

Online UPS

SANUPS A11N

Lineup

[No. of phases/wires] Input/Output voltage	Output capacity		Battery backup time*
	[kVA]	[kW]	
[Single-phase 2-wire] 200 V model 200/208/220/230/240 V	5	4.5	5 min
	10	9	

* At a 25°C ambient temperature and a load power factor of 0.9, using new, fully charged batteries.



High Efficiency

- This UPS achieves a conversion efficiency of 94% (up to 95.1%).⁽¹⁾



Max. **95.1%**

Space-Saving

- The compact 3U-sized⁽¹⁾ UPS unit is suitable for standard EIA 19-inch racks.

Compatible with High Power Factor Loads

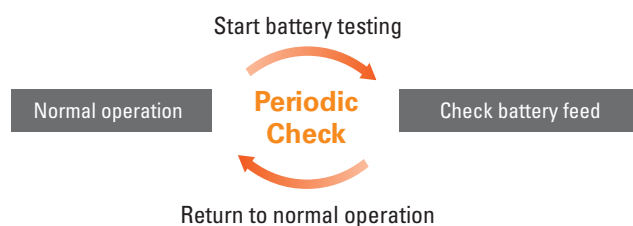
- With a 0.9 load power factor, the UPS is capable of providing its power to loads with a high power factor such as servers.

Output capacity of **5 kVA** ➔ **4.5 kW max.**

(1) In a 5 kVA configuration with a single unit.

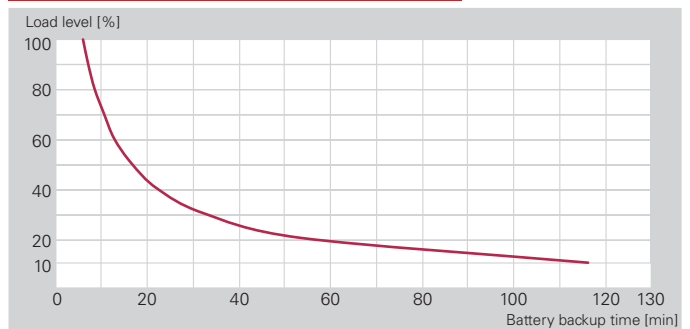
High Reliability

- The UPS performs battery self-tests automatically at regular intervals, preventing malfunction due to battery run-out in the event of a power failure. Battery testing requires no power interruption to loads.



Note: Battery test interval can be set by the user.

Load Level vs Backup Time



Note: Reference value at a 25°C ambient temperature and load power factor of 0.9, using new, fully charged batteries.

SANUPS SOFTWARE STANDALONE

A free software program (Windows version) that enables the power management from computers is available for download from our website.

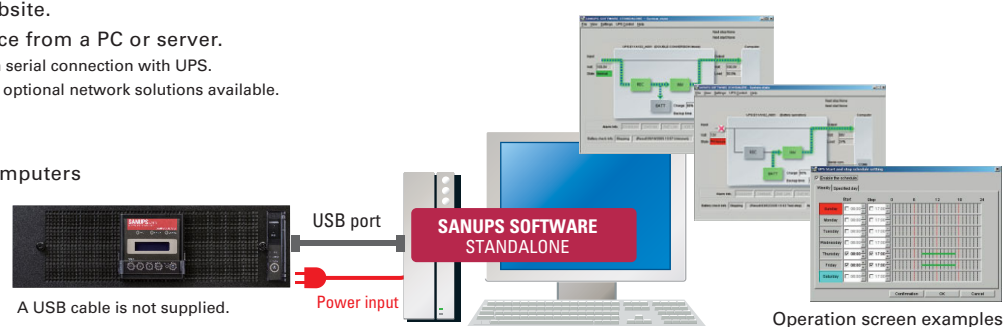
UPS status can be checked at a glance from a PC or server.

This software can only be used on computers in serial connection with UPS.

For power management via a network, we have optional network solutions available.

Main functions

- Automatic start-up/shutdown of computers
- Scheduled operation
- UPS status display
- Message display
- UPS event log



Specifications

UL/CE certified models

Output capacity **5 kVA, 10 kVA**

Order no.			A11N502U0TM	A11N103U0TM	
UL-registered no. (Model)			A11N502U0T	A11N103U0T	
Rated output capacity (apparent power / active power)		Single-unit/Parallel operation (N config.)	5 kVA / 4.5 kW	10 kVA / 9 kW	
		Parallel redundant operation (N+1 config.)	—	5 kVA / 4.5 kW	
Technology		Topology	Double conversion online		
		Cooling system	Forced air cooling		
		Inverter	High-frequency PWM		
AC input	No. of phases/wires		Single-phase 2-wire		
	Rated voltage		200/208/220/230/240 V (Selectable. Factory setting: 200 V)		
	Voltage range ⁽¹⁾		Within -40% to +15% of rated voltage		
	Rated frequency		50/60 Hz (Auto-sensing or fixed-frequency mode selectable. ⁽²⁾ Factory setting: auto-sensing)		
	Required capacity	N config.	5.5 kVA or less	11 kVA or less	
		N+1 config.	—	6.2 kVA or less	
	Input power factor		0.95 or greater (at rated input voltage, input voltage harmonic distortion < 1%)		
AC output	No. of phases/wires		Single-phase 2-wire		
	Rated voltage		200/208/220/230/240 V (Same as input voltage)		
	Voltage regulation		Within ±2% of rated voltage		
	Rated frequency		50/60 Hz (Same as input frequency)		
	Frequency regulation ⁽²⁾	In grid operation	Within ±1/3/5% of rated frequency (Factory setting: ±3%)		
		At free run (asynchronous)	Within ±0.5% of rated frequency		
	Voltage waveform		Sinusoidal		
	Voltage harmonic distortion	At linear load	3% or less (At rated output)		
		At rectifier load	7% or less (At rated output)		
	Load power factor	Rated	0.9 lagging (Variation range: 0.7 lagging to 1.0)		
	Transient voltage fluctuation	Abrupt load change		Within ±5% of rated voltage (For 10⇔100% abrupt change)	
		Loss/return of input power		Within ±5% of rated voltage	
		Abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change)	
	Overcurrent protection		N config.	110% or more (Automatic transfer to bypass circuit ⁽³⁾ if exceeded)	
			N+1 config.	—	220% or more (Automatic transfer to bypass circuit ⁽³⁾ if exceeded)
	Overload capability	Inverter	N config.	110% (for 1 min), 118% (instantaneously)	
			N+1 config.	—	220% (for 1 min), 236% (instantaneously)
Bypass		N config.	200% (for 30 s), 800% (for 2 cycles)		
		N+1 config.	—	400% (for 30 s), 1600% (for 2 cycles)	
Battery	Type		Small-sized valve-regulated lead-acid (VRLA) battery		
	Backup time		5 min (At 25°C ambient temperature and load power factor of 0.9, using new, fully charged batteries.)		
	Quantity		16 pcs (12 V per battery)	32 pcs (12 V per battery)	
	Rated capacity		6 Ah per battery		
	Expected service life		5 years (At a 25°C average ambient temperature. For reference purposes only.)		
Acoustic noise (1 m from front of UPS, A-weighted)		Excluding start of charging		45 dB or less	50 dB or less
		At start of charging		51 dB or less	53 dB or less
Heat dissipation (at rated output after fully charged)			287 W	574 W	
Input leakage current			5 mA or less	18 mA or less	
I/O connector, wire gauge, etc. ⁽⁴⁾		Input connector		Field wiring connection	Field wiring connection
		Input wire		8 mm²	14 or 22 mm²
		Output connector		Field wiring connection	Field wiring connection
		Output wire		8 mm²	14 or 22 mm²
		Grounding wire		5.5 mm²	14 or 22 mm²
		Input distribution board breaker capacity		50 A	100 A
Operating environment			Temperature: 0 to +40°C, humidity: 10 to 90% RH (non-condensing)		
Storage environment ⁽⁵⁾			Temperature: -15 to +50°C, humidity: 10 to 90% RH (non-condensing)		
Expected service life (of the UPS unit excluding battery)			10 years (At a 30°C average ambient temperature. For reference purposes only.)		
EMC standard			EN 62040-2:2018 C2, EN 55032:2015, EN 55035:2017, FCC Part 15 Subpart B Class A, VCCI 32-1 Class A		
Safety standard			UL 1778 5th edition (E226092), CSA C22.2 No. 107.3-14 (3rd edition), CE marking (EN 62040-1:Ed. 2:2017)		
Separate options					
Rack support rails ⁽⁶⁾			RM027 (1 pc)	RM027 (2 pcs)	
Air filter kit			FLA11NA00 (1 pc)	FLA11NA00 (2 pcs)	

(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 $\leq 70\%$, or within -20% to +15% of the rated value at load levels $> 70\%$.

(2) At the auto-sensing setting, the frequency synchronizing range can be set to ± 1 , ± 3 , or $\pm 5\%$. At the auto-sensing setting, the input frequency range is within $\pm 8\%$ of the rated frequency. Also, for the inverter to start running, the input frequency must be within the set synchronizing frequency range. When fixed-frequency setting is selected, output frequency is fixed to either 50 Hz or 60 Hz regardless of input frequency. At the fixed-frequency setting, the input frequency range is 40 to 120 Hz.

(3) 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.

(4) Communications:

- a. Dry contact signal: D-sub 15-pin female, fixed mounting screws: M3
- b. PC port: USB Type C
- c. Remote control: One-touch terminal block connector, compatible wire size: 24 to 16 AWG

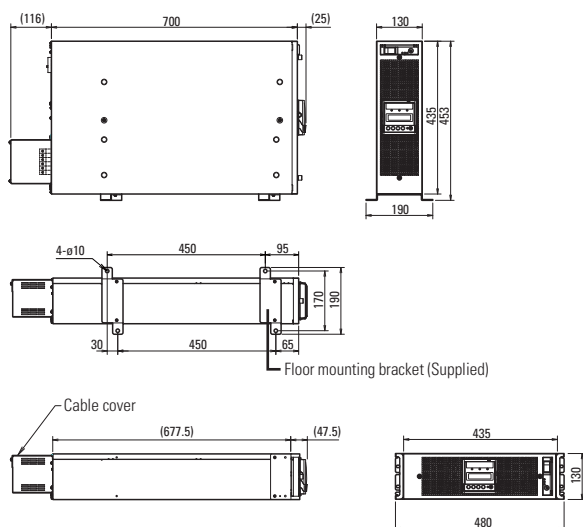
(5) Avoid use or storage in 30°C or higher temperatures for extended periods of time, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.

(6) Used for mounting a UPS unit and battery unit on an EIA-standard 19-inch rack. Prior to purchase, check that the rails are mountable to your 19-inch rack.

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

Dimensions (Unit: mm)

Model: A11N502U0TM

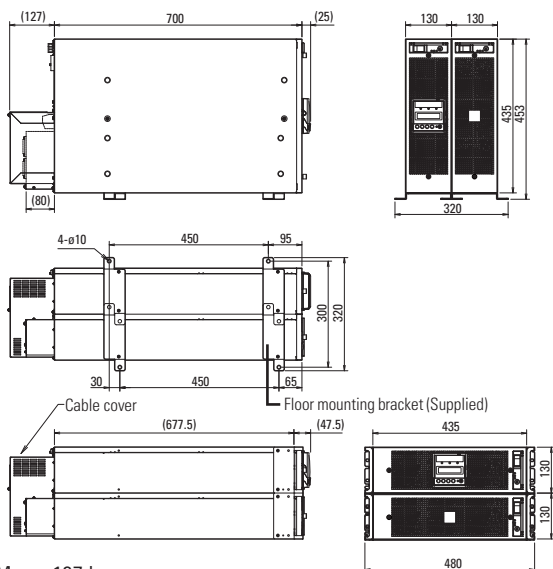


Floor mounting bracket (Supplied)

Cable cover

Mass: 63 kg

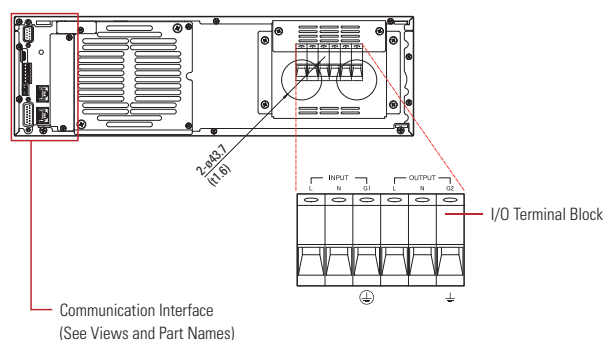
Model: A11N103U0TM



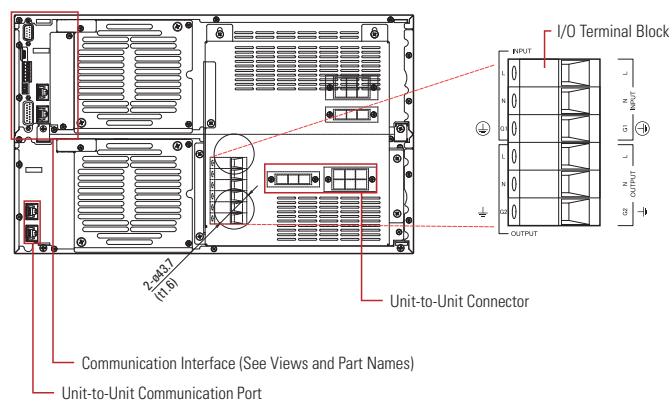
Floor mounting bracket (Supplied)

Cable cover

Mass: 127 kg



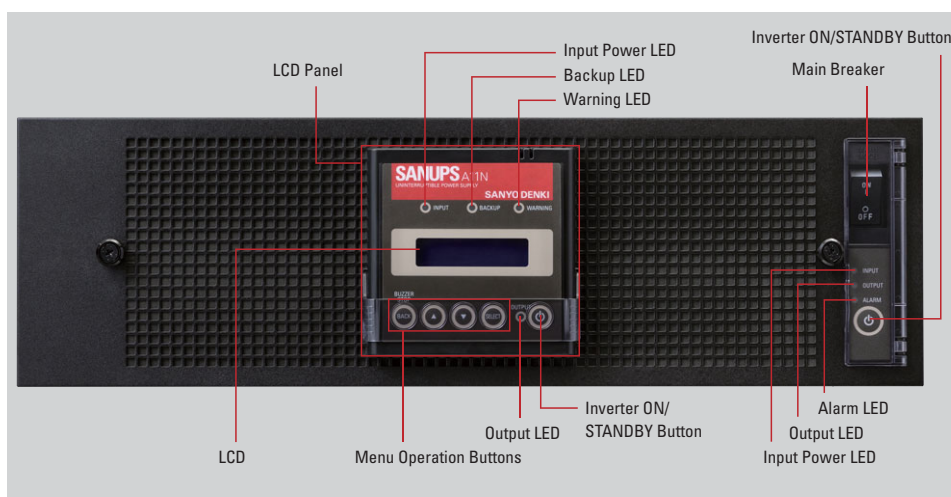
Communication Interface
(See Views and Part Names)



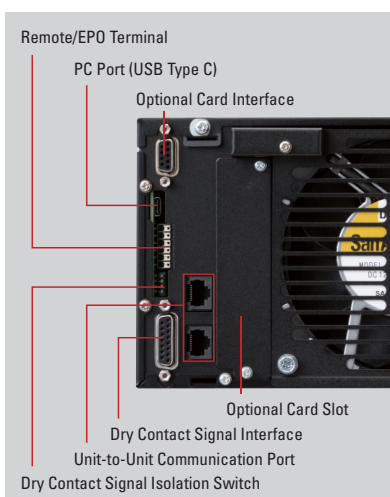
Communication Interface (See Views and Part Names)
Unit-to-Unit Communication Port

Paint color: Black (Munsell N1.5)

Views and Part Names



Front Operating Panel



Communication Interface

Note: The photos above may look different from the actual products in the printed text, etc.

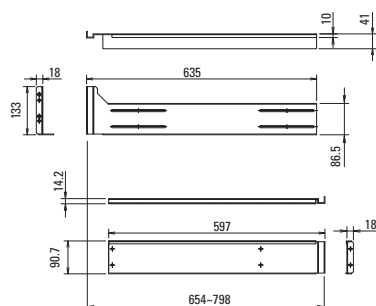
Dimensions (Unit: mm)

Rack support rails

Used for mounting the UPS on a standard EIA/JIS 19-inch rack.

Rack mounting brackets for securing a UPS in a rack come included with or installed to the UPS. (A pair of left and right rails. Shown below is the left rail.)

RM027 (3U)



Rack mounting dimensions

Mass: Approx. 2.6 kg (5.2 kg for a pair of left and right rails)



ECO PRODUCTS

ECO PRODUCTS are designed to reduce the environmental impacts throughout the product's life cycle. Ranging from design to manufacturing stages, the environmental impact of a product and its packaging materials is assessed against the eco-design requirements. Those products that satisfy the requirements are accredited as ECO PRODUCTS.

● Fire Service Law and Fire Prevention Ordinance in Japan

The Fire Prevention Ordinance regulates the total battery capacity of storage batteries, including lithium-ion batteries, that can be installed indoors. When installing UPSs indoors, confirm that the total battery capacity in one location does not exceed 4,800 Ah-cell. In other cases, consult with your local fire department for approval.

Note that the UPSs cannot be used as an emergency power supply for firefighting equipment.

● Building Standard Law in Japan

The UPSs cannot be used as backup power for building facilities conforming to the disaster management requirements defined in the Building Standard Law.

Notes before Purchase

- Before installing, assembling, and using the products, please read Instruction Manual carefully and use them properly.
- When using the products in the following applications, consult with us in advance because special considerations are required for operation, maintenance, and management.
 - (a) Medical equipment that may have direct effects on human life or human body.
 - (b) Trains, elevators, and other machinery that can cause injury.
 - (c) Socially and publicly important computer systems.
 - (d) Other equipment that is related to safety of human life and that can have major impact on maintenance of public functions.
- For use in an environment where vibration is present, such as in a car or a ship, please consult with us in advance.
- Refrain from modifying or processing the product in any way.
- For installation and maintenance work of the products, please consult with us or properly licensed personnel.
- Please contact us concerning the disposal of used storage batteries supplied by SANYO DENKI.
- The maintenance support period after discontinuation is 6 years.

- The products listed in this catalog fall into the category 16 of Appended Table 1 of the Export Trade Control Order. To export the products as an individual part or to export a device into which the products are assembled, the "Inform Requirements" and "Objective Requirements" that the Ministry of Economy, Trade and Industry of Japan established based on the "Catch-all Controls" must be studied for applicability. Accordingly, appropriate export formalities must be performed.

- SANYO DENKI will not be liable for any direct or indirect damages or loss, including but not limited to equipment downtime, missed power sales revenue, business interruptions, increased power purchases, resulting from the use of or inability to use our products or services.

- Products that have lithium-ion batteries listed in the catalog cannot be transported by air. When transporting by sea, transport must be carried out according to the International Maritime Dangerous Goods (IMDG) Code. Also, some countries and regions have their own regulations, so please consult with the shipping company in advance.

For any inquiry or consultation, please contact a SANYO DENKI sales representative.

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<https://www.sanyodenki.com/>

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