rated value, this is limited to the maximum current may decrease. ms , limited by the maximum current at r f 75 V to 175 V / 150 V to 330 V, a load po ated output voltage, the maximum current f 100 V / 200 V, a load power factor of 1, v nponents in DC mode using the output ten ay (All accuracy of the measurent Resolution RMS value accuracy	tisfy the power capacity. If there is the DC supe e or higher, the maximum current may decreas naximum current. e power flow capacity is not available. atisfy the power capacity. If there is the AC sup atted output voltage. wer factor of 1,stepwise change from an outpu or lower, AC and AC+DC modes, THD+N. For ith respect to stepwise change from an output minal on the rear panel. Thent function is indicated for 23 °C± Single-phas 0.01 V / 0.1 V 45 Hz to 65 Hz and DC: ± (0.5 % of 15 Hz to 2000 Hz: ± (0.7 % of rdg -	rimmpositions, the active current of AC+ erimmpositions , the active current of AC- current of 0 A to maximum current (or its the polyphase it is a specification for phas current of 0 A to the maximum current (o 5 °C.) is output frdg + 0.5 V / 1 V) - 1 V / 2 V)	-DC satisfies the maximum current. And t reverse), using the output terminal on th e voltage setting. r its reverse). 10% ~ 90% of output voltage Polyphas 45 Hz to 65 Hz: ± (0.5 % of rdg 15 Hz to 2000 Hz: ± (0.7 % of rd	he ambient temperature e rear panel. e. se output^{®6} + 0.5 V / 1 V) dg + 1 V / 2 V) V)				
*6. Line voltage only can be = *7. If the output voltage is hi or 400 Hz or higher, and *8. With respect to the capaa *9. External power injection *16. If the output voltage is 1 is 40 degree or higher, th *17. Instantaneous within 3 *18. For an output voltage of *19. 50 % or higher of the ra *20. For an output voltage of *21. For 5 Hz to 1 MHz com Measured Value Displa	set in balance mode. sigher than rated value, this is limited to ss that the ambient temperature is 40 degree citor-input rectifying load. Limited by the I or regeneration which is over short revers higher than rated value, this is limited to 1 the maximum current may decrease. ms, limited by the maximum current at r of 25 V to 125 V 150 V to 350 V, a load po ted output voltage, the maximum current of 100 V / 200 V, a load power factor of 1, v ponents in DC mode using the output te ay (All accuracy of the measurent Resolution RMS value accuracy AVG value accuracy PEAK value accuracy ⁹	tisfy the power capacity. If there is the DC supe e or higher, the maximum current may decreas naximum current. e or or higher, the maximum current may decreas naximum current. atisfy the power capacity is not available. atisfy the power capacity. If there is the AC sup ated output voltage. wer factor of 1, stepwise change from an output or lower, AC and AC+DC modes, THD+N. For ith respect to stepwise change from an output minal on the rear panel. ent function is indicated for 23 °C± Single-phas 0.01 V / 0.1 V 45 Hz to 65 Hz and DC: $\pm (0.5 \% \text{ of rdg} -$ DC: $\pm (0.5 \% \text{ of rdg} + 0.5 V / 1 V)$ 45 Hz to 65 Hz and DC: $\pm (2 \% \text{ of rd})$	rimmpositions, the active current of AC+ erimmpositions , the active current of AC- current of 0 A to maximum current (or its the polyphase it is a specification for phas current of 0 A to the maximum current (o 5 °C.) frdg + 0.5 V / 1 V) - 1 V / 2 V) dg + 1 V / 2 V) rdg + 0.1 A / 0.05 A)	-DC satisfies the maximum current. And t reverse), using the output terminal on th e voltage setting. rits reverse). 10% ~ 90% of output voltage Polyphas 45 Hz to 65 Hz: ± (0.5 % of rdg 15 Hz to 2000 Hz: ± (0.7 % of rd DC: ± (0.5 % of rdg + 0.5 V / 1	he ambient temperature e rear panel. e. :e output^{~6} + 0.5 V / 1 V) dg + 1 V / 2 V) V) - 1 V / 2 V) + 0.05 A / 0.03 A)				
*6. Line voltage only can be = *7. If the output voltage is hi or 400 Hz or higher, and *8. With respect to the capaci- *9. External power injection *16. If the output voltage is 1 is 40 degree or higher, th *17. Instantaneous within 3 *18. For an output voltage of *19. 50 % or higher of the ra *20. For an output voltage of *21. For 5 Hz to 1 MHz com Measured Value Displa Voltage	set in balance mode. sigher than rated value, this is limited to sat ligher than rated value, this is limited to sat that the ambient temperature is 40 degre citor-input rectifying load. Limited by the I or regeneration which is over short revers higher than rated value, this is limited to sate maximum current may decrease. ms , limited by the maximum current at r of 75 V to 175 V / 150 V to 350 V, a load po ated output voltage, the maximum current f 100 V / 200 V, a load power factor of 1, v nponents in DC mode using the output ten ay (All accuracy of the measurent Resolution RMS value accuracy PEAK value accuracy ^{\$3} Resolution	tisfy the power capacity. If there is the DC super or higher, the maximum current may decreas naximum current. e power flow capacity is not available. atisfy the power capacity. If there is the AC sup the output voltage. wer factor of 1, stepwise change from an outpu or lower, AC and AC+DC modes, THD+N. For ith respect to stepwise change from an output minal on the rear panel. Thent function is indicated for 23 °C± 0.01 V / 0.1 V 45 Hz to 65 Hz and DC: \pm (0.5 % of 15 Hz to 2000 Hz: \pm (0.7 % of rdg- DC: \pm ((0.5 % of rdg) + 0.5 V / 1 V) 45 Hz to 65 Hz and DC: \pm (20 f it 0.01 A / 0.1 A 45 Hz to 65 Hz and DC: \pm (0.5 % of rdg) 0.01 A / 0.1 A	rimmpositions, the active current of AC+ erimmpositions , the active current of AC- current of 0 A to maximum current (or its the polyphase it is a specification for phas current of 0 A to the maximum current (or 5 °C.) frdg + 0.5 V / 1 V) - 1 V / 2 V) dg] + 1 V / 2 V) dg] + 1 V / 2 V) rdg + 0.1 A / 0.05 A) 0.2 A / 0.1 A)	DC satisfies the maximum current. And t reverse), using the output terminal on th e voltage setting. its reverse). 10% ~ 90% of output voltage Polyphas 45 Hz to 65 Hz: ± (0.5 % of rdg 15 Hz to 2000 Hz: ± (0.7 % of rd DC: ± (0.5 % of rdg + 0.5 V / 1 45 Hz to 65 Hz: ±(2 % of rdg + 45 Hz to 65 Hz: ±(0.5 % of rdg -	he ambient temperature e rear panel. e. e output ⁷⁶ + 0.5 V / 1 V) 4g + 1 V / 2 V) V) - 1 V / 2 V) + 0.05 A / 0.03 A) g + 0.1 A / 0.05 A) 05 A)				

SPECIFICATIONS								
Model			ASR-6450	ASR-6600				
	Active (W)	Resolution	0.1 W /1 W					
	Active (w)	Accuracy ^{*9}	±(1 % of rdg + 3 W)	±(1 % of rdg + 1 W)				
Power ^{*7*8}	Apparent (VA)	Resolution	0.1 VA / 1 VA					
	, .ppuloin (11.)	Accuracy	±(2 % of rdg + 6 VA) ±(2 % of rdg + 2 VA)					
	Reactive (VAR)	Resolution	0.1 VAR / 1 VAR					
icacute (triii)		Accuracy ^{*10}	±(2 % of rdg + 6 VAR) ±(2 % of rdg + 2 VAR)					
Power factor Range			0.000 to 1.000 0.001					
Resolution			Up to 100th order of the fundamental wave					
Harmonic voltage Effective		Full Scale	200 V / 400 V, 100%					
alue (rms) Percent (%)		Resolution	0.01 V /0.1 V, 0.1%					
AC-INT and 50/60 Hz o	only) ^{***}	Accuracy ^{*12}	Up to 20th: ±(0.2 % of rdg + 0.5 V / 1 V) ; 20th to 100th: ±(0.3 % of rdg + 0.5 V / 1 V)					
		Range	Up to 100th order of the fundamental wave					
Harmonic current		Full Scale	63 A / 31.5 A, 100% 21 A / 10.5 A, 100%					
ffective value (rms)		Resolution	0.01 A / 0.1 A, 0.1%					
Percent (%)	. \$11		Up to 20th: ±(1 % of rdg + 1.5 A / 0.75 A) Up to 20th: ±(1 % of rdg + 0.5 A / 0.25 A)					
AC-INT and 50/60 Hz o	only)"''	Accuracy ^{*13}	20th to 100th: $\pm(1.5 \% \text{ of rdg} + 1.5 \text{ A} / 0.75 \text{ A})$	20th to 100th: $\pm(1.5\% \text{ of rdg} + 0.5\text{ A} / 0.25\text{ A})$				
*5. The accuracy is for out *6. In the polyphase output *7. For an output voltage of DC or an output freque	the case that the outp put waveform DC or s it, these are the specif of 50 V or greater, an o	ut current is 5% to 10 ine wave only. ications for each pha output current in the r	*12. For an output voltage of 10 V	conform to the IEC or other standard. Phase Voltage and Phase Current.				
Others								
rotections			UVP, OVP, OCP, OTP, OPP, Fan Fail, Peak and RMS Current Limit					
Parallel function			Up to 3 units					
Display			TFT-LCD, 7 inch					
lemory function			Store and recall settings, Basic settings: 10					
1.1. 197	Number of men		16 (nonvolatile) 4096 words					
arbitrary Wave	Waveform length							
	Amplitude resol	ution	16 bits					
General Specifications	5	1	1					
		USB	Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB-CDC / USB-TMC					
	Standard	LAN	MAC Address, DNS IP Address, User Password, Gateway IP Address,	Instrument IP Address, Subnet Mask				
		External	External Signal Input ; External Control I/O ; V/I Monitor Output					
nterface		RS-232C	Complies with the EIA-RS-232 specifications					
	Optional 1	GPIB	SCPI-1993, IEEE 488.2 compliant interface					
	Optional 2	CAN Bus	Complies with CAN 2.0A or 2.0B based protocol					
nsulation resistance	Optional 3 Between input and	DeviceNet	Complies with CAN 2.0A or 2.0B based protocol					
	and chassis, input		DC 500 V, 30 M Ω or more					
Vithstand voltage	Between input and and chassis, input		AC 1500 V or DC 2130 V , 1 minute					
EMC			EN 61326-1 (Class A) EN 61326-2-1/-2-2 (Class A) EN 61000-3-2/-3-12 (Class A, Group 1) EN 61000-3-3/-3-11 (Class A, Group 1) EN 61000-4-2/-4-3/-4-4/-4-5/-4-8/-4-11/-4-34 (Class A, Group 1) EN 55011 (Class A, Group1)					
Safety			EN 61010-1					
ibration, Shock and Tra	ansportation Integr	rity	ISTA 2A Test Procedure					
nvironment	Operating enviro	onment	Indoor use, Overvoltage Category II					
	Operating temp	erature range	0 °C to 40 °C					
	Storage tempera	-	-10 °C to 70 °C					
Operating humidity range Storage humidity range		dity range	20 %rh to 80 % RH (no condensation)					
		y range	90 % RH or less (no condensation)					
Altitude			Up to 2000 m					
Dimensions (mm)			430(W)×176(H)×590(D) (not including protrusions)					
Weight			Approx. 40 kg					
			However, an accuracy noted as reference value shows the supplemental data for refere lue (shown as typ.). Product specifications are subject to change without notice.	nce when the product is used, and is not under the guarantee.				
				ations subject to change without notice. ASR-6000IE				

ORDERING INFORMATION

ASR-6450 4.5kVA High-Performance AC/DC Power Supply ASR-6600 6kVA High-Performance AC/DC Power Supply ACCESSORIES

GTL-246 USB cable (USB 2.0 Type A - Type B cable, approx. 1.2M)

Quick start guide, Safety guide, Input terminal cover, Output terminal cover, Copper plate for delta connection input, Copper plate for single phase and Y connection input,
 OPTION ACCESSORIES

 ASR-003
 GPIB interface card
 GTL-232
 RS-232C Cable, approx. 2M

 ASR-004
 DeviceNet interface card
 GTL-248
 GPIB Cable, approx. 2M

 ASR-005
 CAN BUS interface card
 GTL-248
 GPIB Cable, approx. 2M

 ASR-005
 CAN BUS interface card
 GRA-451-E
 Rack mount adapter (EIA)

 ASR-006
 External parallel cable
 GRA-451-I
 Rack mount adapter (IIS)

 GPW-008
 6RV3 Power Cord; 10AWG/3C, 3m Max Length, , RV5-5*3P, RV5-5*3P UL TYPE
 GPW-009
 6RVV13 Power Cord; 2.5mm2/3C, 3m Max Length, RVS2-5*3P, RVS2-5*3P NDE TYPE

 GPW-010
 6RVV5 VDE Power Cord; 10AWG/5C, 3m Max Length, RVS2-5*3P, RVS2-5*3P DUE TYPE
 GPW-011
 6RV5 UD Power Cord; 2.0mm2/3C, 3m Max Length, RVS2-5*3P, RVS2-5*3P PDE TYPE

 GPW-011
 6RV5 VDE Power Cord; 2.0mm2/5C, 3m Max Length, RVS2-5*3P, RVS2-5*3P PDE Type
 GPW-012
 6RVV4 VDE Power Cord; 2.0mm2/4C, 3m Max Length, RVS2-5*4P, RVS2-5*5P PSE Type

 GPW-013
 6RV14 UL Power Cord; 10AWG/4C, 3m, RV5-5*4P, RVS-5*4P, RVS2-5*4P, RVS2-5*4P PDE Type
 GPW-015
 6RVV4 VDE Power Cord; 2.0mm2/4C, 3m Max Length, RVS2-5*4P, RVS2-5*4P PDE Type

 GPW-015
 6RVV4 VDE Power Cord; 2.0mm2/4C, 3m Max Length, RVS2-5*4P, RVS2-5*4P PDE Type
 GPW-016
 6RVT4 PSE Power Cord; 2.0mm2/4C, 3m Ma



Copper plate for delta connection input,

Copper plate for 1P output, GRA-451-E Rack mount adapter (EIA)

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