

SPECIFICATIONS													
			ASR-3200		ASR-3300		ASR-3400		ASR-3500		ASR-3400HF		
INPUT RATING (AC rms)													
NOMINAL INPUT VOLTAGE			200 Vac to 240 Vac										
INPUT VOLTAGE RANGE			180 Vac to 264 Vac										
PHASE			Single phase, Two-wire										
NOMINAL INPUT FREQUENCY			50 Hz to 60 Hz										
INPUT FREQUENCY RANGE			47 Hz to 63 Hz										
MAX. POWER CONSUMPTION			2500 VA or less		3750 VA or less		5000 VA or less		6000 VA or less		5000 VA or less		
POWER FACTOR ^{*1}		200 Vac	0.95 (TYP)										
^{*1.} For an output voltage of 100 V / 200 V (100 V / 200 V range), maximum current, and a load power factor of 1.													
AC MODE OUTPUT RATINGS (AC rms)													
VOLTAGE		Setting Range ^{*1}		0.0 V to 200.0 V / 0.0 V to 400.0 V									
		Setting Resolution		0.1 V									
		Accuracy ^{*2}		±(1 % of set + 1 V / 2 V)									
OUTPUT PHASE			Single phase, Two-wire										
MAXIMUM CURRENT ^{*3}		100 V	20 A		30 A		40 A		50 A		40 A		
		200 V	10 A		15 A		20 A		25 A		20 A		
MAXIMUM PEAK CURRENT ^{*4}		100 V	120 A		180 A		240 A		300 A		160 A		
		200 V	60 A		90 A		120 A		150 A		80 A		
LOAD POWER FACTOR			0 to 1(leading phase or lagging phase)										
POWER CAPACITY			2000 VA		3000 VA		4000 VA		5000 VA		4000 VA		
FREQUENCY		Setting Range		AC Mode: 40.00 Hz to 999.9 Hz, AC+DC Mode: 1.00 Hz to 999.9 Hz								AC Mode: 40.0 Hz to 5000 Hz, AC+DC Mode: 1 Hz to 5000 Hz	
		Setting Resolution		0.01 Hz (1.00 Hz to 99.99 Hz), 0.1 Hz (100.0 Hz to 999.9 Hz)								0.01 Hz (1.00 Hz to 99.99 Hz), 0.1 Hz (100.0 Hz to 999.9 Hz), 1 Hz (1000 Hz to 5000 Hz)	
		Accuracy		0.02 % of set (23 °C ± 5 °C)									
		Stability ^{*5}		± 0.005 %									
OUTPUT ON PHASE			0° to 359° variable (setting resolution 1°)										
DC OFFSET ^{*6}			Within ± 20 mV (TYP)										
^{*1.} 100 V / 200 V range													
^{*2.} For an output voltage of 20 V to 200 V / 40 V to 400 V, an output frequency of 45 Hz to 65 Hz, no load, and 23 °C ± 5 °C.													
^{*3.} For an output voltage of 1 V to 100 V / 2 V to 200 V. Limited by the power capacity when the output voltage is 100 V to 200 V / 200 V to 400 V. If there is the DC superimposition, the current of AC+DC mode satisfies the maximum current. In the case of lower than 40 Hz, and the power rating temperature, the maximum current will be decrease.													
^{*4.} With respect to the capacitor-input rectifying load. Limited by the maximum current.													
^{*5.} For 45 Hz to 65 Hz, the rated output voltage, no load and the resistance load for the maximum current, and the operating temperature.													
^{*6.} In the case of the AC mode and 23 °C ± 5 °C.													
OUTPUT RATING FOR DC MODE													
VOLTAGE		Setting Range ^{*1}		-285 V to +285 V / -570 V to +570 V									
		Setting Resolution		0.1 V									
		Accuracy ^{*2}		±(1 % of set + 1 V / 2 V)									
MAXIMUM CURRENT ^{*3}		100 V	20 A		30 A		40 A		50 A		40 A		
		200 V	10 A		15 A		20 A		25 A		20 A		
MAXIMUM PEAK CURRENT ^{*4}		100 V	120 A		180 A		240 A		300 A		160 A		
		200 V	60 A		90 A		120 A		150 A		80 A		
POWER CAPACITY			2000 W		3000 W		4000 W		5000 W		4000 W		
^{*1.} 100 V / 200 V range													
^{*2.} For an output voltage of -285 V to -28.5 V, +28.5 V to +285 V / -570 V to -57 V, +57 V to +570 V, no load, and 23 °C ± 5 °C.													
^{*3.} For an output voltage of 1.4 V to 100 V / 2.8 V to 200 V. Limited by the power capacity when the output voltage is 100 V to 250 V / 200 V to 500 V.													
^{*4.} Limited by the maximum current.													
OUTPUT VOLTAGE STABILITY													
LINE REGULATION ^{*1}			0.2 % or less										
LOAD REGULATION ^{*2}			0.5 % or less (0 % to 100 %, via output terminal)										
RIPPLE NOISE ^{*3}			1 Vrms / 2 Vrms (TYP)										
^{*1.} Power source input voltage is 200 V, 220 V, or 240 V, no load, rated output.													
^{*2.} For an output voltage of 100 V to 200 V / 200 V to 400 V, a load power factor of 1, stepwise change from an output current of 0 A to maximum current (or its reverse), using the output terminal on the rear panel.													
^{*3.} For 5 Hz to 1 MHz components in DC mode using the output terminal on the rear panel.													
OUTPUT VOLTAGE WAVEFORM DISTORTION RATIO, OUTPUT VOLTAGE RESPONSE TIME, EFFICIENCY													
TOTAL HARMONIC DISTORTION(THD) ^{*1}			< 0.2 % @50/60 Hz				< 0.2 % @50/60 Hz		<0.2 % @50/60 Hz				
			< 0.3 % @<500 Hz				< 0.6 % @<500 Hz		<0.5 % @<500 Hz				
			< 0.5 % @500.1 Hz to 999.9 Hz				< 0.8 % @500.1 Hz to 999.9 Hz		<1 % @500.1 Hz to 2000 Hz				
									< 2 % @2001 Hz to 5000 Hz				
OUTPUT VOLTAGE RESPONSE TIME ^{*2}			100 μs (TYP)										
EFFICIENCY ^{*3}			80 % or more										
^{*1.} At an output voltage of 50 V to 200 V / 100 V to 400 V, a load power factor of 1, and in AC mode.													
^{*2.} For an output voltage of 100 V / 200 V, a load power factor of 1, with respect to stepwise change from an output current of 0 A to the maximum current (or its reverse).													
^{*3.} For AC mode, at an output voltage of 100 V / 200 V, maximum current, and load power factor of 1.													
MEASURED VALUE DISPLAY													
VOLTAGE		RMS, AVG Value ^{*1}	Resolution	0.1 V									
			Accuracy ^{*2}	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading + 0.5 V / 1 V) For all other frequencies: ±(0.7 % of reading + 1 V / 2 V)									
		PEAK Value	Resolution	0.1 V									
		Accuracy	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1 V / 2 V)										
CURRENT		RMS, AVG Value	Resolution	0.01 A									
			Accuracy ^{*3}	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.1 A/0.05 A)	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.15 A/0.08 A)	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.2 A/0.1 A)	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.25 A/0.13 A)	For 45 Hz to 65 Hz and DC: ±(0.5 % of reading+0.2 A/0.1 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+0.2 A/0.1 A)	For all other frequencies: ±(0.7 % of reading+0.3 A/0.15 A)	For all other frequencies: ±(0.7 % of reading+0.4 A/0.2 A)	For all other frequencies: ±(0.7 % of reading+0.5 A/0.25 A)	For all other frequencies: ±(0.7 % of reading+0.4 A/0.2 A)	For all other frequencies: ±(0.7 % of reading+0.4 A/0.2 A)					
		PEAK Value	Resolution	0.1 A									
		Accuracy ^{*4}	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.5 A/0.25 A)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 0.8 A/0.4 A)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1 A/0.5 A)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1.3 A/0.65 A)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1 A/0.5 A)	For 45 Hz to 65 Hz and DC: ±(2 % of reading + 1 A/0.5 A)					
POWER		Active (W)	Resolution	1 W									
			Accuracy ^{*5}	±(2 % of reading +2 W)	±(2 % of reading +3 W)	±(2 % of reading +4 W)	±(2 % of reading +5 W)	±(2 % of reading +4 W)	±(2 % of reading +4 W)				
		Apparent (VA)	Resolution	1 VA									
			Accuracy ^{*5*6}	±(2 % of reading +2 VA)	±(2 % of reading +3 VA)	±(2 % of reading +4 VA)	±(2 % of reading +5 VA)	±(2 % of reading +4 VA)	±(2 % of reading +4 VA)				
		Reactive (VAR)	Resolution	1 VAR									
			Accuracy ^{*5*7}	±(2 % of reading +2 VAR)	±(2 % of reading +3 VAR)	±(2 % of reading +4 VAR)	±(2 % of reading +5 VAR)	±(2 % of reading +4 VAR)	±(2 % of reading +4 VAR)				
LOAD POWER FACTOR			Range	0.000 to 1.000									
		Resolution	0.001										
LOAD CREST FACTOR			Range	0.00 to 50.00									
		Resolution	0.01										
HARMONIC VOLTAGE EFFECTIVE VALUE (RMS) PERCENT (%) (AC-INT and 50/60 Hz only)			Range	Up to 100th order of the fundamental wave									
		Full Scale	200 V / 400 V, 100%										
		Resolution	0.1 V, 0.1%										
		Accuracy ^{*8}	Up to 20th : ±(0.2 % of reading + 0.5 V / 1 V) 20th to 100th : ±(0.3 % of reading + 0.5 V / 1 V)										
HARMONIC CURRENT EFFECTIVE VALUE (RMS) PERCENT (%)			Range	Up to 100th order of the fundamental wave									
		Full Scale	20 A / 10 A, 100 %		30 A / 15 A, 100 %		40 A / 20 A, 100 %		50 A / 25 A, 100 %		40 A / 20 A, 100 %		
		Resolution	0.01 A/0.1 A, 0.1%										
		Accuracy ^{*3}	Up to 20th ±(1 % of reading+0.4 A/0.2 A)		Up to 20th ±(1 % of reading+0.6 A/0.3 A)		Up to 20th ±(1 % of reading+0.8 A/0.4 A)		Up to 20th ±(1 % of reading+1 A/0.5 A)		Up to 20th ±(1 % of reading+0.8 A/0.4 A)		
			20th to 100th ±(1.5 % of reading+0.4 A/0.2 A)		20th to 100th ±(1.5 % of reading+0.6 A/0.3 A)		20th to 100th ±(1.5 % of reading+0.8 A/0.4 A)		20th to 100th ±(1.5 % of reading+1 A/0.5 A)		20th to 100th ±(1.5 % of reading+0.8 A/0.4 A)		
^{*1.} The voltage display is set to RMS in AC/AC+DC mode and AVG 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.													
^{*4.} An output current in the range of 5 % to 100 % of the maximum peak 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													
^{*6.} The apparent and reactive powers are not displayed in the DC mode.													
^{*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.													
OTHERS													
PROTECTIONS			UVP, OCP, OTP, OPP, Fan Fail										
DISPLAY			TFT-LCD, 4.3 inch										
MEMORY FUNCTION			Store and recall settings, Basic settings: 10 (0 to 9 numeric keys)										
ARBITRARY WAVE	Number of Memories		253 (nonvolatile)										
	Waveform Length		4096 words										
		USB	Type A: Host, Type B: Slave, Speed: 2.0, USB-CDC										
		LAN	MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask										

INTERFACE	Standard	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			
Between input and chassis, output and chassis, input and output		1000 Vdc, 30 MΩ or more	
WITHSTAND VOLTAGE			
Between input and chassis, output and chassis, input and output		1500 Vac, 1 minute	
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 Environment	Indoor use, Overvoltage Category II	
	Operating Temperature Range	0 °C to 40 °C	
	Storage Temperature 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	
TRANSPORTATION INTEGRITY		ISTA 2A Test Procedure	
DIMENSIONS & WEIGHT		430 mm(W) × 176 mm(H) × 530 mm(D) (not including protrusions); Approx. 25 kg	

[⚠] Note: A value with the accuracy is the guaranteed value of the specification. However, an accuracy noted as reference value shows the supplemental data
for reference when the product is used, and is not under the guarantee. A value without the accuracy is the nominal value or representative value (shown as typ.).