

ASR-3000 Series

Programmable AC/DC Power Source

FEATURES

- Output Rating: AC 0 \sim 400 Vrms, DC 0 \sim ± 570 V
- Output Frequency up to 999.9Hz (5kHz for ASR-3400HF only)
- DC Output (100% of Rated Power)
- Measurement Items: Vrms, Vavg, Vpeak, Irms, IpkH, Iavg, Ipeak, P, S, Q, PF, CF
- Voltage and Current Harmonic Analysis(THDv, THDi)
- Remote Sensing Capability
- OCP, OPP, OTP, AC Fail Detection and Fan Fail Alarm
- Support Arbitrary Waveform Function
- Output Capacity: 2kVA/3kVA/4kVA
- Customized Phase Angle for Output On/Off
- Sequence and Simulation Function(up to 10 sets)
- Interface(std): USB, LAN, RS-232, GPIB
- Built-in External Control I/O and External Signal Input
- Built-in Output Relay Control
- Memory Function (up to 10 sets)
- Built-in Web Server





The ASR-3000 Series is an AC+DC power source, featuring high-speed DC voltage rising and falling time (≤100us). There are four models of the series: ASR-3200(2kVA), ASR-3300(3kVA) and ASR-3400/3400HF (4kVA). The series can provide rated power output during AC output and DC output. Ten ASR-3000 Series output modes are available, including 1) AC power output mode (AC-INT Mode), 2) DC power output mode (DC-INT Mode), 3) AC/DC power output mode (AC+DC-INT Mode), 4) External AC signal source mode (AC-EXT Mode), 5) External AC/DC signal source mode (AC+DC-EXT Mode), 6) External AC signal superimposition mode (AC-ADD Mode), 7) External AC/DC signal superimposition mode (AC+DC-ADD Mode), 8) External AC signal synchronization mode (AC-SYNC Mode), 9) External AC/DC signal synchronization mode (AC+DC-SYNC Mode)10) External DC voltage control of AC output mode(AC-VCA).

ASR-3000 Series is ideal for the development of On-board Chargers, Server Powers, LED modules, AC Motors, AC Fans, UPS and various electronic components, as well as for testing applications of automotive electrical equipment and home appliances.

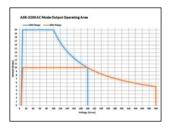
The ASR-3000 Series provides users with waveform output capabilities including 1) Sequence mode generates waveform fallings, surges, sags, changes and other abnormal power line conditions; 2) Arbitrary waveform function allows users to store/upload user-defined waveforms; and 3) Simulate mode simulates power outage, voltage rise, voltage fall, and frequency variations. When the ASR-3000 Series power source outputs, it can also measure Vrms, Vavg, Vpeak, Irms, Iavg, Ipeak, IpkH, P, S, Q, PF, CF, 100th-order Voltage Harmonic and Current Harmonic. In addition, the remote sensing function ensures accurate voltage output, and the Customized Phase Angle for Output On/Off function can set the start and end angles of the voltage output according to the test requirements. The protection limits of V-Limit, Ipeak-Limit and F-Limit can be set according to user requirements. Over voltage limit, OCP, OPP will protect the DUT during the output process. The Fan Fail Alarm function and the AC fail alarm function are also designed in the ASR-3000 Series.

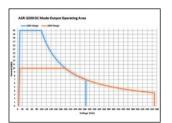
The front panel of the ASR-3000 Series provides a universal socket or a European socket, which allows users to plug and use so as to save wiring time. Since the power socket specification has a maximum current of 15A, the rear panel of ASR-3000 Series is designed with a current circuit breaker. When the socket current is greater than 15A, it will automatically open the circuit to protect users. The ASR-3000 Series supports I/O interface and is standardly equipped with USB, LAN, External I/O, RS-232C and GPIB.

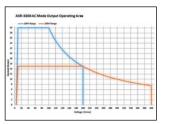
PANEL INTRODUCTION

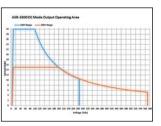


OPERATING AREA FOR ASR-3000 SERIES









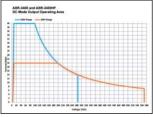
AC Output for ASR-3200

DC Output for ASR-3200

AC Output for ASR-3300

DC Output for ASR-3300

-	 111		
-			
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Model Name	Power Rating	Max. Output Current	Max. Output Voltage
ASR-3200	2k VA	20 / 10 A	400 Vrms / ±570 Vdc
ASR-3300	3k VA	30 / 15 A	400 Vrms / ±570 Vdc
ASR-3400	4k VA	40 / 20 A	400 Vrms / ±570 Vdc
ASR-3400HF	4k VA	40 / 20 A	400 Vrms / ±570 Vdc

AC Output for ASR-3400/3400HF DC Output for ASR-3400/3400HF

The ASR-3000 series is an AC + DC power source that provides not only rated power output for AC output, but also rated power output for DC output.

MEASUREMENT ITEMS FOR ASR-3000 SERIES







RMS Meas Display

AVG Meas Display

Peak Meas Display

ON	ON	ON	ON 94 % 200V SQU				
Harr	Harn	Harn	Harmoni	c Voltage Measure	THDv= 42	.2 %	Simple
31th	21th	11th	1st	179.9 Vrms	90	.7 %	[Harm]
32th	22th	12th	2nd	0.0 Vrms		1.0 %	
33th	23th	13th	3rd	59.8 Vrms	30	.2 %	[THDv]
34th	24th	14th	4th	0.0 Vrms		1.0 %	THDi
35th	25th	15th	5th	35.8 Vrms	18	.0%	
36th	26th	16th	6th	0.0 Vrms		.0 %	
37th	27th	17th	7th	25.5 Vrms	12	.9 %	
38th	28th	18th	8th	0.0 Vrms		.0%	
39th	29th	19th	9th	19.8 Vrms	10	.0 %	Page
40th	30th	20th	10th	0.0 Vrms		.0 %	Down

Harr	Harn	Harn	Harmonic	Current Measure	THDi = 42	2.2 %	Simple
31th	21th	11th	1st	4.31 Arms	90	0.7 %	[Harm
32th	22th	12th	2nd	0.00 Arms		0.0 %	
33th	23th	13th	3rd	1.44 Arms	30	1.2 %	THD
34th	24th	14th	4th	0.00 Arms		0.0 %	[THDi
35th	25th	15th	5th	0.86 Arms	18	3.0 %	
36th	26th	16th	6th	0.00 Arms		0.0%	
37th	27th	17th	7th	0.61 Arms	12	2.8%	
38th	28th	18th	8th	0.00 Arms		0.0 %	
39th	29th	19th	9th	0.47 Arms	9	9.9 %	Page
40th	30th	20th	10th	0.00 Arms		0.0 %	Down

Voltage Harmonic

Current Harmonic

The ASR-3000 Series provides users with measurement capabilities including Vrms, Vavg, Vpeak, Irms, Iavg, Ipeak, IpkH, P, S, Q, PF, CF, 100th-order Voltage Harmonic and Current Harmonic. During the power output, the measurement

parameters including Vrms/Irms, Vavg/Iavg and Vmax/Vmin/ Imax/ Imin can be switched by users at any time to display the instantaneous calculation reading.

SEQUENCE MODE AND BUILT-IN ISO-16750-2 WAVEFORMS





SEQ6: Momentary Drop in **Supply Voltage**

SEQ7: Reset Behavior at Voltage Drop with 12V System

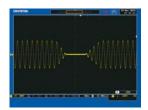
The sequence mode provides editable 10 sets of SEQ0~SEQ9, each set has 0~999 steps, each step time setting range is 0.0001~999.9999 seconds. Users can combine multiple sets of steps to generate the required waveforms, including waveform falling, surges, sags and other abnormal power line conditions to meet the needs of the test applications.

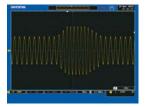
SEQ8: Starting Profile Waveform

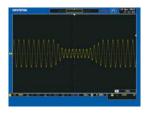
SEQ9: Load Dump with Tr_10ms, Td_40ms

In addition, ASR-3000 Series also built in common ISO-16750-2 test waveforms in the Sequence Mode preset waveforms, including Momentary Drop in Supply Voltage built in at SEQ6, Reset Behavior at Voltage Drop with 12V system built in at SEQ7, Starting Profile Waveform built in at SEQ8 and Load Dump with Tr_10ms, and Td_40ms built in at SEQ9.

SIMULATE MODE







Simulate Mode can quickly simulate different transient waveforms, such as power outage, voltage rise, voltage fall, etc., for engineers to evaluate the impact of transient phenomena on the DUT. Ex: Capacitance durability test.

Power Outage

Voltage Rise

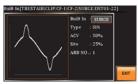
Voltage Fall

FUNCTION WAVEFORM (ARBITRARY EDIT) MODE











TRI Waveform

STAIR Waveform

CLIP Waveform

SURGE Waveform

Fourier Series Synthesized Waveform

in seven categories, allowing users to quickly simulate different AC voltage waveforms. Adjust the desired waveform type directly through the panel (displayed synchronously on the screen),

ASR-3000 Series provides more than 20,000 waveform combinations then the waveform is loaded into the ARB 1~16 waveform register through the access procedures, and return to the main menu output mode to perform ARB Waveform output.

PC SOFTWARE









Basic Controller

Sequence Mode

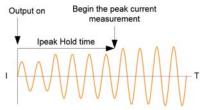
ARB Waveform Edit

The Waveform is Observed with DSO

The ASR-3000 Series software includes basic settings, the Simulate Mode, the Sequence Mode, Data Log and the arbitrary waveform editing function. Users can directly set output voltage, frequency, start/stop phase on ASR-3000 Series through the software. The Simulate Mode can quickly simulate different transient waveforms such as power outage, voltage rise, voltage fall... etc.

The Sequence Mode can edit the editing parameters read back from ASR-3000 Series, or directly edit the parameters and control ASR-3000 Series to output waveforms according to the set sequence. The arbitrary waveform editing function not only combines various waveforms, including sine waves, square waves, triangle waves, and noise waveforms, but also allows uses to draw arbitrary waveforms and output them.

T, IPK HOLD & IPK, HOLD FUNCTIONS

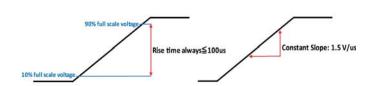


T, Ipk Measurement

T, Ipk Hold is used to set the delay time after the output (1ms \sim 60,000ms) to capture the Ipeak value and keep the maximum value. The update only functions when the measurement value is greater than the original value. The T, Ipk Hold delay time setting can be used to measure surge current at the power on process of the DUT.

Ipk Hold can be used to measure the transient surge current of the DUT at power on without using an oscilloscope and a current probe.

Н. **SLEW RATE MODE**



Time Mode

Slope Mode

The ASR-3000 Series can set the Slew Rate Mode to determine the rise time of the voltage according to the test requirements of the DUT. Slew $\,$ Rate Mode provides "Time" and "Slope" modes. When setting "Time" mode, ASR-3000 Series can increase output to 10~90% of the set voltage within 100 μs ; and when selecting "Slope" mode, ASR-3000 Series increases output voltage by a fixed rising slope of 1.5V/µs until reaching the set voltage value.

In addition, if users decide to self-define the rise time of the output voltage, users can flexibly set the rise time of the ASR-3000 Series voltage by editing the Sequence mode.

SPECIFICATIONS			ASR-3200	ASR-3300	ASR-3400	ASR-3400HF
INPUT RATING (AC)			200 Vac to 240 Vac			•
INPUT VOLTAGE RA			180 Vac to 264 Vac			
PHASE NOMINAL INPUT FI	PEOLIENCY		Single phase, Two-wire 50 Hz to 60 Hz			
INPUT FREQUENCY	RANGE		47 Hz to 63 Hz			
MAX. POWER CONS	UMPTION	leest	2500 VA or less	3750 VA or less	5000 VA or less	5000 VA or less
POWER FACTOR *1 MAX. INPUT CURRE	NT	200Vac 200Vac	0.95 (TYP) 15 A	22.5 A	30 A	30 A
*1. For an output voltage of 1	00 V / 200 V (100V / 200V range)	maximum current, and a load po		EL.S IX	3071	3071
AC MODE OUTPUT	RATINGS (AC rms)	[aut a *1	I 00 W to 200 0 W 10 0 W to 400 0 W			
VOLTAGE		Setting Range " Setting Resolution	0.0 V to 200.0 V / 0.0 V to 400.0 V			
		Accuracy *2	±(1 % of set + 1 V / 2 V)			
OUTPUT PHASE	#3		Single phase, Two-wire	I 20 A	40.4	1 40 4
MAXIMUM CURREN	т -	100 V 200 V	20 A 10 A	30 A 15 A	40 A 20 A	40 A 20 A
MAXIMUM PEAK CU	IRRENT *4	100 V	120 A	180 A	240 A	160 A
LOAD POWER FACT	OP	200 V	60 A	90 A	120 A	80 A
POWER CAPACITY	OK .		0 to 1 (leading phase or lagging phase 2000 VA	3000 VA	4000 VA	4000 VA
FREQUENCY		Setting Range	AC Mode: 40.0 Hz to 999.9 Hz,			AC Mode: 40.0 Hz to 5000 Hz,
		C-M BI-N	AC+DC Mode: 1 Hz to 999.9 Hz 0.01 Hz (1.00 to 99.99 Hz),			AC+DC Mode: 1 Hz to 5000 Hz 0.01 Hz (1.00 to 99.99 Hz),
		Setting Resolution	0.01 Hz (1.00 to 999.9 Hz)			0.1 Hz (100.0 to 999.9 Hz)
		Accuracy	0.02% of set (23 °C ± 5 °C)			1 Hz (1000 to 5000 Hz)
OUTDIT ON BUILD		Stability *5	± 0.005%	n 1º\		
OUTPUT ON PHASE DC OFFSET **	•		0° to 359° variable (setting resolutio Within ± 20 mV (TYP)	nı,		
*3. For an output voltage of 1 If there is the DC superim *4. With respect to the capaci	V to 100 V / 2 V to 200 V . Limite position, the current of AC+DC m itor-input rectifying load. Limited ated output voltage, no load and the and $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.	ode satisfies the maximum curren by the maximum current.	, no load, and 23 °C \pm 5°C. output voltage is 100 \vee to 200 \vee 100 \vee to 400 \vee . I. in the case of lower than 40 $+$ 12, and the power rating m current, and the operating temperature.	temperature, the maximum current will be decrease.		
VOLTAGE	OK DC MODE	Setting Range *1	-285 V to +285 V / -570 V to +570 V			
		Setting Resolution	0.1 V			
MAXIMUM CURREN	re *3	Accuracy *2 100 V	±(1 % of set + 1 V / 2 V)	30 A	40 A	40 A
MAXIMUM CURREN		200 V	10 A	15 A	20 A	20 A
MAXIMUM PEAK CU	IRRENT *4	100 V	120 A	180 A	240 A	160 A
POWER CAPACITY		200 V	60 A 2000 W	90 A 3000 W	120 A 4000 W	80 A 4000 W
LOAD REGULATION RIPPLE NOISE *3			0.2% or less 0.5% or less (0 to 100%, via output 1 Vrms / 2 Vrms (TYP)	terminal)		
*2. For an output voltage of 1		oad power factor of 1, stepwise cl	nange from an output current of 0 A to maximum currer	nt (or its reverse), using the output terminal on the rear p	anel.	
			LTAGE RESPONSE TIME, EFFICIENCY < 0.2% @50/60Hz < 0.3% @<500Hz < 0.5% @500.1Hz-999.9Hz			<0.2% @50/60Hz <0.5% @<500Hz <1.0% @500.1Hz~2000Hz
OUTPUT VOLTAGE	RESPONSE TIME *2		100 μs (TYP)			< 2.0% @2100Hz~5000Hz
		d power factor of 1, and in AC mo	de. lige from an output current of 0 A to the maximum curre	ent (or its reverse)		
*3. For AC mode, at an outpu	it voltage of 100 V / 200 V, maxim	um current, and load power facto	of 1.	. ,		
MEASURED VALUE I	RMS, AVG Value 1	1 Resolution	0.1 V			
	o, ATG Value	Accuracy *2	For 45 Hz to 65 Hz and DC: ±(0.5 %			
	PEAK Value	Resolution	For all other frequencies: ±(0.7 % of 0.1 V	reading + 1 V / 2 V)		
		Accuracy	For 45 Hz to 65 Hz and DC: ±(2 %	of reading + 1 V / 2 V)		
CURRENT	RMS, AVG Value	Resolution Accuracy *3	0.01 A For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.1 A/0.05 A) For all other frequencies:	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.15 A/0.08 A) For all other frequencies: ±(0.7 % of reading+0.3 A/0.15 A)	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.2 A/0.1 A) For all other frequencies: ±(0.7 % of reading+0.4 A/0.2 A)	
			1 1/0 7 % of roading 10 2 4 /0 1 A		±(0.7 /0 0) reaumg+0.4 A/0.2 A)	
	PEAK Value	Resolution Accuracy *4	±(0.7 % of reading+0.2 A/0.1 A) 0.1 A For 45 Hz to 65 Hz and DC: ±(12 % of reading) ± 0.5 A/0.25 A)	For 45 Hz to 65 Hz and DC:	For 45 Hz to 65 Hz and DC: +(12 % of reading) + 1 A/0 5 A)	
POWER	PEAK Value Active (W)	Accuracy *4 Resolution	0.1 A	· · · · · · · · · · · · · · · · · · ·	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1 A/0.5 A)	
POWER	Active (W)	Resolution Accuracy *5	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W)	For 45 Hz to 65 Hz and DC:		
POWER		Accuracy ⁶⁴ Resolution Accuracy ⁶⁵ Resolution	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W)	
POWER	Active (W)	Resolution Accuracy *5	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A)	±(2 % of reading + 1 A/0.5 A)	
	Active (W) Apparent (VA) Reactive (VAR)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5*6 Resolution Accuracy *5*7	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VA)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W)	
LOAD POWER FACT	Active (W) Apparent (VA) Reactive (VAR)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5*6 Resolution Accuracy *5*7 Range Resolution	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
	Active (W) Apparent (VA) Reactive (VAR)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5* Resolution Accuracy *5*7 Range Resolution Range	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VA) 0.000 to 1.000	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACT	Active (W) Apparent (VA) Reactive (VAR) OR	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5*6 Resolution Accuracy *5*7 Range Resolution	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.00 to 50.00	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACT LOAD CREST FACTO HARMONIC VOLTAGE EFFECTIVE VALUE (I	Active (W) Apparent (VA) Reactive (VAR) OR GE	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5* Resolution Accuracy *5*7 Range Resolution Range Resolution Range Resolution Range Full Scale	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading +2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.00 to 50.00 0.01 Up to 100th order of the fundament 200 V / 400 V, 100%	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACTO	Active (W) Apparent (VA) Reactive (VAR) OR GE	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5*4 Resolution Accuracy *5*7 Range Resolution Range Resolution Range Resolution Range	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading + 2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.001 to 50.00 0.01 Up to 100th order of the fundament 200 V / 400 V, 100% Up to 20th : ±(0.2 % of reading + 0.	For 45 Hz to 65 Hz and DC: ±([2 % of reading] + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR)	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACTO LOAD CREST FACTO HARMONIC VOLTAGE EFFECTIVE VALUE (I PERCENT (%) (AC-INT and 50/60 H	Active (W) Apparent (VA) Reactive (VAR) OR GE RMS)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5** Resolution Accuracy *5** Resolution Accuracy *5** Resolution Range Resolution Range Full Scale Resolution Accuracy *8	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading + 2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.00 to 50.00 0.01 Up to 100th order of the fundament 200 V / 400 V, 100% 0.1 V, 0.1% Up to 20th :±(0.2 % of reading + 0. 20th to 100th :±(0.3 % of reading + 0. 20th to 100th :=(0.3 % of reading + 0. 20th to 10	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR) al wave	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACT LOAD CREST FACTO HARMONIC VOLTA EFFECTIVE VALUE (I PERCENT (%)	Active (W) Apparent (VA) Reactive (VAR) OR GE RMS)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5** Resolution Accuracy *5** Resolution Accuracy *5** Range Resolution Range Resolution Range Fesolution Range Resolution Range Full Scale Resolution Accuracy *8 Range	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading + 2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.00 to 50.00 0.01 Up to 1000th order of the fundament 200 V / 400 V, 100% 0.1 V, 0.1% Up to 20th : ±(0.2 % of reading +0.20th to 100th : ±(0.3 % of reading +0.20th to 100th order of the fundament	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR) al wave 5 V / 1 V) 0.5 V / 1 V) al wave	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA)	
LOAD POWER FACT LOAD CREST FACTO HARMONIC VOLTAL EFFECTIVE VALUE (I PERCENT (%) (AC-INT and 50/60 H HARMONIC CURREI	Active (W) Apparent (VA) Reactive (VAR) OR GE RMS) Iz only) NT RMS)	Accuracy *4 Resolution Accuracy *5 Resolution Accuracy *5** Resolution Accuracy *5** Resolution Accuracy *5** Resolution Range Resolution Range Full Scale Resolution Accuracy *8	0.1 A For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A) 1 W ±(2 % of reading + 2 W) 1 VA ±(2 % of reading +2 VA) 1 VAR ±(2 % of reading +2 VAR) 0.000 to 1.000 0.001 0.00 to 50.00 0.01 Up to 100th order of the fundament 200 V / 400 V, 100% 0.1 V, 0.1% Up to 20th :±(0.2 % of reading + 0. 20th to 100th :±(0.3 % of reading + 0. 20th to 100th :=(0.3 % of reading + 0. 20th to 10	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A) ±(2 % of reading +3 W) ±(2 % of reading +3 VA) ±(2 % of reading +3 VAR) al wave	±(2 % of reading + 1 A/0.5 A) ±(2 % of reading +4 W) ±(2 % of reading +4 VA) ±(2 % of reading +4 VAR)	

SPECIFICATIONS ASR-3200 ASR-3300 ASR-3400 ASR-3400HF *1. The voltage display is set to RMS in AC/AC+DC mode and AVC in DC mode.

*2. AC mode: For an output voltage of 20 V to 200 V / 40 V to 400 V and 23 "C ± 5 "C. DC mode: For an output voltage of 28.5 V to 285 V / 57 V to 570 V and 23 "C ± 5 "C.

*3. An output current in the range of 5 % to 100 % of the maximum current, and 23 "C ± 5 "C. DC mode: For an output voltage of 28.5 V to 285 V / 57 V to 570 V and 23 "C ± 5 "C.

*4. An output current in the range of 5 % to 100 % of the maximum pack current in AC mode, an output current in the range of 5 % to 100 % of the maximum instantaneous current in DC mode, and 23 "C ± 5 "C. The accuracy of the peak value is for a waveform of DC or sine wave

*5. For an output voltage of 50 V or greater, an output current in the range of 10 % to 100 % of the maximum current, DC or an output frequency of 45 Hz to 65 Hz, and 23 "C ± 5 "C.

*7. The reactive power is for the load with the power factor 0.5 or lower.

*8. An output voltage in the range of 20 V to 200 V / 40 V to 400 V and 23 "C ± 5 "C.

PROTECTIONS			UVP, OCP, OTP, OPP, Fan Fail		
DISPLAY			TFT-LCD, 4.3 inch Store and recall settings, Basic settings: 10 (0~9 numeric keys)		
MEMORY FUNCTION	4				
ARBITRARY WAVE	RBITRARY WAVE Number of Memories Waveform Length		16 (nonvolatile)		
			4096 words		
INTERFACE	Standard	USB	Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB-CDC, USB-TMC MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask		
		LAN			
		RS-232C	Complies with the EIA-RS-232 specifications		
		EXT Control	External Signal Input; External Control I/O		
		GPIB	SCPI-1993, IEEE 488.2 compliant interface		
INSULATION RESISTANCE			500 Vdc, 30 M Ω or more		
Between input and chassi	is, output and chassis, ir	nput and output			
WITHSTAND VOLTAGE			1500 Vac, 1 minute		
Between input and chassi	is, output and chassis, ir	nput and output			
EMC			EN 61326-1, EN 61326-2-1, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12		
			EN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11/-4-34, EN 55011 (Class A), EN 55032		
SAFETY			EN 61010-1		
ENVIRONMENT	Operating Envi	ronment	Indoor use, Overvoltage Category II		
	Operating Temperature Range		0 °C to 40 °C		
	Storage Temper	rature Range	-10 °C to 70 °C		
	Operating Humidity Range		20 % to 80 % RH (no condensation)		
	Storage Humidity Range		90 % RH or less (no condensation)		
	Altitude		Up to 2000 m		
DIMENSIONS & WEI	GHT		430(W)×176(H)×530(D) mm (not including protrusions); Approx. 25kg		

ASR-3200 2kVA Programmable AC/DC Power Source 3kVA Programmable AC/DC Power Source ASR-3300 4kVA Programmable AC/DC Power Source ASR-3400 ASR-3400HF 4kVA Programmable AC/DC Power Source

CCESSORIES

CD (User manual/Programming manual), Safety guide, Input terminal cover, Output terminal cover Include remote sensing, GRA-442-E Rack mount adapter(EIA), GTL-246 USB Cable

GPW-005 Power Cord, 3m, 105℃, UL/CSA Type **GPW-006** Power Cord, 3m, 105° C, VDE Type GPW-007 Power Cord, 3m, 105°C, PSE Type GRA-442-J Rack mount adapter (JIS) GTL-137

Output power wire(Load wire_ 10AWG: 50A, 600V/Sense wire_ 16AWG: 20A, 600V)

GTL-232 RS232C Cable, approx. 2m

GTL-248 GPIB Cable, approx. 2m ASR-002 External three phase control unit for IP2W, IP3W, 3P4W output

APS-008 Air inlet filter

* European Output Outlet (factory installed)

GPW-005 APS-008 GRA-442-J GTL-137









ASR-002 External three phase control unit

- * Basis Requirement of ASR-002 to ASR-Series
- 1. Must be the three same models of ASR-Series
- * Functions of ASR-Series are limited when conducts to ASR-002
- No DC Output
 Measurement Items: only current(A), power(W) and PF for each phase
- No Voltage and Current Harmonic Analysis
 No Remote Sensing Capability
 No Arbitrary Waveform Function

- 6. No Sequence and Simulation Function
- Not supported External Control I/O

 No memory Function

 Only support USB, no LAN port for communication



Siege social:

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