SANUPS A11J

ONLINE UPS

SANYO DENKI

SANUPS A11J

Highly reliable and efficient double conversion online UPS

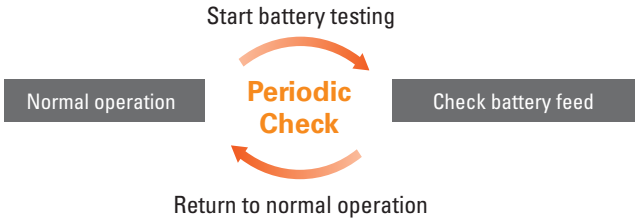
High Efficiency

- This UPS achieves a conversion efficiency of 93% (with the 5 kVA single-unit model).
- The high efficiency reduces running costs and contributes to energy savings.

Automatic Battery Self-Test

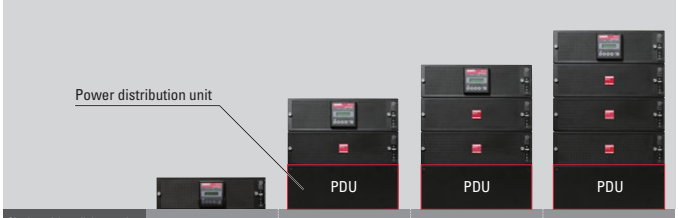
- Battery self-tests can be performed automatically at regular intervals, ensuring reliable operation in the event of a power failure.
- Battery testing requires no power interruption to loads.

The battery test interval can be set by the user.



Scalable Capacity in Space-Saving Design

- UPS capacity can be expanded in 5 kVA increments up to 20 kVA with no increase in footprint as the customer's load requirements increase after installation.



Single-unit/parallel operation (N configuration)	5 kVA / 4.5 kW	10 kVA / 9 kW	15 kVA / 13.5 kW	20 kVA / 18 kW (UL/CE certified model: 17 kW)
Parallel redundant operation (N+1 configuration)	—	5 kVA / 4.5 kW	10 kVA / 9 kW	15 kVA / 13.5 kW

Space-Saving Design

- The UPS has a compact design. For example, the 5 kVA UPS unit (5-minute backup model) has a 3U height.

Compatible with High Power Factor Loads

- With a 0.9 load power factor, this UPS can protect high power factor devices such as servers without the need to oversize the UPS.

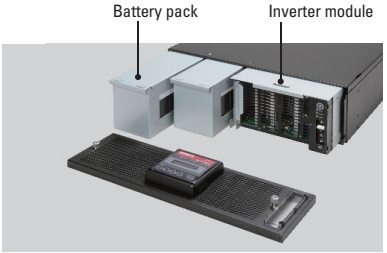
Output capacity of **5 kVA** → **4.5 kW max**

Output capacity of **20 kVA** → **18 kW max** (UL / CE certified unit : 17 kW max)

Easy Maintenance

- Front-access module design allows users to replace battery packs and inverter module easily.
- A built-in maintenance bypass allows maintenance to be performed while grid power is being supplied. During parallel redundant operation, maintenance can be performed without interrupting the inverter power to critical loads.

Note that the maintenance bypass circuit is not available for UL/CE certified models.



Mounting examples

Mountable in an EIA-standard 19-inch rack

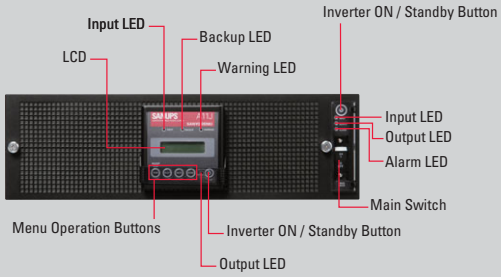
Rack support rails are available as options.

Vertical installation

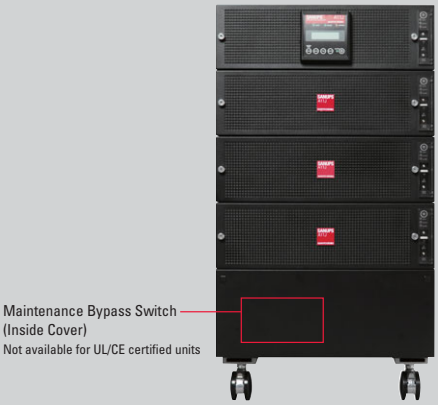
The orientation of the front LCD panel can be changed freely.

External View

5 kVA, Front View [model No.: **A11J502****T/N**]

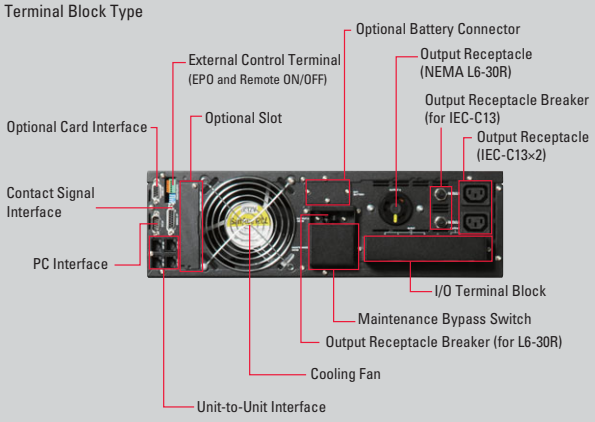


20 kVA, Front View [model No.: **A11J203S****]

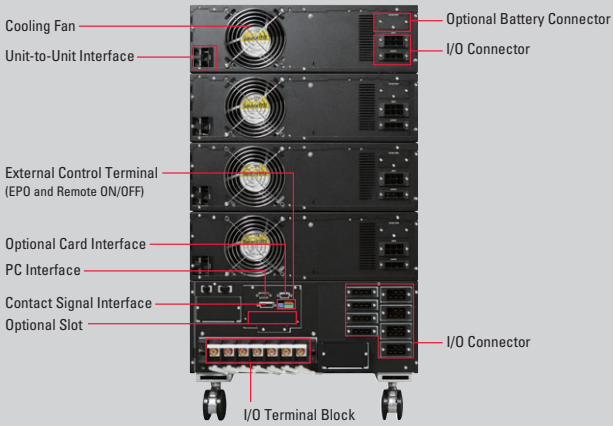


5 kVA, Back View [model No.: **A11J502****T**]

Terminal Block Type

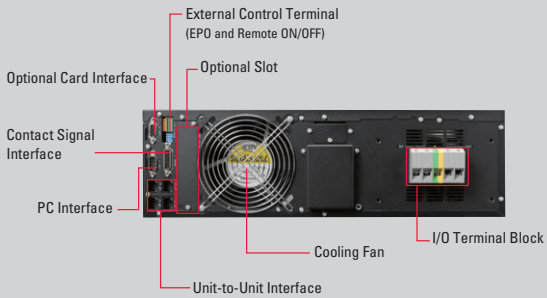


20 kVA, Back View [model No.: **A11J203S****]

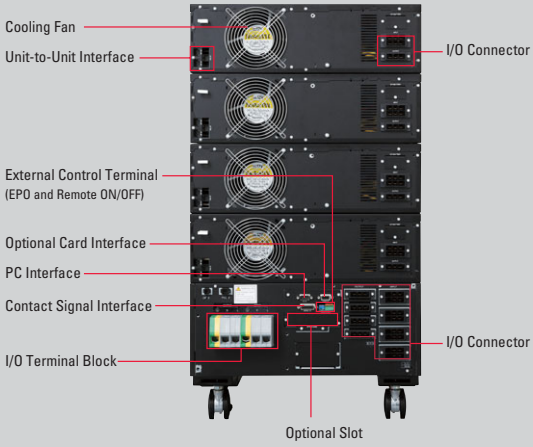


5 kVA UL/CE Certified Model, Back View [model No.: **A11J502****TU**]

Terminal Block Type



20 kVA UL/CE Certified Model, Back View [model No.: **A11J203S****U**]



Lineup

Input and output connector types are indicated by the following icons: (T) Terminal block, (C) NEMA/IEC plugs and outlets

[Number of phases/wires] Input voltage	[Number of phases/wires] Output voltage	Output capacity [kVA]	Output capacity [kW]	Capacity scalability (max. 20 kVA)[1]	Input connector	Output connector	UL/CE certified	Free-standing	Rack mount	Battery backup time[2] [min]	Model no.[3]	Page: Specifications	Page: Dimensions
[Single-phase 2-wire] 200 V 200/208/220/230/240 V	[Single-phase 2-wire] 200 V 200/208/220/230/240 V	5	4.5	—	T	T C	—	✓	✓	5	S-A11J502A005T	p. 6 ①	p. 12
									✓	10	S-A11J502A010T-4U	p. 6 ①	p. 12
									—	30	S-A11J502A030T	p. 6 ①	p. 12
									—	60	S-A11J502A060T	p. 6 ①	p. 12
									—	180	S-A11J502A180T	p. 6 ①	p. 12
				—	C	C	—	✓	✓	5	S-A11J502A005N	p. 6 ②	p. 12
									✓	10	S-A11J502A010N-4U	p. 6 ②	p. 12
									—	30	S-A11J502A030N	p. 6 ②	p. 12
									—	60	S-A11J502A060N	p. 6 ②	p. 12
									—	180	S-A11J502A180N	p. 6 ②	p. 12
				—	C	C	—	—	✓	15	S-A11J502A015NRM	p. 6 ②	p. 14
									✓	25	S-A11J502A025NRM	p. 6 ②	p. 14
									✓	35	S-A11J502A035NRM	p. 6 ②	p. 14
									✓	45	S-A11J502A045NRM	p. 6 ②	p. 14
				✓	T	T C	—	—	✓	5	S-A11J502S2A005RM	p. 6 ③	p. 14
									✓	10	S-A11J502S2A010RM-4U	p. 6 ③	p. 14
									✓	15	S-A11J502S2A015RM	p. 6 ③	p. 14
									✓	25	S-A11J502S2A025RM	p. 6 ③	p. 14
									✓	35	S-A11J502S2A035RM	p. 6 ③	p. 14
									✓	45	S-A11J502S2A045RM	p. 6 ③	p. 14
		10	9	—	T	T C	—	✓	✓	5	S-A11J103A005T	p. 8 ⑥	p. 13
									—	30	S-A11J103A030T	p. 8 ⑥	p. 13
									—	60	S-A11J103A060T	p. 8 ⑥	p. 13
									—	180	S-A11J103A180T	p. 8 ⑥	p. 13
				—	T	T C	—	—	✓	15	S-A11J103A015TRM	p. 8 ⑥	p. 14
									✓	25	S-A11J103A025TRM	p. 8 ⑥	p. 14
									✓	35	S-A11J103A035TRM	p. 8 ⑥	p. 14
				✓	T	T C	—	✓	—	5	S-A11J103S2A005	p. 8 ⑦	p. 13
									—	10	S-A11J103S2A010-4U	p. 8 ⑦	p. 13
									—	30	S-A11J103S2A030	p. 8 ⑦	p. 13
									—	60	S-A11J103S2A060	p. 8 ⑦	p. 13
									—	180	S-A11J103S2A180	p. 8 ⑦	p. 13
				✓	T	T C	—	—	✓	5	S-A11J103S2A005RM	p. 8 ⑦	p. 14
									✓	10	S-A11J103S2A010RM-4U	p. 8 ⑦	p. 14
									✓	15	S-A11J103S2A015RM	p. 8 ⑦	p. 14
									✓	25	S-A11J103S2A025RM	p. 8 ⑦	p. 14
									✓	35	S-A11J103S2A035RM	p. 8 ⑦	p. 14
		15	13.5	✓	T	T C	—	✓	—	5	S-A11J153S2A005	p. 10 ⑪	p. 13
									—	10	S-A11J153S2A010-4U	p. 10 ⑪	p. 13
									—	30	S-A11J153S2A030	p. 10 ⑪	p. 13
									—	60	S-A11J153S2A060	p. 10 ⑪	p. 13
									—	180	S-A11J153S2A180	p. 10 ⑪	p. 13
				✓	T	T C	—	—	✓	5	S-A11J153S2A005RM	p. 10 ⑪	p. 14
									✓	10	S-A11J153S2A010RM-4U	p. 10 ⑪	p. 14
									✓	15	S-A11J153S2A015RM	p. 10 ⑪	p. 14
									✓	25	S-A11J153S2A025RM	p. 10 ⑪	p. 14
		20	18	✓	T	T C	—	✓	—	5	S-A11J203S2A005	p. 11 ⑬	p. 13
									—	10	S-A11J203S2A010-4U	p. 11 ⑬	p. 13
									—	30	S-A11J203S2A030	p. 11 ⑬	p. 13
									—	60	S-A11J203S2A060	p. 11 ⑬	p. 13
									—	180	S-A11J203S2A180	p. 11 ⑬	p. 13
				✓	T	T C	—	—	✓	5	S-A11J203S2A005RM	p. 11 ⑬	p. 14
									✓	10	S-A11J203S2A010RM-4U	p. 11 ⑬	p. 14
									✓	15	S-A11J203S2A015RM	p. 11 ⑬	p. 14

[Number of phases/wires] Input voltage	[Number of phases/wires] Output voltage	Output capacity [kVA]	Output capacity [kW]	Capacity scalability (max. 20 kVA)(1)	Input connector	Output connector	UL/CE certified	Free-standing	Rack mount	Battery backup time(2) [min]	Model no.(3)	Page: Specifications	Page: Dimensions
[Single-phase 2-wire] 100 V or [Single-phase 2-wire] 200 V	[Single-phase 2-wire] 100 V or [Single-phase 3-wire] 100/200 V	5	4.5	—	T	T	—	✓	—	5	S-A11J502W1A005	p. 7 ④	p. 12
									—	10	S-A11J502W1A010-4U	p. 7 ④	p. 12
									—	30	S-A11J502W1A030	p. 7 ④	p. 12
									—	60	S-A11J502W1A060	p. 7 ④	p. 12
									—	180	S-A11J502W1A180	p. 7 ④	p. 12
		10	9	—	T	T	—	✓	—	5	S-A11J103W1A005	p. 8 ⑧	p. 13
									—	10	S-A11J103W1A010-4U	p. 8 ⑧	p. 13
									—	30	S-A11J103W1A030	p. 8 ⑧	p. 13
									—	60	S-A11J103W1A060	p. 8 ⑧	p. 13
									—	180	S-A11J103W1A180	p. 8 ⑧	p. 13
[Single-phase 2-wire] 200 V	[Single-phase 2-wire] 100 V or [Single-phase 3-wire] 100/200 V	5	4.5	—	T	T	—	✓	—	5	S-A11J502W2A005	p. 7 ⑤	p. 12
									—	10	S-A11J502W2A010-4U	p. 7 ⑤	p. 12
									—	30	S-A11J502W2A030	p. 7 ⑤	p. 12
									—	60	S-A11J502W2A060	p. 7 ⑤	p. 12
									—	180	S-A11J502W2A180	p. 7 ⑤	p. 12
		10	9	—	T	T	—	✓	—	5	S-A11J103W2A005	p. 9 ⑨	p. 13
									—	10	S-A11J103W2A010-4U	p. 9 ⑨	p. 13
									—	30	S-A11J103W2A030	p. 9 ⑨	p. 13
									—	60	S-A11J103W2A060	p. 9 ⑨	p. 13
									—	180	S-A11J103W2A180	p. 9 ⑨	p. 13
				✓	T	T	—	✓	—	5	S-A11J103W2A005Z	p. 9 ⑩	p. 13
									—	10	S-A11J103W2A010Z-4U	p. 9 ⑩	p. 13
									—	30	S-A11J103W2A030Z	p. 9 ⑩	p. 13
									—	60	S-A11J103W2A060Z	p. 9 ⑩	p. 13
									—	180	S-A11J103W2A180Z	p. 9 ⑩	p. 13
		15	13.5	✓	T	T	—	✓	—	5	S-A11J153W2A005Z	p. 10 ⑫	p. 13
									—	10	S-A11J153W2A010Z-4U	p. 10 ⑫	p. 13
									—	30	S-A11J153W2A030Z	p. 10 ⑫	p. 13
									—	60	S-A11J153W2A060Z	p. 10 ⑫	p. 13
									—	180	S-A11J153W2A180Z	p. 10 ⑫	p. 13
		20	18	✓	T	T	—	✓	—	5	S-A11J203W2A005Z	p. 11 ⑭	p. 13
									—	10	S-A11J203W2A010Z-4U	p. 11 ⑭	p. 13
									—	30	S-A11J203W2A030Z	p. 11 ⑭	p. 13
									—	60	S-A11J203W2A060Z	p. 11 ⑭	p. 13
									—	180	S-A11J203W2A180Z	p. 11 ⑭	p. 13
[Single-phase 2-wire] 200 V 200/208/220/230/240 V	[Single-phase 2-wire] 200 V 200/208/220/230/240 V	5	4.5	—	T	T	✓	✓	—	5	A11J502A002TU	p. 16	p. 16
				✓					—	5	A11J502SA002U	p. 16	p. 16
		10	9	—	T	T	✓	✓	—	5	A11J103A002TU	p. 16	p. 16
				✓					—	5	A11J103SA002U	p. 16	p. 16
		15	13.5	✓	T	T	✓	✓	—	5	A11J153SA002U	p. 17	p. 16
		20	17	✓	T	T	✓	✓	—	5	A11J203SA002U	p. 17	p. 16

(1) Up to four 5 kVA UPS units can be combined. The expansion can be done even after installation.
(2) At a 25°C ambient temperature, 0.8 load power factor, using new, fully charged batteries; calculated using a 0.75 load power factor for 10- and 180-minute backup models.
(3) These are a set of a UPS unit(s) + battery(ies) + power distribution unit. The PDU is not included with some models.
Note: We also offer models that are not listed in this catalog. If you have a specific requirement, contact us.

Specifications

Specifications

Output capacity 5 kVA Size 3U, 4U

The □' s in model numbers vary with the battery backup time. Refer to the lineup list for details.

				①	②	③
Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)				**S-A11J502A□□□T S-A11J502A010T-4U**	**S-A11J502A□□□N S-A11J502A□□□NRM S-A11J502A010N-4U**	**S-A11J502S2A□□□RM S-A11J502S2A010RM-4U**
Rated output capacity (Apparent power / Active power)		N configuration		5 kVA / 4.5 kW		
		N+1 configuration		—		
Technology		Topology		Double conversion online		
		Cooling method		Forced air cooling		
		Inverter		High-frequency PWM		
UPS classification according to IEC standard				VFI-SS-111		
AC input	Number of phases/wires			Single-phase 2-wire		
	Rated voltage			200/208/220/230/240 V (Same as output voltage)		
	Voltage range[1]			Within -40 to +15% of rated voltage		
	Rated frequency			50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)		
	Required capacity			5.5 kVA or less		
	Input power factor			0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		
AC output	Number of phases/wires			Single-phase 2-wire		
	Rated voltage			200/208/220/230/240 V (User-selectable. Factory setting: 200 V)		
	Voltage regulation			Within ± 2% of rated voltage		
	Rated frequency (same as input)			50/60 Hz		
	Frequency range[3]	In grid operation		Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)		
		In battery operation		Within ± 0.5% of rated voltage		
	Voltage waveform			Pure sine wave		
	Voltage harmonic distortion			3% or less / 8% or less (At linear load / rectifier load, rated output)		
	Transient voltage fluctuation	For abrupt load change		Within ± 5% of rated voltage (For 0 ⇔ 100% load step changes)		
		For loss or return of input power		Within ± 5% of rated voltage		
		For abrupt input voltage change		Within ± 5% of rated voltage (For ± 10% abrupt changes)		
	Load power factor			0.9 lagging (Variation range: 0.7 lagging to 1.0)		
	Overcurrent protection		N configuration	110% or more (Automatic transfer to bypass)[4]		
			N+1 configuration	—		
	Overload capability	Inverter	N configuration	110% (for 1 min), 118% (instantly)		
			N+1 configuration	—		
		Bypass	N configuration	200% (for 30 s), 800% (for 2 cycles)		
			N+1 configuration	—		
Battery	Type			Small-sized valve-regulated lead-acid (VRLA) battery		
	Number of batteries			Battery backup time 5 or 10 min: 16 (12 V per battery)		
	Rated battery capacity			Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery		
	Battery backup time			Depends on the model. Refer to the lineup list.		
Input leak current				4 mA or less		12 mA or less
Acoustic noise (At 1 m from front of UPS, A-weighting)				45 dB or less		
Heat dissipation (At rated output, after battery charging completed)				339 W		350 W
Operating environment	Operating temperature			0 to 40°C		
	Relative humidity			20 to 90% (Non-condensing)		
I/O connector, wiring, etc.[5]	Input connector			M6	NEMA L6-30P	M8
	Input wire			8 mm²	—	8 mm²
	Output connector			M6 NEMA L6-30R ×1 IEC-C13 ×2	NEMA L6-30R ×2 NEMA L6-20R ×2	M8 NEMA L6-30R ×4
	Output wire			8 mm²	—	8 mm²
	Grounding wire			5.5 mm²	—	8 mm²
	Input breaker capacity			40 A or more	30 A or more	40 A or more

(1) AC input voltage range changes depending on the load level. For 100 V input models, the input voltage range is within -35% to +15% of the rated value at load levels ≤ 70%, and is within ±15% of the rated value at load levels > 70%. For 200 V input models, the input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -20% to +15% of the rated value at load levels > 70%. For A11J502A□□□N (NEMA plug type), the input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -10% to +15% of the rated value at load levels > 70%.

(2) At the auto-sensing setting, the input frequency range is within ±8% of the rated frequency. At the fixed-frequency setting, the input frequency range is 40 to 120 Hz.

(3) At the auto-sensing setting, the frequency synchronizing range can be set to ±1, ±3, or ±5% (the factory setting is ±3%). At the fixed-frequency setting, the output frequency is always regulated within ±0.5% of the rated frequency, regardless of the input frequency. Note that when returning from outside the allowable range, the range limits will be ±8% for both settings. Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range (±1/3/5%).

(4) Uninterrupted transfer to bypass operation is only possible when all of the following conditions are true: the automatic frequency detection setting is selected, the input frequency is within the synchronizing range, and the input voltage is within the allowable range.

(5) Communications: a. Dry contact signal: D-sub 15-pin female connector, M3 screw mounting b. PC port: D-sub 9-pin male connector, #4-40 UNC screw mounting Remote control: One-touch terminal block connector, 26 to 20 AWG wire size compatible

Note 1: Output power is supplied from the inverter at start-up. (Inverter start-up type)

Note 2: If you plan to install additional UPS units in the future, make sure that you use the electric wires of the right size and the input breaker with the right capacity for the planned expanded UPS capacity.

Note 3: The Operation Manuals included with these models are in Japanese.

	④	⑤				
	S-A11J502W1A□□□ **S-A11J502W1A010-4U**	**S-A11J502W2A□□□** **S-A11J502W2A010-4U**	Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)			
	5 kVA / 4.5 kW		N configuration		Rated output capacity (Apparent power / Active power)	
	—		N+1 configuration			
	Double conversion online		Topology		Technology	
	Forced air cooling		Cooling method			
	High-frequency PWM		Inverter			
	VFI-SS-111		UPS classification according to IEC standard			
	Single-phase 2-wire		Number of phases/wires			AC input
	100/200 V (Toggled by terminal connection, factory setting: 100 V)	200 V	Rated voltage			
	Within -35 to +15% of rated voltage	Within -40 to +15% of rated voltage	Voltage range[1]			
	50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)		Rated frequency			
	6 kVA or less		Required capacity			
	0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		Input power factor			
	Single-phase 2-wire or single-phase 3-wire		Number of phases/wires			AC output
	100 V (2-wire) or 100/200 V (3-wire)		Rated voltage			
	Within ± 5% of rated voltage		Voltage regulation			
	50/60 Hz		Rated frequency (same as input)			
	Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)		In grid operation		Frequency range[3]	
	Within ± 0.5% of rated voltage		In battery operation			
	Pure sine wave		Voltage waveform			
	3% or less (At linear load, rated output)		Voltage harmonic distortion			
	Within ± 5% of rated voltage (For 10 ⇔ 100% load step changes)		For abrupt load change		Transient voltage fluctuation	
	Within ± 5% of rated voltage		For loss or return of input power			
	Within ± 5% of rated voltage (For ± 10% abrupt changes)		For abrupt input voltage change			
	0.9 lagging (Variation range: 0.7 lagging to 1.0)		Load power factor			
	104% or more (Automatic transfer to bypass)[4]		N configuration		Overcurrent protection	
	—		N+1 configuration			
	104% (for 1 min), 112% (instantly)		N configuration	Inverter	Overload capability	
	—		N+1 configuration			
	200% (for 30 s), 800% (for 2 cycles)		N configuration	Bypass		
	—		N+1 configuration			
	Small-sized valve-regulated lead-acid (VRLA) battery		Type			Battery
	Battery backup time 5 or 10 min: 16 (12 V per battery)		Number of batteries			
	Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery		Rated battery capacity			
	Depends on the model. Refer to the lineup list.		Battery backup time			
	12 mA or less		Input leak current			
	50 dB or less		Acoustic noise (At 1 m from front of UPS, A-weighting)			
	733 W	556 W	Heat dissipation (At rated output, after battery charging completed)			
	0 to 40°C		Operating temperature			Operating environment
	20 to 90% (Non-condensing)		Relative humidity			
	M8		Input connector			I/O connector, wiring, etc.[5]
	22 mm² (100 V), 8 mm² (200 V)	8 mm²	Input wire			
	M8		Output connector			
	14 mm² (1P2W), 8 mm² (1P3W)		Output wire			
	8 mm²		Grounding wire			
	80 A (100 V), 40 A (200 V)	60 A or more	Input breaker capacity			

Specifications

Specifications Output capacity 10 kVA Size 3U, 4U

The □' s in model numbers vary with the battery backup time. Refer to the lineup list for details.

				⑥	⑦	⑧
Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)				**S-A11J103A□□□T** **S-A11J103A□□□TRM**	**S-A11J103S2A□□□** **S-A11J103S2A010-4U** **S-A11J103S2A□□□RM** **S-A11J103S2A010RM-4U**	**S-A11J103W1A□□□** **S-A11J103W1A010-4U**
Rated output capacity (Apparent power / Active power)		N configuration		10 kVA / 9 kW		
		N+1 configuration		5 kVA / 4.5 kW		
Technology		Topology		Double conversion online		
		Cooling method		Forced air cooling		
		Inverter		High-frequency PWM		
UPS classification according to IEC standard				VFI-SS-111		
AC input	Number of phases/wires			Single-phase 2-wire		
	Rated voltage			200/208/220/230/240 V (Same as output voltage)		100/200 V (Toggled by terminal connection, factory setting: 100 V)
	Voltage range(1)			Within -40 to +15% of rated voltage		Within -35 to +15% of rated voltage
	Rated frequency			50/60 Hz (Auto-sensing/Fixed frequency settings selectable.(2) Factory setting: Auto-sensing)		
	Required capacity	N configuration		11 kVA or less		12 kVA or less
		N+1 configuration		6.2 kVA or less		6.7 kVA or less
	Input power factor			0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		
AC output	Number of phases/wires			Single-phase 2-wire		Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (User-selectable. Factory setting: 200 V)		100 V (2-wire) or 100/200 V (3-wire)
	Voltage regulation			Within ± 2% of rated voltage		Within ± 5% of rated voltage
	Rated frequency (same as input)			50/60 Hz		
	Frequency range(3)	In grid operation		Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)		
		In battery operation		Within ± 0.5% of rated voltage		
	Voltage waveform			Pure sine wave		
	Voltage harmonic distortion			3% or less / 8% or less (At linear load / rectifier load, rated output)		3% or less (At linear load, rated output)
	Transient voltage fluctuation	For abrupt load change		Within ± 5% of rated voltage (For 0 ⇔ 100% load step changes)		Within ± 5% of rated voltage (For 10 ⇔ 100% load step changes)
		For loss or return of input power		Within ± 5% of rated voltage		
		For abrupt input voltage change		Within ± 5% of rated voltage (For ± 10% abrupt changes)		
	Load power factor			0.9 lagging (Variation range: 0.7 lagging to 1.0)		
	Overcurrent protection		N configuration	110% or more (Automatic transfer to bypass)(4)		104% or more (Automatic transfer to bypass)(4)
			N+1 configuration	220% or more (Automatic transfer to bypass)(4)		208% or more (Automatic transfer to bypass)(4)
	Overload capability	Inverter	N configuration	110% (for 1 min), 118% (instantly)		104% (for 1 min), 112% (instantly)
			N+1 configuration	220% (for 1 min), 236% (instantly)		208% (for 1 min), 224% (instantly)
		Bypass	N configuration	200% (for 30 s), 800% (for 2 cycles)		
			N+1 configuration	400% (for 30 s), 1600% (for 2 cycles)		
Battery	Type			Small-sized valve-regulated lead-acid (VRLA) battery		
	Number of batteries			Battery backup time 5 or 10 min: 32 (12 V per battery)		
	Rated battery capacity			Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery		
	Battery backup time			Depends on the model. Refer to the lineup list.		
Input leak current				8 mA or less	15 mA or less	
Acoustic noise (At 1 m from front of UPS, A-weighting)				50 dB or less		55 dB or less
Heat dissipation (At rated output, after battery charging completed)				730 W		1465 W
Operating environment	Operating temperature			0 to 40°C		
	Relative humidity			20 to 90% (Non-condensing)		
I/O connector, wiring, etc.(5)	Input connector			M6	M8	
	Input wire			22 mm²		22 mm² (200 V), 38 mm² (100 V)
	Output connector			M6 NEMA L6-30R × 2 NEMA L6-20R × 2	M8 NEMA L6-30R × 4	M8
	Output wire			22 mm²		38 mm² (1P2W), 14 mm² (1P3W)
	Grounding wire			14 mm²		
	Input breaker capacity			80 A or more		80 A or more (200 V), 160 A or more (100 V)

(1) AC input voltage range changes depending on the load level. For 100 V input models, the input voltage range is within -35% to +15% of the rated value at load levels ≤ 70%, and is within ±15% of the rated value at load levels > 70%. For 200 V input models, the input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -20% to +15% of the rated value at load levels > 70%.

(2) At the auto-sensing setting, the input frequency range is within ±8% of the rated frequency. At the fixed-frequency setting, the input frequency range is 40 to 120 Hz.

(3) At the auto-sensing setting, the frequency synchronizing range can be set to ±1, ±3, or ±5% (the factory setting is ±3%). At the fixed-frequency setting, the output frequency is always regulated within ±0.5% of the rated frequency, regardless of the input frequency. Note that when returning from outside the allowable range, the range limits will be ±8% for both settings. Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range (±1/3/5%).

(4) Uninterrupted transfer to bypass operation is only possible when all of the following conditions are true: the automatic frequency detection setting is selected, the input frequency is within the synchronizing range, and the input voltage is within the allowable range.

(5) Communications: a. Dry contact signal: D-sub 15-pin female connector, M3 screw mounting b. PC port: D-sub 9-pin male connector, #4-40 UNC screw mounting Remote control: One-touch terminal block connector, 26 to 20 AWG wire size compatible

Note 1: Output power is supplied from the inverter at start-up. (Inverter start-up type)

Note 2: If you plan to install additional UPS units in the future, make sure that you use the electric wires of the right size and the input breaker with the right capacity for the planned expanded UPS capacity.

Note 3: The Operation Manuals included with these models are in Japanese.

	⑨	⑩				
	S-A11J103W2A□□□ **S-A11J103W2A010-4U**	**S-A11J103W2A□□□Z** **S-A11J103W2A010Z-4U**	Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)			
	10 kVA / 9 kW		N configuration		Rated output capacity (Apparent power / Active power)	
	5 kVA / 4.5 kW		N+1 configuration			
	Double conversion online		Topology		Technology	
	Forced air cooling		Cooling method			
	High-frequency PWM		Inverter			
	VFI-SS-111		UPS classification according to IEC standard			
	Single-phase 2-wire		Number of phases/wires			AC input
	200 V		Rated voltage			
	Within -40 to +15% of rated voltage		Voltage range[1]			
	50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)		Rated frequency			
	12 kVA or less		N configuration		Required capacity	
	6.7 kVA or less		N+1 configuration			
	0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		Input power factor			
	Single-phase 2-wire or single-phase 3-wire		Number of phases/wires			AC output
	100 V (2-wire) or 100/200 V (3-wire)		Rated voltage			
	Within ± 5% of rated voltage		Voltage regulation			
	50/60 Hz		Rated frequency (same as input)			
	Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)		In grid operation		Frequency range[3]	
	Within ± 0.5% of rated voltage		In battery operation			
	Pure sine wave		Voltage waveform			
	3% or less (At linear load, rated output)		Voltage harmonic distortion			
	Within ± 5% of rated voltage (For 10 ⇔ 100% load step changes)		For abrupt load change		Transient voltage fluctuation	
	Within ± 5% of rated voltage		For loss or return of input power			
	Within ± 5% of rated voltage (For ± 10% abrupt changes)		For abrupt input voltage change			
	0.9 lagging (Variation range: 0.7 lagging to 1.0)		Load power factor			
	104% or more (Automatic transfer to bypass)[4]		N configuration		Overcurrent protection	
	208% or more (Automatic transfer to bypass)[4]		N+1 configuration			
	104% (for 1 min), 112% (instantly)		N configuration	Inverter	Overload capability	
	208% (for 1 min), 224% (instantly)		N+1 configuration			
	200% (for 30 s), 800% (for 2 cycles)		N configuration	Bypass		
	400% (for 30 s), 1600% (for 2 cycles)		N+1 configuration			
	Small-sized valve-regulated lead-acid (VRLA) battery		Type			Battery
	Battery backup time 5 or 10 min: 32 (12 V per battery)		Number of batteries			
	Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery		Rated battery capacity			
	Depends on the model. Refer to the lineup list.		Battery backup time			
	15 mA or less		Input leak current			
	55 dB or less		Acoustic noise (At 1 m from front of UPS, A-weighting)			
	1112 W		Heat dissipation (At rated output, after battery charging completed)			
	0 to 40°C		Operating temperature			Operating environment
	20 to 90% (Non-condensing)		Relative humidity			
	M8		Input connector			I/O connector, wiring, etc.[5]
	22 mm²		Input wire			
	M8		Output connector			
	38 mm² (1P2W), 14 mm² (1P3W)		Output wire			
	14 mm²		Grounding wire			
	125 A or more	80 A or more	Input breaker capacity			

Specifications

Specifications

Output capacity 15 kVA Size 3U, 4U

The □' s in model numbers vary with the battery backup time. Refer to the lineup list for details.

				⑪	⑫
Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)				**S-A11J153S2A□□□** **S-A11J153S2A010-4U** **S-A11J153S2A□□□RM** **S-A11J153S2A010RM-4U**	**S-A11J153W2A□□□Z** **S-A11J153W2A010Z-4U**
Rated output capacity (Apparent power / Active power)		N configuration		15 kVA / 13.5 kW	
		N+1 configuration		10 kVA / 9 kW	
Technology		Topology		Double conversion online	
		Cooling method		Forced air cooling	
		Inverter		High-frequency PWM	
UPS classification according to IEC standard				VFI-SS-111	
AC input	Number of phases/wires			Single-phase 2-wire	
	Rated voltage			200/208/220/230/240 V (Same as output voltage)	200 V
	Voltage range[1]			Within -40 to +15% of rated voltage	
	Rated frequency			50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)	
	Required capacity	N configuration		16.5 kVA or less	18 kVA or less
		N+1 configuration		11.7 kVA or less	12.7 kVA or less
	Input power factor			0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)	
AC output	Number of phases/wires			Single-phase 2-wire	Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (User-selectable. Factory setting: 200 V)	100 V (2-wire) or 100/200 V (3-wire)
	Voltage regulation			Within ± 2% of rated voltage	Within ± 5% of rated voltage
	Rated frequency (same as input)			50/60 Hz	
	Frequency range[3]	In grid operation		Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)	
		In battery operation		Within ± 0.5% of rated voltage	
	Voltage waveform			Pure sine wave	
	Voltage harmonic distortion			3% or less / 8% or less (At linear load / rectifier load, rated output)	3% or less (At linear load, rated output)
	Transient voltage fluctuation	For abrupt load change		Within ± 5% of rated voltage (For 0 ⇔ 100% load step changes)	Within ± 5% of rated voltage (For 10 ⇔ 100% load step changes)
		For loss or return of input power		Within ± 5% of rated voltage	
		For abrupt input voltage change		Within ± 5% of rated voltage (For ± 10% abrupt changes)	
	Load power factor			0.9 lagging (Variation range: 0.7 lagging to 1.0)	
	Overcurrent protection		N configuration	110% or more (Automatic transfer to bypass)[4]	104% or more (Automatic transfer to bypass)[4]
			N+1 configuration	165% or more (Automatic transfer to bypass)[4]	156% or more (Automatic transfer to bypass)[4]
	Overload capability	Inverter	N configuration	110% (for 1 min), 118% (instantly)	104% (for 1 min), 112% (instantly)
			N+1 configuration	165% (for 1 min), 177% (instantly)	156% (for 1 min), 168% (instantly)
		Bypass	N configuration	200% (for 30 s), 800% (for 2 cycles)	
			N+1 configuration	300% (for 30 s), 1200% (for 2 cycles)	
Battery	Type			Small-sized valve-regulated lead-acid (VRLA) battery	
	Number of batteries			Battery backup time 5 or 10 min: 48 (12 V per battery)	
	Rated battery capacity			Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery	
	Battery backup time			Depends on the model. Refer to the lineup list.	
Input leak current				20 mA or less	
Acoustic noise (At 1 m from front of UPS, A-weighting)				50 dB or less	55 dB or less
Heat dissipation (At rated output, after battery charging completed)				1100 W	1669 W
Operating environment	Operating temperature			0 to 40°C	
	Relative humidity			20 to 90% (Non-condensing)	
I/O connector, wiring, etc.[5]	Input connector			M8	
	Input wire			38 mm²	
	Output connector			M8 NEMA L6-30R × 4	M8
	Output wire			38 mm²	22 mm² × 2 (for 1P2W), 38 mm² (for 1P3W)
	Grounding wire			14 mm²	
	Input breaker capacity			125 A	125 A or more

(1) AC input voltage range changes depending on the load level. The input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -20% to +15% of the rated value at load levels > 70%.

(2) At the auto-sensing setting, the input frequency range is within ±8% of the rated frequency. At the fixed-frequency setting, the input frequency range is 40 to 120 Hz.

(3) At the auto-sensing setting, the frequency synchronizing range can be set to ±1, ±3, or ±5% (the factory setting is ±3%). At the fixed-frequency setting, the output frequency is always regulated within ±0.5% of the rated frequency, regardless of the input frequency. Note that when returning from outside the allowable range, the range limits will be ±8% for both settings. Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range (±1/3/5%).

(4) Uninterrupted transfer to bypass operation is only possible when all of the following conditions are true: the automatic frequency detection setting is selected, the input frequency is within the synchronizing range, and the input voltage is within the allowable range.

(5) Communications: a. Dry contact signal: D-sub 15-pin female connector, M3 screw mounting b. PC port: D-sub 9-pin male connector, #4-40 UNC screw mounting Remote control: One-touch terminal block connector, 26 to 20 AWG wire size compatible

Note 1: Output power is supplied from the inverter at start-up. (Inverter start-up type)

Note 2: If you plan to install additional UPS units in the future, make sure that you use the electric wires of the right size and the input breaker with the right capacity for the planned expanded UPS capacity.

Note 3: The Operation Manuals included with these models are in Japanese.

Specifications

Output capacity 20 kVA Size 3U, 4U

The □' s in model numbers vary with the battery backup time. Refer to the lineup list for details.

				⑬	⑭
Model no. (A set of a UPS unit(s) + Battery(ies) + Power distribution unit PDU is not included with some models)				**S-A11J203S2A□□□** **S-A11J203S2A010-4U** **S-A11J203S2A□□□RM** **S-A11J203S2A010RM-4U**	**S-A11J203W2A□□□Z** **S-A11J203W2A010Z-4U**
Rated output capacity (Apparent power / Active power)		N configuration		20 kVA / 18 kW	
		N+1 configuration		15 kVA / 13.5 kW	
Technology		Topology		Double conversion online	
		Cooling method		Forced air cooling	
		Inverter		High-frequency PWM	
UPS classification according to IEC standard				VFI-SS-111	
AC input	Number of phases/wires			Single-phase 2-wire	
	Rated voltage			200/208/220/230/240 V (Same as output voltage)	200 V
	Voltage range[1]			Within -40 to +15% of rated voltage	
	Rated frequency			50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)	
	Required capacity	N configuration		22 kVA or less	24 kVA or less
		N+1 configuration		17.2 kVA or less	18.7 kVA or less
	Input power factor			0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)	
AC output	Number of phases/wires			Single-phase 2-wire	Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (User-selectable. Factory setting: 200 V)	100 V (2-wire) or 100/200 V (3-wire)
	Voltage regulation			Within ± 2% of rated voltage	Within ± 5% of rated voltage
	Rated frequency (same as input)			50/60 Hz	
	Frequency range[3]	In grid operation		Within ± 1, 3, or 5% of rated frequency (Factory setting: ± 3%)	
		In battery operation		Within ± 0.5% of rated voltage	
	Voltage waveform			Pure sine wave	
	Voltage harmonic distortion			3% or less / 8% or less (At linear load / rectifier load, rated output)	3% or less (At linear load, rated output)
	Transient voltage fluctuation	For abrupt load change		Within ± 5% of rated voltage (For 0 ⇔ 100% load step changes)	Within ± 5% of rated voltage (For 10 ⇔ 100% load step changes)
		For loss or return of input power		Within ± 5% of rated voltage	
		For abrupt input voltage change		Within ± 5% of rated voltage (For ± 10% abrupt changes)	
	Load power factor			0.9 lagging (Variation range: 0.7 lagging to 1.0)	
	Overcurrent protection		N configuration	110% or more (Automatic transfer to bypass)[4]	104% or more (Automatic transfer to bypass)[4]
			N+1 configuration	147% or more (Automatic transfer to bypass)[4]	138% or more (Automatic transfer to bypass)[4]
	Overload capability	Inverter	N configuration	110% (for 1 min), 118% (instantly)	104% (for 1 min), 112% (instantly)
			N+1 configuration	147% (for 1 min), 157% (instantly)	138% (for 1 min), 149% (instantly)
		Bypass	N configuration	200% (for 30 s), 800% (for 2 cycles)	
			N+1 configuration	267% (for 30 s), 1067% (for 2 cycles)	
Battery	Type			Small-sized valve-regulated lead-acid (VRLA) battery	
	Number of batteries			Battery backup time 5 or 10 min: 64 (12 V per battery)	
	Rated battery capacity			Battery backup time 5 min: 5 Ah per battery, 10 min: 9 Ah per battery	
	Battery backup time			Depends on the model. Refer to the lineup list.	
Input leak current				25 mA or less	
Acoustic noise (At 1 m from front of UPS, A-weighting)				50 dB or less	55 dB or less
Heat dissipation (At rated output, after battery charging completed)				1500 W	2225 W
Operating environment	Operating temperature			0 to 40°C	
	Relative humidity			20 to 90% (Non-condensing)	
I/O connector, wiring, etc.[5]	Input connector			M8	
	Input wire			60 mm²	
	Output connector			M8 NEMA L6-30R × 4	M8
	Output wire			60 mm²	38 mm² × 2 (for 1P2W), 60 mm² (for 1P3W)
	Grounding wire			14 mm²	
	Input breaker capacity			160 A or more	

(1) AC input voltage range changes depending on the load level. The input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -20% to +15% of the rated value at load levels > 70%.

(2) At the auto-sensing setting, the input frequency range is within ±8% of the rated frequency. At the fixed-frequency setting, the input frequency range is 40 to 120 Hz.

(3) At the auto-sensing setting, the frequency synchronizing range can be set to ±1, ±3, or ±5% (the factory setting is ±3%). At the fixed-frequency setting, the output frequency is always regulated within ±0.5% of the rated frequency, regardless of the input frequency. Note that when returning from outside the allowable range, the range limits will be ±8% for both settings. Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range (±1/3/5%).

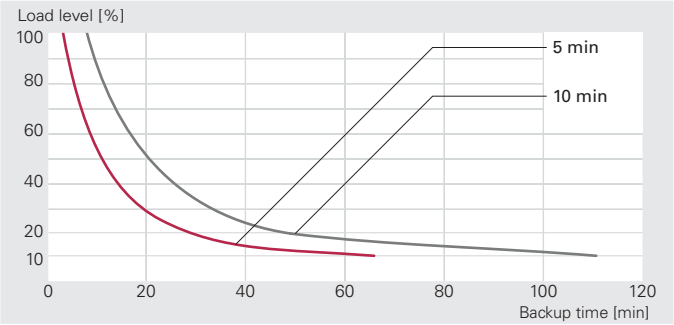
(4) Uninterrupted transfer to bypass operation is only possible when all of the following conditions are true: the automatic frequency detection setting is selected, the input frequency is within the synchronizing range, and the input voltage is within the allowable range.

(5) Communications: a. Dry contact signal: D-sub 15-pin female connector, M3 screw mounting b. PC port: D-sub 9-pin male connector, #4-40 UNC screw mounting Remote control: One-touch terminal block connector, 26 to 20 AWG wire size compatible

Note 1: Output power is supplied from the inverter at start-up. (Inverter start-up type)

Note 2: The Operation Manuals included with these models are in Japanese.

Load Level vs Backup Time



Note: At a 25°C ambient temperature, load power factors: 0.8 for the 5-minute model and 0.75 for the 10-minute model, using new, fully charged batteries.

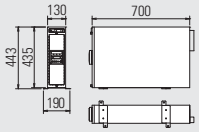
Dimensions [mm]

The dimensional drawings provided here are for models with a backup time of 5 minutes (and 10 minutes whose model numbers ending in -4U).
For dimensional drawings of other models that have a battery box or battery cabinet, see page 15.

5 kVA output capacity, free-standing type

Model no.		S-A11J502A □□□ T S-A11J502A□□□N	S-A11J502W1A□□□	S-A11J502W2A□□□	S-A11J502A010T-4U S-A11J502A010N-4U	S-A11J502W1A010-4U	S-A11J502W2A010-4U
Dimensions		Fig. 1	Fig. 2	Fig. 2	Fig. 3	Fig. 4	Fig. 4
Width		435	435	435	435	435	435
Depth[1]		700 + 30	700 + 80	700 + 80	700 + 30	700 + 80	700 + 80
Height		130	541	541	175	586	586
Mass[2]	With a battery pack	61 kg	211 kg	181 kg	80 kg	230 kg	200 kg
	Without a battery pack	26 kg	176 kg	146 kg	—	—	—

Fig.1 Vertical



Horizontal / Rack mounting

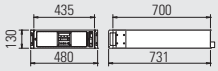


Fig.2

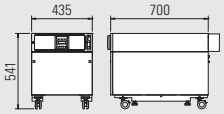
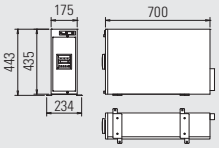


Fig.3 Vertical



Horizontal / Rack mounting

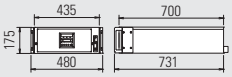
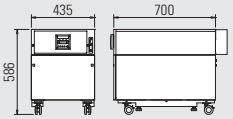


Fig.4



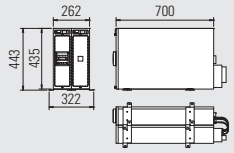
Paint color : Black (Munsell N1.5)

10 kVA output capacity, free-standing type

Model no.		S-A11J103A□□□T	S-A11J103S2A□□□	S-A11J103W1A□□□	S-A11J103W2A□□□	S-A11J103W2A□□□Z
Dimensions		Fig. 5	Fig. 6	Fig. 7	Fig. 7	Fig. 8
Width		435	435	435	435	435
Depth(1)		700 + 105	700 + 80	700 + 80	700 + 80	700 + 80
Height		262	540	673	673	850
Mass(2)	With a battery pack	124 kg	162 kg	322 kg	272 kg	327 kg
	Without a battery pack	54 kg	92 kg	252 kg	202 kg	257 kg

Model no.		S-A11J103S2A010-4U	S-A11J103W1A010-4U	S-A11J103W2A010-4U	S-A11J103W2A010Z-4U
Dimensions		Fig. 9	Fig. 10	Fig. 10	Fig. 11
Width		435	435	435	435
Depth(1)		700 + 80	700 + 80	700 + 80	700 + 80
Height		629	762	762	939
Mass(2)	With a battery pack	200 kg	360 kg	310 kg	365 kg
	Without a battery pack	—	—	—	—

Fig.5 Vertical



Horizontal / Rack mounting

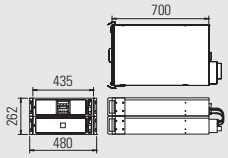


Fig.6

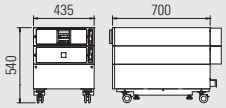


Fig.7

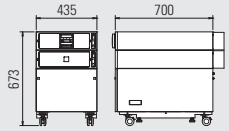


Fig.8

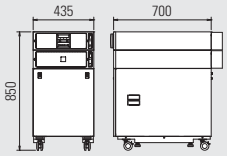


Fig.9

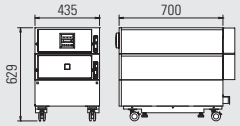


Fig.10

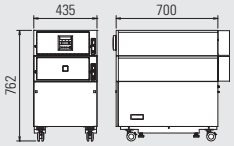
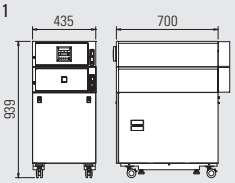


Fig.11



15 kVA output capacity, free-standing type

Model no.		S-A11J153S2A□□□	S-A11J153W2A□□□Z	S-A11J153S2A010-4U	S-A11J153W2A010Z-4U
Dimensions		Fig. 12	Fig. 13	Fig. 14	Fig. 15
Width		435	435	435	435
Depth(1)		700 + 80	700 + 80	700 + 80	700 + 80
Height		671	981	805	1115
Mass(2)	With a battery pack	223 kg	388 kg	280 kg	445 kg
	Without a battery pack	118 kg	283 kg	—	—

Fig.12

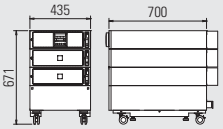


Fig.13

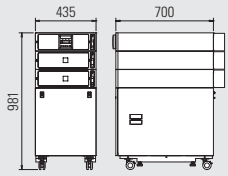


Fig.14

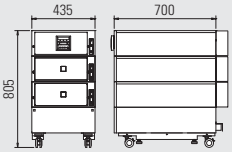
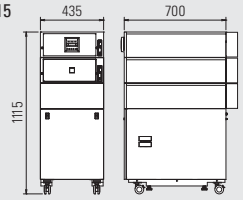


Fig.15



20 kVA output capacity, free-standing type

Model no.		S-A11J203S2A□□□	S-A11J203W2A□□□Z	S-A11J203S2A010-4U	S-A11J203W2A010Z-4U
Dimensions		Fig. 16	Fig. 17	Fig. 18	Fig. 19
Width		435	435	435	435
Depth(1)		700 + 80	700 + 80	700 + 80	700 + 80
Height		803	1113	981	1291
Mass(2)	With a battery pack	284 kg	449 kg	360 kg	525 kg
	Without a battery pack	144 kg	309 kg	—	—

Fig.16

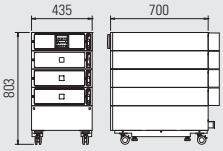


Fig.17

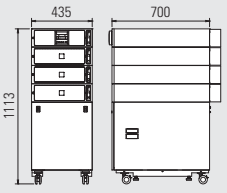


Fig.18

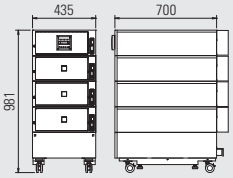
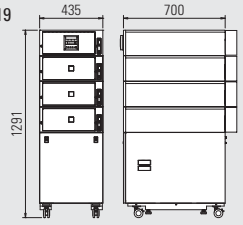


Fig.19



Paint color : Black (Munsell N1.5)

(1) UPS unit + cable cover / terminal block / protruding portion

(2) Backup time of models with batteries: 5, 10, 15, 25, 35, and 45 min; Backup time of models without batteries: 30, 60, and 180 min

Note: The mass values listed are for the UPS only. The total mass varies with different backup times.

Dimensions [mm]

The dimensional drawings provided here are for models with a backup time of 5 minutes (and 10 minutes whose model numbers ending in -4U).
For dimensional drawings of other models that have a battery box or battery cabinet, see page 15.

5 kVA output capacity, rack mount type

Model no.	S-A11J502A□□□NRM	S-A11J502S2A □□□ RM	S-A11J502S2A010RM-4U
Battery backup time	5 min	5 min	10 min
Dimensions	Fig. 20	Fig. 20 + Fig. 22	Fig. 21 + Fig. 22
Width	435	435	435
Depth(1)	700 + 30	700 + 80	700 + 80
Height [rack unit]	130 (3U)	306 (7U)	351 (8U)
Mass	61 kg	94 kg	113 kg

10 kVA output capacity, rack mount type

Model no.	S-A11J103A□□5TRM	S-A11J103S2A□□□RM	S-A11J103S2A010RM-4U
Battery backup time	5 min	5 min	10 min
Dimensions	Fig. 20 ×2(2)	Fig. 20 ×2(2) + Fig. 22	Fig. 20 ×2(2) + Fig. 22
Width	435	435	435
Depth(1)	700 + 105	700 + 80	700 + 80
Height [rack unit]	262 (6U)	436 (10U)	525 (12U)
Mass	124 kg	155 kg	193 kg

15 kVA output capacity, rack mount type

Model no.	S-A11J153S2A□□□RM	S-A11J153S2A010RM-4U
Battery backup time	5 min	10 min
Dimensions	Fig. 20 ×3(2) + Fig. 22	Fig. 21 ×3(2) + Fig. 22
Width	435	435
Depth(1)	700 + 80	700 + 80
Height [rack unit]	566 (13U)	700 (16U)
Mass	216 kg	273 kg

20 kVA output capacity, rack mount type

Model no.	S-A11J203S2A□□□RM	S-A11J203S2A010RM-4U
Battery backup time	5 min	10 min
Dimensions	Fig. 20 ×4(2) + Fig. 22	Fig. 21 ×4(2) + Fig. 22
Width	435	435
Depth(1)	700 + 80	700 + 80
Height [rack unit]	696 (16U)	874 (20U)
Mass	277 kg	353 kg

(1) UPS unit + cable cover / terminal block / protruding portion
(2) Only one LCD panel will be included.

Fig.20

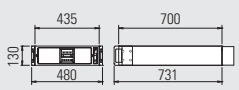
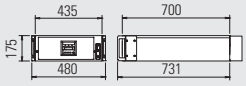
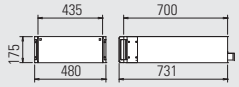


Fig.21



Power distribution unit

Fig.22



Paint color: Black (Munsell N1.5)

Networking Options

Item	Model no.		Description
LAN Interface Card with Modbus	IPv4/IPv6, Modbus TCP supported	**PRLANIF022A**	When installed in the optional card slot, this card enables 24/7 monitoring of UPS operations and status, and sends e-mail notifications to system administrators for quick actions via network in the event of a power failure.
	IPv4/IPv6, Modbus TCP/RTU supported	**PRLANIF024A**	
	IPv4/IPv6, environmental monitoring supported	**PRLANIF013B-US**	Combined with our temperature sensor (PRLANSN001) and humidity sensor (PRLANSN002), this model enables you to monitor UPS ambient temperature and humidity.
SANUPS SOFTWARE Download version	for Windows	**PMS52□00DL**(2)	This is an installation-based UPS management software. For the latest OS support information, refer to our website. For bulk purchase of software licenses, append an appropriate -suffix to the model number as below.
	for Multi-OS(1)	**PMS53□00DL**(2)	

-10	(10 licenses)
-50	(50 licenses)
-100	(100 licenses)

(1) Supports Windows, Unix, and Linux.
(2) The □ 's denote revision characters.
Note: Optional products have different operating temperature ranges from the UPS.

Battery Box

Fig.	Dimensions [mm]			Mass	Battery capacity [Ah・cell]	Battery expansion options															
	Width	Depth*	Height			5 kVA output capacity				10 kVA output capacity				15 kVA output capacity				20 kVA output capacity			
						15 min	25 min	35 min	45 min	15 min	25 min	35 min	45 min	15 min	25 min	35 min	45 min	15 min	25 min	35 min	45 min
23	435	700 + 80	130	49 kg	480	1 unit	—	1 unit	—	—	—	2 units	—	1 unit	—	—	—	—	—	—	—
23	435	700 + 80	130	84 kg	960	—	1 unit	1 unit	2 units	1 unit	2 units	2 units	—	1 unit	3 units	—	—	2 units	—	—	—

* Depth of battery cabinet + cable cover

Fig.23

Battery Cabinet

Fig.	Dimensions [mm]			Mass	Battery capacity [Ah・cell]	Battery expansion options											
	Width	Depth*	Height			5 kVA output capacity			10 kVA output capacity			15 kVA output capacity			20 kVA output capacity		
						30 min	60 min	180 min	30 min	60 min	180 min	30 min	60 min	180 min	30 min	60 min	180 min
24	440	700 + 12	544	215 kg	2688	1 unit	—	—	—	—	—	1 unit	—	—	—	—	—
25	440	700 + 12	988	415 kg	5376	—	—	—	1 unit	—	—	1 unit	—	—	2 units	—	—
26	440	870 + 12	544	320 kg	4224	—	1 unit	—	—	—	—	—	1 unit	—	—	—	—
27	440	870 + 12	988	620 kg	8448	—	—	1 unit	—	1 unit	2 units	—	1 unit	3 units	—	2 units	4 units

* Depth of battery box + cable cover

Fig.24

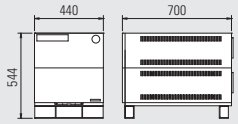


Fig.25

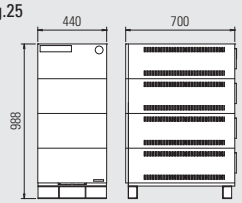


Fig.26

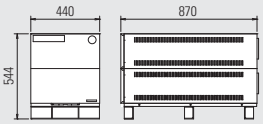
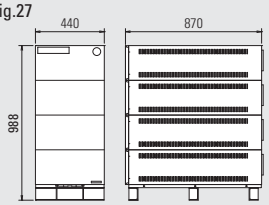


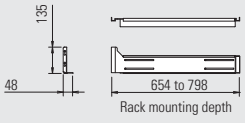
Fig.27



Rack Support Rail Dimensions [mm]

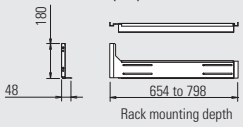
Used for mounting a UPS unit onto a 19 inch rack.
Rack mounting brackets for mounting a UPS unit to racks are included with the UPS unit.

Model No.: RM027 (3U)



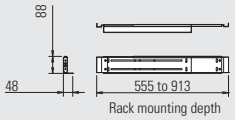
A set of left and right rails (for Fig.20, 23).
The figure shows the left rail.

Model No.: RM028 (4U)



A set of left and right rails (for Fig.21, 22).
The figure shows the left rail.

Model No.: RM030 (2U)

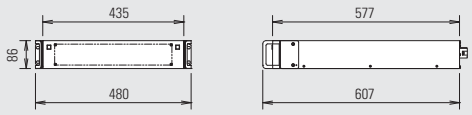


A set of left and right rails (for Transformer Box).
The figure shows the left rail.

Transformer Box Dimensions [mm]

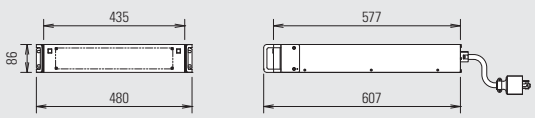
This is a transformer box that can be mounted in a 19-inch rack and can convert the voltage from 200 to 100 V.
A transformer, a circuit breaker, and outlets are integrated in one, achieving the 2U size.
Models with 1.5 kVA and 3.5 kVA rated capacities are also available. Contact us for more information.

Model No.: TRA11J502A00TRM



I/O terminal block: M6, output receptacle: Dual 5-15R × 4
Mass: Approx. 42 kg

Model No.: TRA11J502A00NRM



Input plug: L6-30P, output terminal block: M6, output receptacle: Dual 5-15R × 4
Mass: Approx. 42 kg

Note: Battery cabinets and transformer boxes are not UL/CE certified.

Specifications

Specifications UL/CE certified models

Output capacity 5 kVA, 10 kVA, 15 kVA, 20 kVA Size 3U

Model no.				A11J502A002TU	A11J502SA002U	A11J103A002TU	A11J103SA002U
Rated output capacity (Apparent power / Active power)			N configuration	5 kVA / 4.5 kW		10 kVA / 9 kW	
			N+1 configuration	—		5 kVA / 4.5 kW	
Technology			Topology	Double conversion online			
			Cooling method	Forced air cooling			
			Inverter	High-frequency PWM			
UPS classification according to IEC standard				VFI-SS-111			
AC input	Number of phases/wires			Single-phase 2-wire			
	Rated voltage			200/208/220/230/240 V (Same as output voltage)			
	Voltage range[1]			Within -40 to +15% of rated voltage			
	Rated frequency			50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)			
	Required capacity		N configuration	5.5 kVA		11 kVA	
			N+1 configuration	—		6.2 kVA	
	Input power factor			0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)			
AC output	Number of phases/wires			Single-phase 2-wire			
	Rated voltage (same as input)			200/208/220/230/240 V (User-selectable. Factory setting: 200 V)			
	Voltage regulation			Within ±2% of rated voltage			
	Rated frequency (same as input)			50/60 Hz			
	Frequency range[2]		In grid operation	Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)			
			In battery operation	Within ±0.5% of rated voltage			
	Voltage waveform			Pure sine wave			
	Voltage harmonic distortion			3% or less / 8% or less (At linear load / rectifier load, rated output)			
	Transient voltage fluctuation		For abrupt load change	Within ±5% of rated voltage (For 0 ⇔ 100% load step changes)			
			For loss or return of input power	Within ±5% of rated voltage			
			For abrupt input voltage change	Within ±5% of rated voltage (For ±10% abrupt changes)			
	Load power factor		N configuration	0.9 lagging (Variation range: 0.7 lagging to 1.0)			
			N+1 configuration	0.9 lagging (Variation range: 0.7 lagging to 1.0)			
	Overcurrent protection		N configuration	110% or more (Automatic transfer to bypass)[4]			
			N+1 configuration	—		220% or more	
	Overload capability	Inverter	N configuration	110% (for 1 min), 118% (instantly)			
			N+1 configuration	—		220% / 236%	
		Bypass	N configuration	200% (for 30 s), 800% (for 2 cycles)			
			N+1 configuration	—		400% / 1600%	
Battery[3]	Type			Small-sized valve-regulated lead-acid (VRLA) battery			
	Number of batteries			16 (12 V per battery)		32 (12 V per battery)	
	Rated battery capacity			5 Ah per battery			
	Battery backup time			5 min (at a 25°C ambient temperature, load power factor of 0.8, using new, fully-charged batteries)			
Input leak current				4 mA or less	12 mA or less	8 mA or less	15 mA or less
Acoustic noise (At 1 m from the front of UPS, A-weighting)				45 dB or less		50 dB or less	
Heat dissipation (At rated output, after battery charging completed)				339 W	350 W	730 W	
Operating environment	Operating temperature			0 to 40°C			
	Relative humidity			20 to 90% (Non-condensing)			
I/O connector, wiring, etc.[5]	I/O connectors	Field wiring terminal block		Compatible wire size: 20 to 4 AWG	Compatible wire size: 6 to 1/0 AWG	Compatible wire size: 20 to 4 AWG	Compatible wire size: 6 to 1/0 AWG
	Input wire			14 mm² (6 AWG)		22 mm² (4 AWG)	
	Output wire			14 mm² (6 AWG)		22 mm² (4 AWG)	
	Grounding wire			14 mm² (6 AWG)		14 mm² (6 AWG)	
	Circuit breaker capacity			35 A (UL 489 listed)		80 A (UL 489 listed)	70 A (UL 489 listed)
Safety standard				UL 1778 5th edition (E226092), CSA C22.2 No. 107.3-14 (3rd edition), CE marking (EN 62040-1:2008/A1:2013)			
Emission standard				EN 62040-2:2006 Category C3, EN 55022:2010, FCC Part 15 Subpart B Class A			
Immunity				EN 62040-2:2006, EN 55024:2010			

Dimensions [mm]

Model no.	A11J502A002TU	A11J502SA002U	A11J103A002TU	A11J103SA002U	A11J153SA002U	A11J203SA002U
Dimensions	Fig. 28	Fig. 29	Fig. 30	Fig. 31	Fig. 32	Fig. 33
Width	130	435	435	435	435	435
Depth*	700 + 115	700 + 160	700 + 121	700 + 160	700 + 160	700 + 160
Height	435	408	262	540	671	803
Mass	61 kg	91 kg	126 kg	152 kg	213 kg	274 kg

* Depth of UPS unit + cable cover

	A11J153SA002U	A11J203SA002U	Model no.		
	15 kVA / 13.5 kW	20 kVA / 17 kW	N configuration	Rated output capacity (Apparent power / Active power)	
	10 kVA / 9 kW	15 kVA / 13.5 kW	N+1 configuration		
	Double conversion online		Topology	Technology	
	Forced air cooling		Cooling method		
	High-frequency PWM		Inverter		
	VFI-SS-111		UPS classification according to IEC standard		
	Single-phase 2-wire		Number of phases/wires		AC input
	200/208/220/230/240 V (Same as output voltage)		Rated voltage		
	Within -40 to +15% of rated voltage		Voltage range[1]		
	50/60 Hz (Auto-sensing/Fixed frequency settings selectable.[2] Factory setting: Auto-sensing)		Rated frequency		
	16.5 kVA	19.8 kVA	N configuration	Required capacity	
	11.7 kVA	17.2 kVA	N+1 configuration		
	0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		Input power factor		
	Single-phase 2-wire		Number of phases/wires		AC output
	200/208/220/230/240 V (User-selectable. Factory setting: 200 V)		Rated voltage (same as input)		
	Within ±2% of rated voltage		Voltage regulation		
	50/60 Hz		Rated frequency (same as input)		
	Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)		In grid operation	Frequency range[2]	
	Within ±0.5% of rated voltage		In battery operation		
	Pure sine wave		Voltage waveform		
	3% or less / 8% or less (At linear load / rectifier load, rated output)		Voltage harmonic distortion		
	Within ±5% of rated voltage (For 0 ⇔ 100% load step changes)		For abrupt load change	Transient voltage fluctuation	
	Within ±5% of rated voltage		For loss or return of input power		
	Within ±5% of rated voltage (For ±10% abrupt changes)		For abrupt input voltage change		
	0.9 lagging (Variation range: 0.7 lagging to 1.0)	0.85 (lagging)	N configuration	Load power factor	
	0.9 lagging (Variation range: 0.7 lagging to 1.0)		N+1 configuration		
	110% or more (Automatic transfer to bypass)[4]		N configuration	Overcurrent protection	
	165% or more	147% or more	N+1 configuration		
	110% (for 1 min), 118% (instantly)		N configuration	Inverter / Overload capability	
	165% / 177%	147% / 157%	N+1 configuration		
	200% (for 30 s), 800% (for 2 cycles)		N configuration	Bypass / Overload capability	
	300% / 1200%	267% / 1067%	N+1 configuration		
	Small-sized valve-regulated lead-acid (VRLA) battery		Type		Battery[3]
	48 (12 V per battery)	64 (12 V per battery)	Number of batteries		
	5 Ah per battery		Rated battery capacity		
	5 min (at a 25°C ambient temperature, load power factor of 0.8, using new, fully-charged batteries)		Battery backup time		
	20 mA or less	25 mA or less	Input leak current		
	50 dB or less		Acoustic noise (At 1 m from the front of UPS, A-weighting)		
	1100 W	1500 W	Heat dissipation (At rated output, after battery charging completed)		
	0 to 40°C		Operating temperature		Operating environment
	20 to 90% (Non-condensing)		Relative humidity		
	Compatible wire size: 6 to 1/0 AWG		Field wiring terminal block	I/O connectors	I/O connector, wiring, etc.[5]
	50 mm² (1 AWG)	60 mm² (1/0 AWG)	Input wire		
	50 mm² (1 AWG)	60 mm² (1/0 AWG)	Output wire		
	22 mm² (4 AWG)	38 mm² (2 AWG)	Grounding wire		
	100 A (UL 489 listed)	125 A (UL 489 listed)	Circuit breaker capacity		
	UL 1778 5th edition (E226092), CSA C22.2 No. 107.3-14 (3rd edition), CE marking (EN 62040-1:2008/A1:2013)		Safety standard		
	EN 62040-2:2006 Category C3, EN 55022:2010, FCC Part 15 Subpart B Class A		Emission standard		
	EN 62040-2:2006, EN 55024:2010		Immunity		

If planning to expand the UPS capacity in the future, make sure to use the wire of the right size and input breaker with the right capacity for the expanded capacity.

(1) The input voltage range varies depending on the load level. The input voltage range is within -40% to +15% of the rated value at load levels ≤ 70%, and is within -20% to +15% of the rated value at load levels > 70%.
Note that at a load level less than 70%, the lower limit value is -40% when leaving the range and -20% when returning.

(2) At the auto-sensing setting, the frequency synchronizing range can be set to ±1, ± 3, or ±5% (the factory setting is ±3%). The allowable frequency range is ±8% at this auto-sensing setting.
On the other hand, at the fixed frequency setting, the output frequency is fixed to the set frequency, 50 or 60 Hz, regardless of input frequency. The allowable frequency range is from 40 to 120 Hz at this fixed frequency setting.
Note that when returning from outside the allowable range, the range limits will be ±8% for both settings.
Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range (±1%, ± 3%, or ±5%).

(3) The backup time can be extended by combining optional external battery boxes.
Contact us for details.

(4) Uninterrupted transfer to bypass operation is only possible when all of the following conditions are true: the automatic frequency detection setting is selected, the input frequency is within the synchronizing range, and the input voltage is within the allowable range.

(5) Communications:
a. Dry contact signal: D-sub 15-pin female connector, M3 screw mounting
b. PC port: D-sub 9-pin male connector, #4-40 UNC screw mounting Remote control: One-touch terminal block connector, 26 to 20 AWG wire size compatible

Both Japanese and English Instruction Manuals are included with UL/CE certified models.

Paint color: Black (Munsell N1.5)

Fig.28

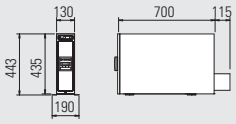


Fig.29

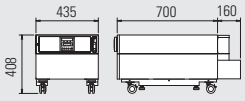


Fig.30

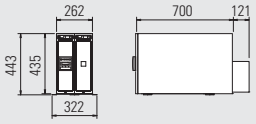


Fig.31

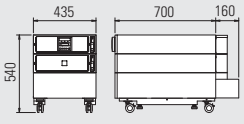


Fig.32

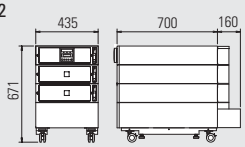
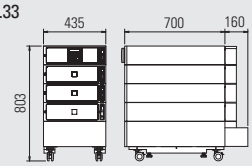


Fig.33



MEMO

ECO PRODUCTS

■ ECO PRODUCTS

SANYO DENKI's ECO PRODUCTS are designed with the concept of lessening impact on the environment in the process from product development to waste. The product units and packaging materials are designed for reduced environmental impact. We have established our own assessment criteria on the environmental impacts applicable to all processes, ranging from design to manufacture. Those products that satisfy the criteria are accredited as ECO PRODUCTS.

Notes when investigating use of this product in your applications

- Before starting installation, assembling and use, read the "Operation Manual" carefully and use the product correctly in your applications.
- When you are going to use this product in the following application, the special considerations are required for operation, running, maintenance and control. Be sure to consult with our company as a part of your investigations.
  - (a) Medical equipment and other equipment that are related directly to human life.
  - (b) Train or elevator that can give injury to human body.
  - (c) Socially and publicly important computer systems.
  - (d) And other equipment that are related to safety of human life and that can affect severe effects on maintenance of public functions.
- For the applications that undergo vibration such as vehicles, ships and transportation facilities, please consult with our company.
- Never modify this product or give additional processing to this product.
- For the installation andmaintenance work, please consult with our company or with specialized company.
- This product may be regulated under export and trade control regulations of each country. During export of each product, compliance to the export regulations of each country is highly recommended.
- Our company shall not be responsible for damages (including but not limited to equipment downtime, power sales revenue, business interruptions, increased power purchases) resulting from use or non-use of this product and services.

※For any inquiry or consultation, please contact our sales representative.

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