SANYO DENKI

SANUPS A11N

Online UPS

Ver. 2
English

SANUPS A11N

Suitable for servers, base stations, and factory facilities

UPS unit
3-year warranty

Lineup

Input and output connector types are indicated by the following icons: (T) Terminal block, (P) Plug, (C) Outlet

[No. of phases/wires] Input voltage	[No. of phases/wires] Output voltage	Output capacity [kVA]	Output capacity [kW]	Scalability (Max. 20 kVA)(1)	Input connector	Output connector	UL/CE certification	Free-standing	Rack mount	Battery backup time(2) (min)	Order 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-A11N502A005T	5	9
										10	S-A11N502A010T	5	10
				—	P	C	—	✓	✓	5	S-A11N502A005N	5	9
										10	S-A11N502A010N	5	10
				✓	T	T C	—	✓	–	5	S-A11N502A005S2	5	11
										10	S-A11N502A010S2	5	12
				—	T	T	✓	✓	✓	5	A11N502U0TM	15	16
		10	9	—	T	T C	—	✓	✓	5	S-A11N103A005T	6	9
				✓	T	T C	—	✓	–	5	S-A11N103A005S2	6	11
										10	S-A11N103A010S2	6	12
				—	T	T	✓	✓	✓	5	A11N103U0TM	15	16
		15	13.5	✓	T	T C	—	✓	–	5	S-A11N153A005S2	7	11
										10	S-A11N153A010S2	7	12
		20	18	✓	T	T C	—	✓	–	5	S-A11N203A005S2	8	11
										10	S-A11N203A010S2	8	12
[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-A11N502A005Z	5	13
										10	S-A11N502A010Z	5	14
		10	9	✓	T	T	—	✓	–	5	S-A11N103A005Z	6	13
										10	S-A11N103A010Z	6	14
		15	13.5	✓	T	T	—	✓	–	5	S-A11N153A005Z	7	13
										10	S-A11N153A010Z	7	14
		20	18	✓	T	T	—	✓	–	5	S-A11N203A005Z	8	13
										10	S-A11N203A010Z	8	14

(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 and load power factor of 0.9 for a 5-minute backup model and 0.8 for a 10-minute backup model, using new, fully charged batteries.
(3) These are a set of a UPS unit(s) + battery(ies) + power distribution unit. The PDU is not included with some models.

Installation examples

Mountable in an EIA standard 19-inch rack

Rack support rails are optional.

Vertical

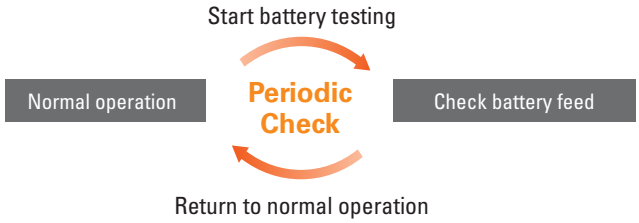
You can change the orientation of the LCD panel.
Floor mounting brackets are included as standard for the single unit type (shown in the photo) and optional for types with a PDU.

High Efficiency

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

High Reliability

- Output capacity can be expanded to up to 20 kVA by combining up to four 5 kVA units. The parallel redundant operation allows one unit to be used as a spare unit, delivering a highly reliable and stable power supply to loads.
- 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.

Space-Saving

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

Easy Maintenance

- Models with built-in maintenance bypass circuit can continue to supply grid power during maintenance. UPS units can be replaced without interrupting output during parallel redundant operation,(2) enabling power to be supplied continuously even if an outage occurs during maintenance.

Note: The maintenance bypass circuit is not available for UL/CE certified models.

For Use as an Emergency Battery

- This UPS features battery cold start function(3) that enables the UPS unit to start up on and power loads from battery even without grid AC power.

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.

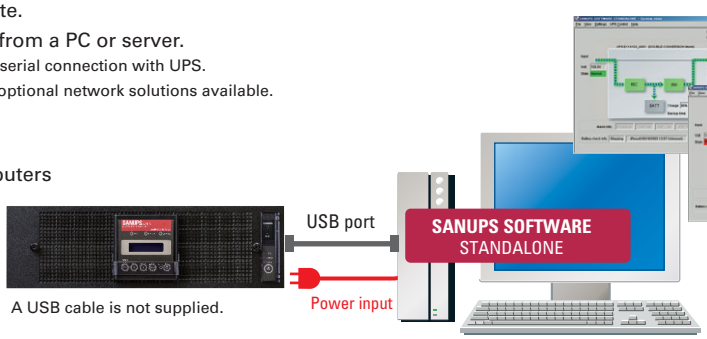
Output capacity of 20 kVA → 18 kW max.

(1) For a single unit of a 5-minute backup model with 5 kVA output capacity.
(2) Parallel redundant operation is an operation in which the UPS output capacity has a sufficient margin for the load. The S-A11N103A005T can perform the redundant operation for a 5 kVA load.
(3) This function is selectable at the time of order. Note that it is not available with UL/CE certified models.

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



A USB cable is not supplied.

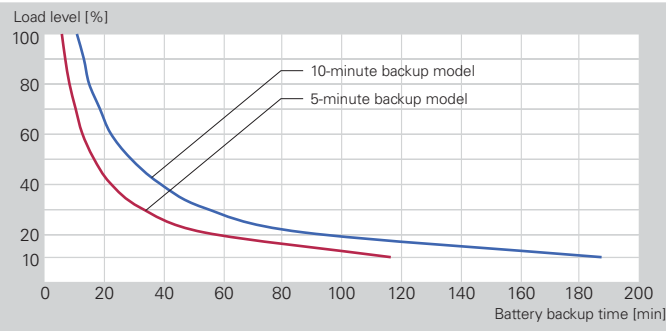
Operation screen examples

Online UPS **SANUPS A11N**

Scalable capacity

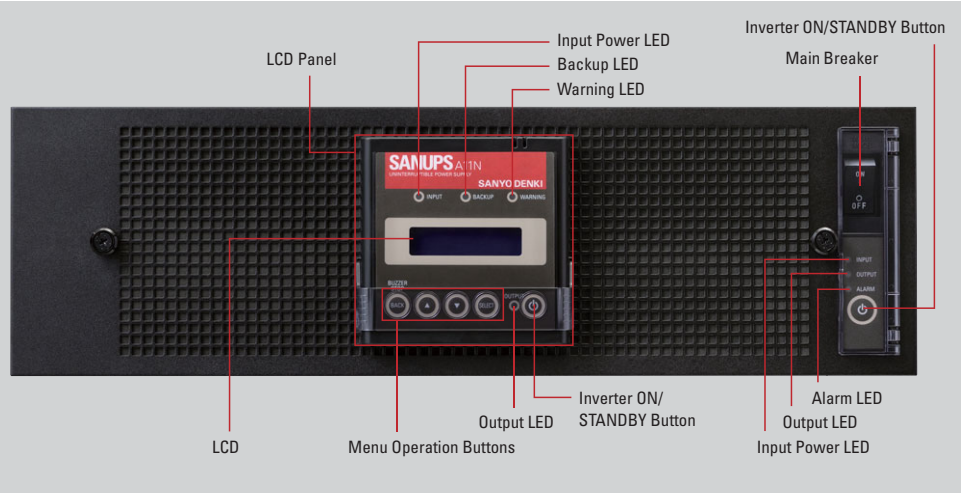
Parallel operation (N configuration)	5 kVA / 4.5 kW	10 kVA / 9 kW	15 kVA / 13.5 kW	20 kVA / 18 kW
Parallel redundant operation (N+1 configuration)	-	5 kVA / 4.5 kW	10 kVA / 9 kW	15 kVA / 13.5 kW

Load Level vs Backup Time

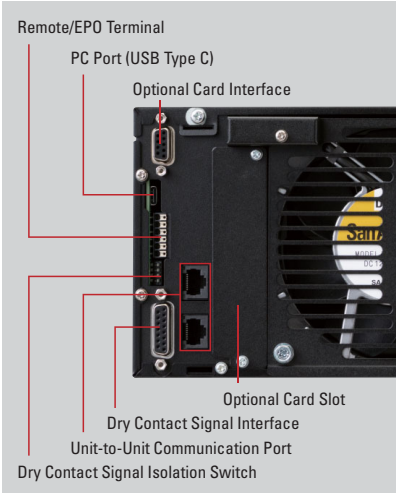


Note: At a 25°C ambient temperature and load power factor of 0.9 for a 5-minute backup model and 0.8 for a 10-minute backup model, using new, fully charged batteries.

Views and Part Names



Front View - Operating Panel



Rear View - Communication Interface

Note: The photos (5-minute backup model shown above) may look different from the actual products in the printed text, etc.

Specifications

Output capacity 5 kVA

Order no.	Backup time of 5 minutes (3U)		S-A11N502A005T	S-A11N502A005N	S-A11N502A005S2	S-A11N502A005Z
	Backup time of 10 minutes (4U)		S-A11N502A010T	S-A11N502A010N	S-A11N502A010S2	S-A11N502A010Z
Rated output capacity (apparent power / active power)	Single-unit/Parallel operation (N config.)		5 kVA / 4.5 kW			
	Parallel redundant operation (N+1 config.)		—			
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 (Same as output voltage)			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			6 kVA or less
		N+1 config.	—			
	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			Single-phase 2-wire or single-phase 3-wire
	Rated voltage		200/208/220/230/240 V (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		50/60 Hz (Same as input frequency)			
	Frequency regulation(2)	In grid operation	Within ±1/3/5% of rated frequency (Selectable. 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)			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)			Within ±5% of rated voltage (For 20⇔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)			104% or more (Automatic transfer to bypass circuit(3) if exceeded)
		N+1 config.	—			
	Overload capability	Inverter, N config.	110% (for 1 min), 118% (instantaneously)			104% (for 1 min), 112% (instantaneously)
		Inverter, N+1 config.	—			
		Bypass, N config.	200% (for 30 s), 800% (for 2 cycles)			
		Bypass, N+1 config.	—			
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.) or 10 min (At 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries.)			
	Quantity		16 pcs (12 V per battery)			
	Rated capacity		Backup time of 5 minutes: 6 Ah per battery, Backup time of 10 minutes: 9 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			55 dB or less
Heat dissipation (at rated output after fully charged)			287 W			500 W
Input leakage current			5 mA or less		22 mA or less	20 mA or less
I/O connector, wire gauge, etc.(4)	Input connector		M6 terminal	NEMA L6-30P	M8 terminal	
	Input wire		8 mm²	—	8 mm²	
	Output connector		M6 terminal NEMA L6-30R ×1 IEC-C13 ×2	NEMA L6-30R ×2 NEMA L6-20R ×2	M8 terminal NEMA L6-30R ×4	M8 terminal
	Output wire		8 mm²	—	8 mm²	8 mm² (3-wire), 14 mm² (2-wire)
	Grounding wire		5.5 mm²	—	8 mm²	
	Input distribution board breaker capacity		40 A or more	30 A or more	40 A or more	
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(6)			Compliant with VCCI 32-1 Class A		—	
UPS classification according to IEC standard			VFI-SS-111			VFI-XX-111
Separate options						
Rack support rails(7)			RM027 (3U, 1 pc) or RM028 (4U, 1 pc)		—	
Floor mounting brackets(8)			—		FMA11NA00 (1 pc)	
Air filter kit(9)			FLA11NA00-3U (3U, 1 pc) or FLA11NA00-4U (4U, 1 pc)			
Replacement battery pack model no.			BPA11N006A00M (3U, 2 pcs) or BPA11N009A00M (4U, 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 ≤ 70%, or within -20% to +15% of the rated value at load levels > 70%. For S-A11N502A005N (NEMA plug type), the input voltage range is within 40% to 15% of the rated value at load levels ≤ 70%, or within -10% 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 ±5%. At the auto-sensing setting, the input frequency range is within ±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) Backup time 5 min (3U) only

(7) 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.

(8) Used to secure the UPS to the floor.

(9) A front side air intake filter for preventing dust ingress.

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

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

Specifications

Output capacity 10 kVA

Order no.		Backup time of 5 minutes (3U)		S-A11N103A005T	S-A11N103A005S2	S-A11N103A005Z
		Backup time of 10 minutes (4U)		—	S-A11N103A010S2	S-A11N103A010Z
Rated output capacity (apparent power / active power)		Single-unit/Parallel operation (N config.)		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 (Same as output voltage)		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.	11 kVA or less		12 kVA or less
			N+1 config.	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	No. of phases/wires			Single-phase 2-wire		Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (Selectable. Factory setting: 200 V)		100 V (2-wire) or 100/200 V (3-wire)
	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 (Selectable. 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)		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)		Within ±5% of rated voltage (For 20⇔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)		104% or more (Automatic transfer to bypass circuit[3] if exceeded)
			N+1 config.	220% or more (Automatic transfer to bypass circuit[3] if exceeded)		208% or more (Automatic transfer to bypass circuit[3] if exceeded)
	Overload capability	Inverter	N config.	110% (for 1 min), 118% (instantaneously)		104% (for 1 min), 112% (instantaneously)
			N+1 config.	220% (for 1 min), 236% (instantaneously)		208% (for 1 min), 224% (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.) or 10 min (At 25˚C ambient temperature and load power factor of 0.8, using new, fully charged batteries.)		
	Quantity			32 pcs (12 V per battery)		
	Rated capacity			Backup time of 5 minutes: 6 Ah per battery, Backup time of 10 minutes: 9 Ah per battery		
	Expected service life			5 years (At a 25ºC average ambient temperature. For reference purposes only.)		
Acoustic noise (1 m from front of UPS, A-weighted)		Excluding start of charging		50 dB or less		55 dB or less
		At start of charging		53 dB or less		55 dB or less
Heat dissipation (at rated output after fully charged)				574 W		1000 W
Input leakage current				18 mA or less	28 mA or less	25 mA or less
I/O connector, wire gauge, etc.[4]		Input connector		M6 terminal	M8 terminal	
		Input wire		22 mm²		
		Output connector		M6 terminal NEMA L6-30R ×2 NEMA L6-20R ×2	M8 terminal NEMA L6-30R ×4	M8 terminal
		Output wire		22 mm²		22 mm² (3-wire), 38 mm² (2-wire)
		Grounding wire		14 mm²		
		Input distribution board breaker capacity		80 A or more		
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 30ºC average ambient temperature. For reference purposes only.)		
EMC standard[6]				Compliant with VCCI 32-1 Class A	—	
UPS classification according to IEC standard				VFI-SS-111		VFI-XX-111
Separate options						
Rack support rails[7]				RM027 (3U, 1 pc)	—	
Floor mounting brackets[8]				—	FMA11NA00 (1 pc)	
Air filter kit[9]				FLA11NA00-3U (3U, 2 pc) or FLA11NA00-4U (4U, 2 pc)		
Replacement battery pack model no.				BPA11N006A00M (3U, 4 pcs) or BPA11N009A00M (4U, 4 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 ≤ 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 ±5%. At the auto-sensing setting, the input frequency range is within ±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) Backup time 5 min (3U) only

(7) 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.

(8) Used to secure the UPS to the floor.

(9) A front side air intake filter for preventing dust ingress.

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

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

Output capacity 15 kVA

Order no.		Backup time of 5 minutes (3U)		**S-A11N153A005S2**	**S-A11N153A005Z**
		Backup time of 10 minutes (4U)		**S-A11N153A010S2**	**S-A11N153A010Z**
Rated output capacity (apparent power / active power)		Single-unit/Parallel operation (N config.)		15 kVA / 13.5 kW	
		Parallel redundant operation (N+1 config.)		10 kVA / 9 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 (Same as output voltage)	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.	16.5 kVA or less	18 kVA or less
			N+1 config.	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	No. of phases/wires			Single-phase 2-wire	Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (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			50/60 Hz (Same as input frequency)	
	Frequency regulation[2]	In grid operation		Within ±1/3/5% of rated frequency (Selectable. 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)	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)	Within ±5% of rated voltage (For 20⇔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)	104% or more (Automatic transfer to bypass circuit[3] if exceeded)
			N+1 config.	165% or more (Automatic transfer to bypass circuit[3] if exceeded)	156% or more (Automatic transfer to bypass circuit[3] if exceeded)
	Overload capability	Inverter	N config.	110% (for 1 min), 118% (instantaneously)	104% (for 1 min), 112% (instantaneously)
			N+1 config.	165% (for 1 min), 177% (instantaneously)	156% (for 1 min), 168% (instantaneously)
		Bypass	N config.	200% (for 30 s), 800% (for 2 cycles)	
			N+1 config.	300% (for 30 s), 1200% (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.) or 10 min (At 25˚C ambient temperature and load power factor of 0.8, using new, fully charged batteries.)	
	Quantity			48 pcs (12 V per battery)	
	Rated capacity			Backup time of 5 minutes: 6 Ah per battery, Backup time of 10 minutes: 9 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		55 dB or less	
		At start of charging		55 dB or less	
Heat dissipation (at rated output after fully charged)				862 W	1500 W
Input leakage current				34 mA or less	30 mA or less
I/O connector, wire gauge, etc.[4]		Input connector		M8 terminal	
		Input wire		38 mm²	
		Output connector		M8 terminal NEMA L6-30R ×4	M8 terminal
		Output wire		38 mm²	22 mm² ×2 (2-wire), 38 mm² (3-wire)
		Grounding wire		14 mm²	
		Input distribution board breaker capacity		125 A or more	
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.)	
UPS classification according to IEC standard				VFI-SS-111	VFI-XX-111
Separate options					
Floor mounting brackets[6]				FMA11NA00 (1 pc)	
Air filter kit[7]				FLA11NA00-3U (3U, 3 pc) or FLA11NA00-4U (4U, 3 pc)	
Replacement battery pack model no.				BPA11N006A00M (3U, 6 pcs) or BPA11N009A00M (4U, 6 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 ≤ 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 ±5%. At the auto-sensing setting, the input frequency range is within ±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 to secure the UPS to the floor.

(7) A front side air intake filter for preventing dust ingress.

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

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

Specifications

Output capacity 20 kVA

Order no.			Backup time of 5 minutes (3U)	**S-A11N203A005S2**	**S-A11N203A005Z**
			Backup time of 10 minutes (4U)	**S-A11N203A010S2**	**S-A11N203A010Z**
Rated output capacity (apparent power / active power)			Single-unit/Parallel operation (N config.)	20 kVA / 18 kW	
			Parallel redundant operation (N+1 config.)	15 kVA / 13.5 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 (Same as output voltage)	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.	22 kVA or less	24 kVA or less
			N+1 config.	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	No. of phases/wires			Single-phase 2-wire	Single-phase 2-wire or single-phase 3-wire
	Rated voltage			200/208/220/230/240 V (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			50/60 Hz (Same as input frequency)	
	Frequency regulation[2]	In grid operation		Within ±1/3/5% of rated frequency (Selectable. 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)	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)	Within ±5% of rated voltage (For 20⇔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)	104% or more (Automatic transfer to bypass circuit[3] if exceeded)
			N+1 config.	147% or more (Automatic transfer to bypass circuit[3] if exceeded)	138% or more (Automatic transfer to bypass circuit[3] if exceeded)
	Overload capability	Inverter	N config.	110% (for 1 min), 118% (instantaneously)	104% (for 1 min), 112% (instantaneously)
			N+1 config.	147% (for 1 min), 157% (instantaneously)	138% (for 1 min), 149% (instantaneously)
		Bypass	N config.	200% (for 30 s), 800% (for 2 cycles)	
			N+1 config.	267% (for 30 s), 1067% (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.) or 10 min (At 25˚C ambient temperature and load power factor of 0.8, using new, fully charged batteries.)	
	Quantity			64 pcs (12 V per battery)	
	Rated capacity			Backup time of 5 minutes: 6 Ah per battery, Backup time of 10 minutes: 9 Ah per battery	
	Expected service life			5 years (At a 25ºC average ambient temperature. For reference purposes only.)	
Acoustic noise (1 m from front of UPS, A-weighted)		Excluding start of charging		55 dB or less	
		At start of charging		55 dB or less	
Heat dissipation (at rated output after fully charged)				1149 W	2000 W
Input leakage current				40 mA or less	35 mA or less
I/O connector, wire gauge, etc.[4]		Input connector		M8 terminal	
		Input wire		60 mm²	
		Output connector		M8 terminal NEMA L6-30R ×4	M8 terminal
		Output wire		60 mm²	38 mm² ×2 (2-wire), 60 mm² (3-wire)
		Grounding wire		14 mm²	
		Input distribution board breaker capacity		160 A or more	
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 30ºC average ambient temperature. For reference purposes only.)	
UPS classification according to IEC standard				VFI-SS-111	VFI-XX-111
Separate options					
Floor mounting brackets[6]				FMA11NA00 (1 pc)	
Air filter kit[7]				FLA11NA00-3U (3U, 4 pc) or FLA11NA00-4U (4U, 4 pc)	
Replacement battery pack model no.				BPA11N006A00M (3U, 8 pcs) or BPA11N009A00M (4U, 8 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 ≤ 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 ±5%. At the auto-sensing setting, the input frequency range is within ±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 to secure the UPS to the floor.

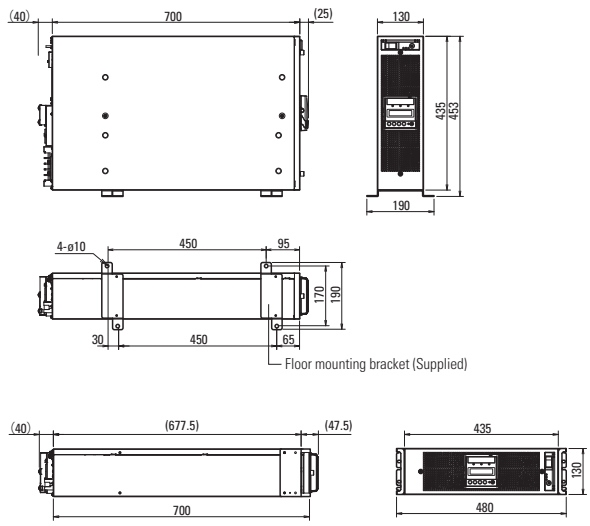
(7) A front side air intake filter for preventing dust ingress.

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

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

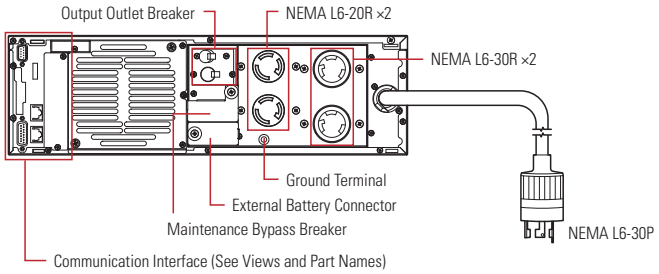
Dimensions (Unit: mm)

Model: **S-A11N502A005□**

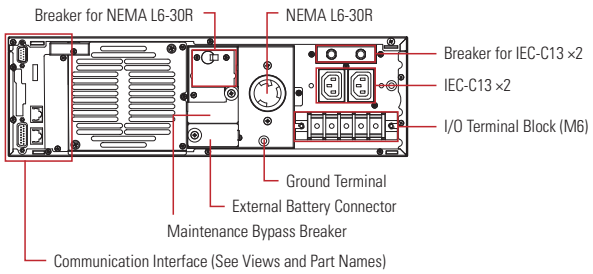


Mass: 63 kg

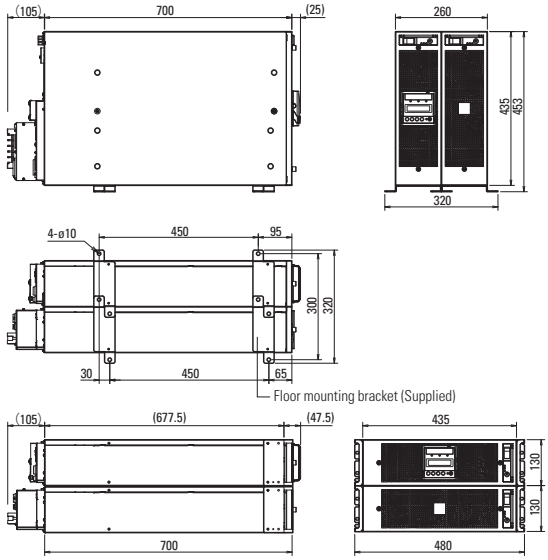
Model: **S-A11N502A005N**



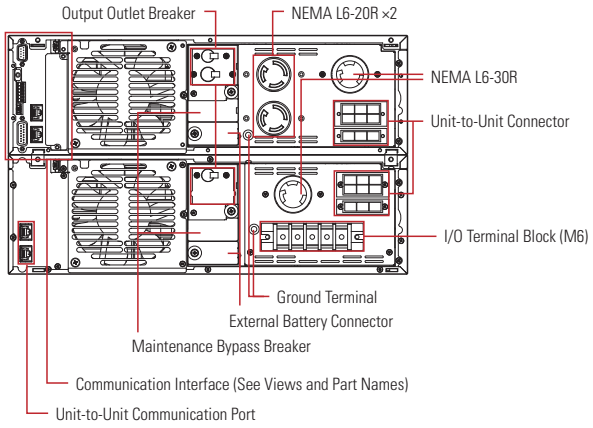
Model: **S-A11N502A005T**



Model: **S-A11N103A005T**



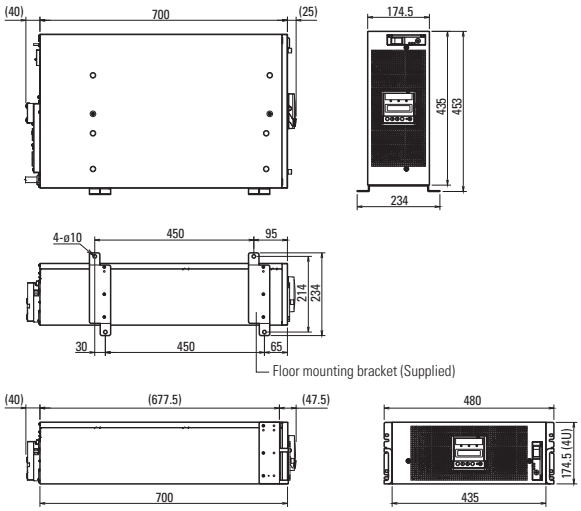
Mass: 127 kg



Paint color: Black (Munsell N1.5)

Dimensions (Unit: mm)

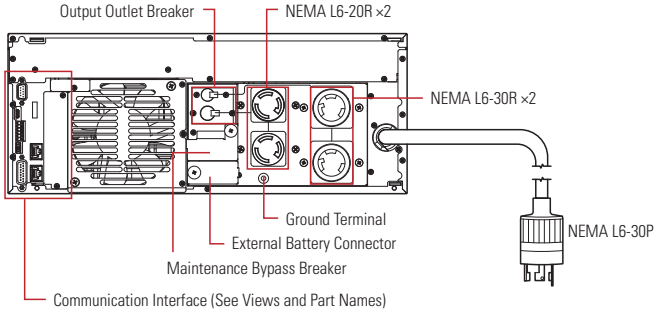
Model: **S-A11N502A010**□



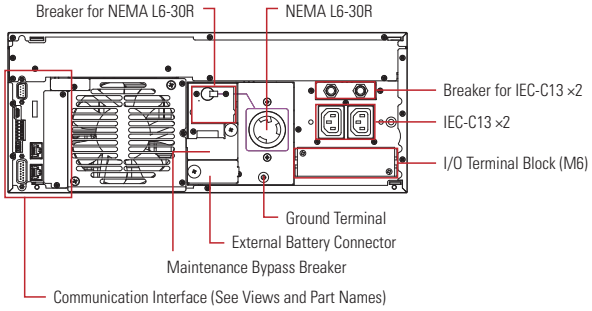
Mass: 80 kg

Paint color: Black (Munsell N1.5)

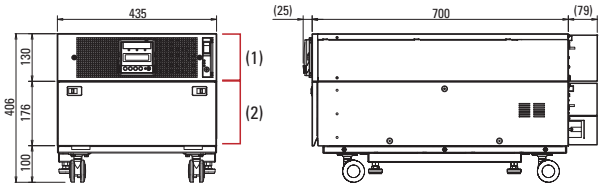
Model: **S-A11N502A010N**



Model: **S-A11N502A010T**

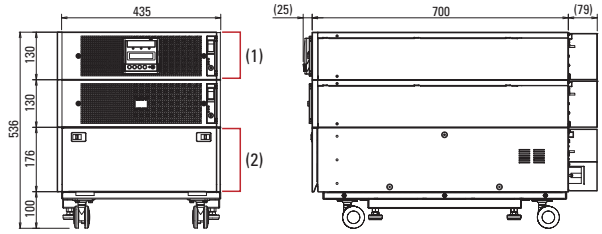


Model: **S-A11N502A005S2**



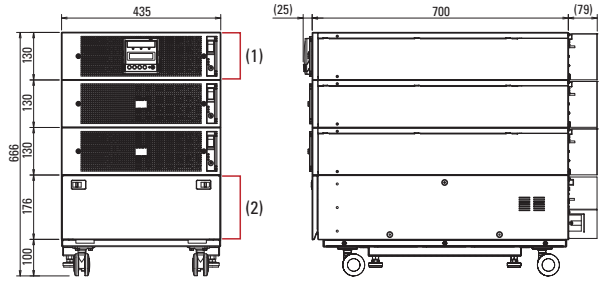
Mass: 110 kg

Model: **S-A11N103A005S2**



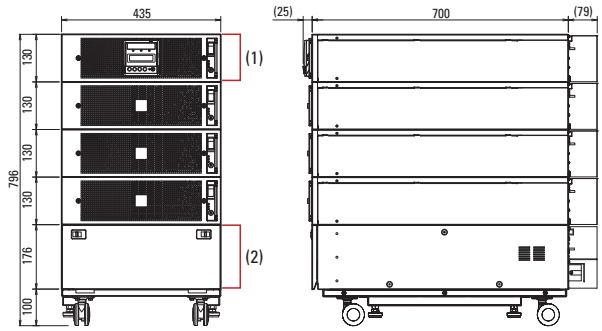
Mass: 170 kg

Model: **S-A11N153A005S2**



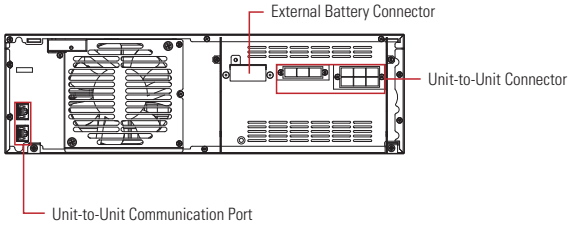
Mass: 230 kg

Model: **S-A11N203A005S2**

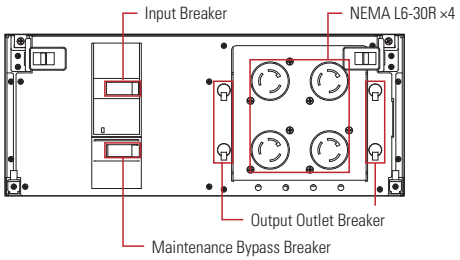


Mass: 290 kg

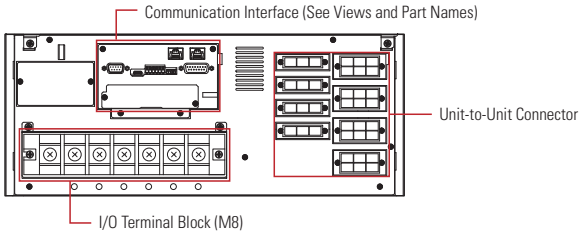
(1) Rear view of UPS unit



(2) Front interior of power distribution unit



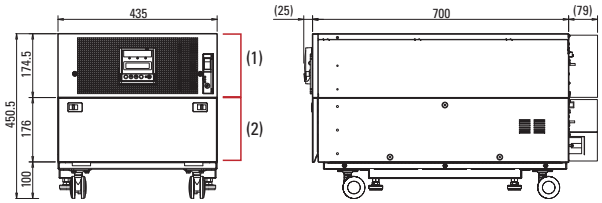
(2) Rear view of power distribution unit



Paint color: Black (Munsell N1.5)

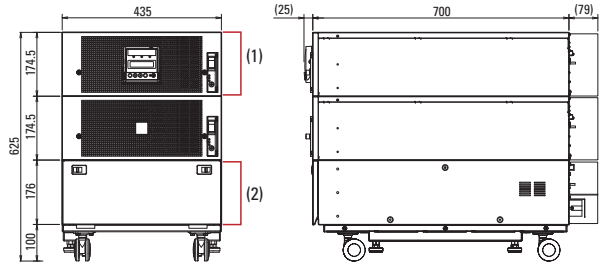
Dimensions (Unit: mm)

Model: **S-A11N502A010S2**



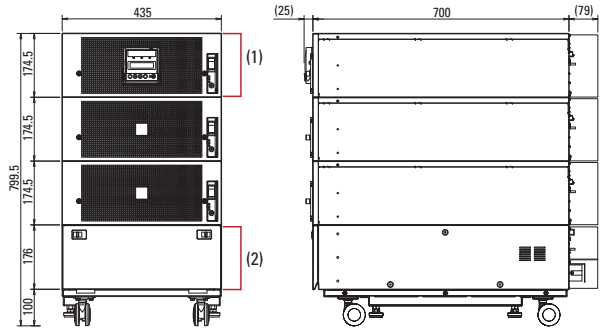
Mass: 130 kg

Model: **S-A11N103A010S2**



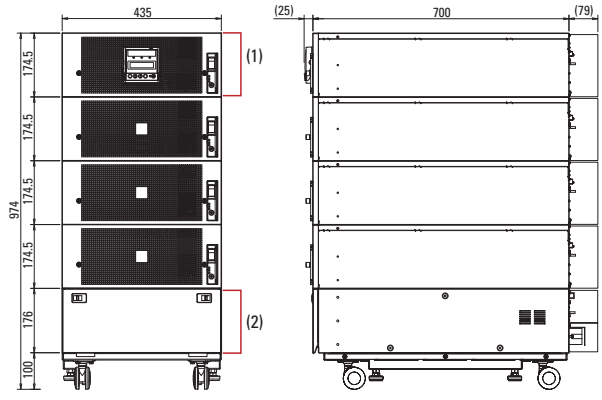
Mass: 210 kg

Model: **S-A11N153A010S2**



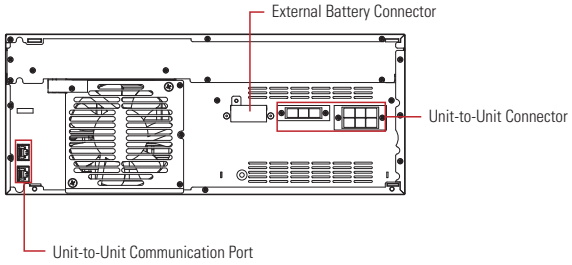
Mass: 290 kg

Model: **S-A11N203A010S2**

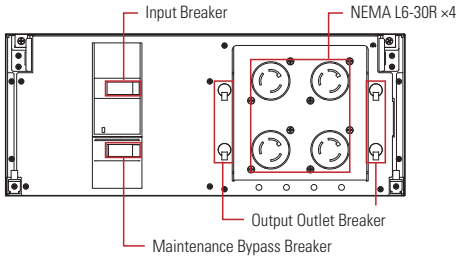


Mass: 370 kg

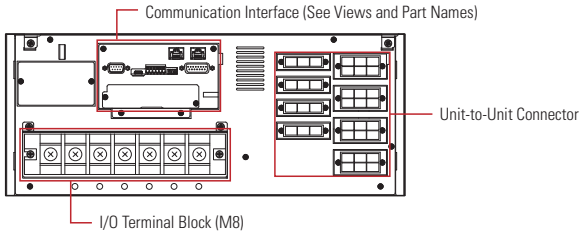
(1) Rear view of UPS unit



(2) Front interior of power distribution unit

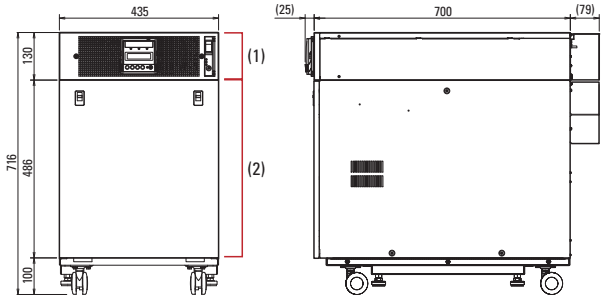


(2) Rear view of power distribution unit



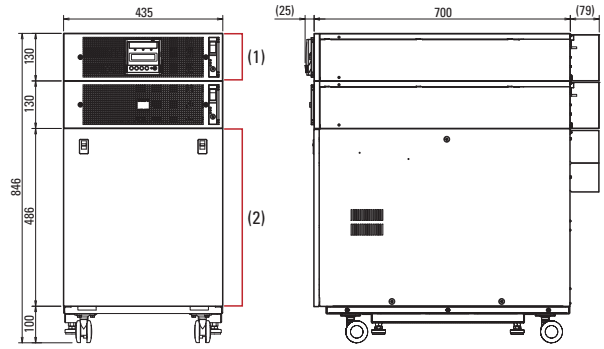
Paint color: Black (Munsell N1.5)

Model: **S-A11N502A005Z**



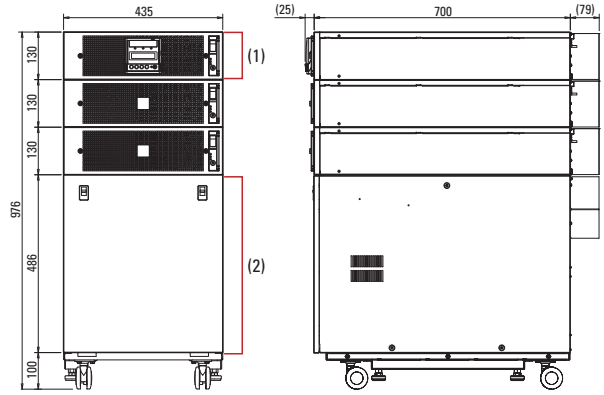
Mass: 270 kg

Model: **S-A11N103A005Z**



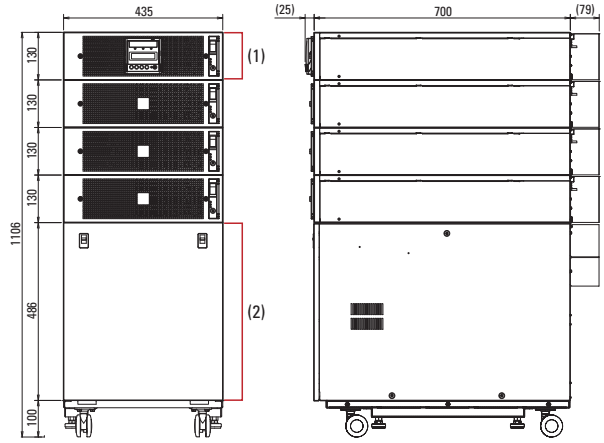
Mass: 330 kg

Model: **S-A11N153A005Z**



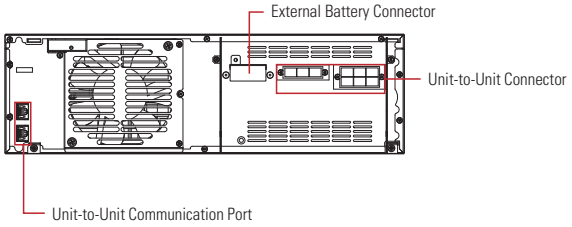
Mass: 390 kg

Model: **S-A11N203A005Z**

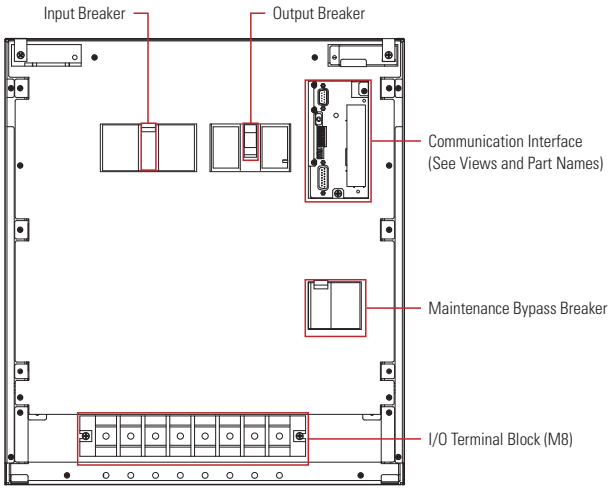


Mass: 450 kg

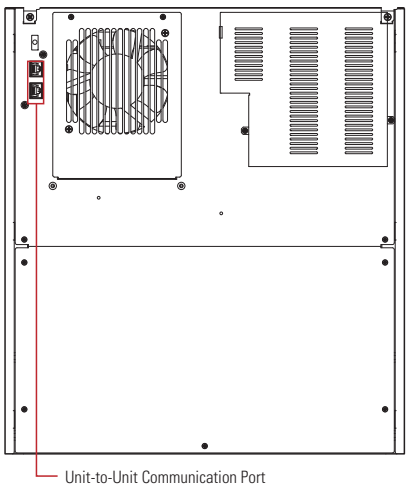
(1) Rear view of UPS unit



(2) Front interior of power distribution unit



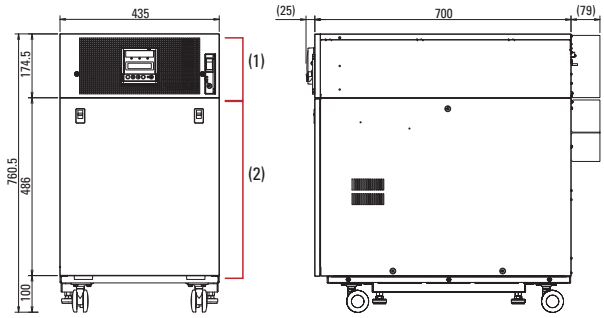
(2) Rear view of power distribution unit



Paint color: Black (Munsell N1.5)

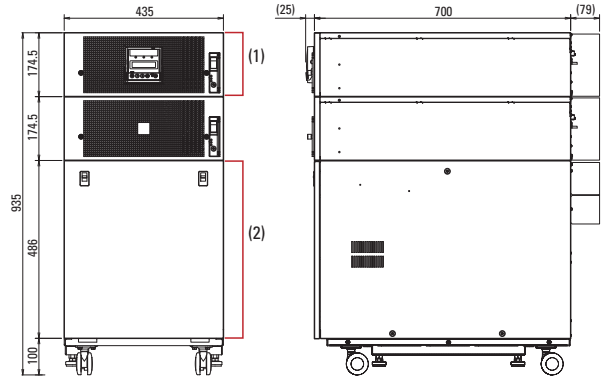
Dimensions (Unit: mm)

Model: **S-A11N502A010Z**



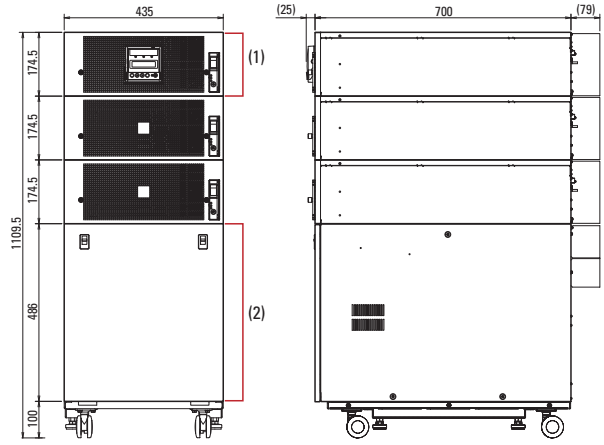
Mass: 290 kg

Model: **S-A11N103A010Z**



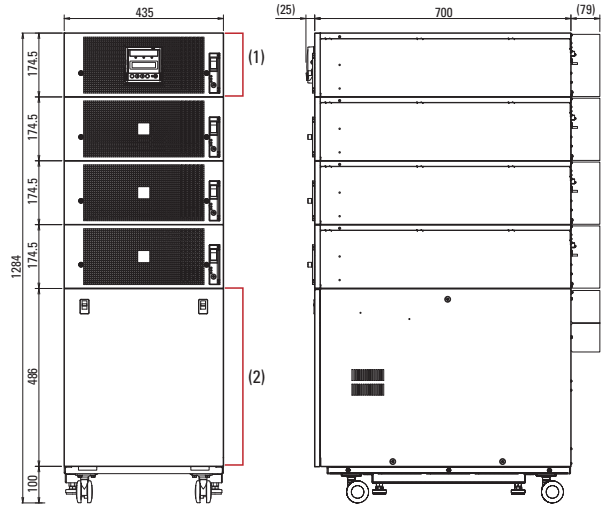
Mass: 370 kg

Model: **S-A11N153A010Z**



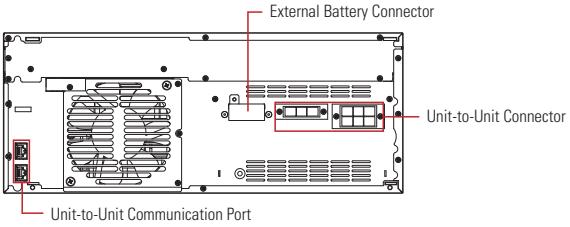
Mass: 450 kg

Model: **S-A11N203A010Z**

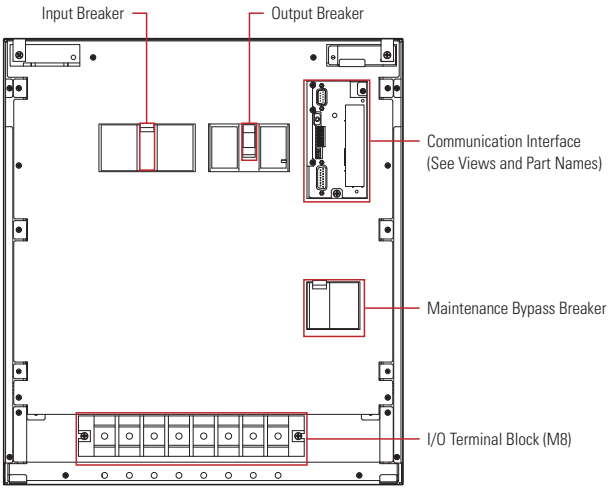


Mass: 530 kg

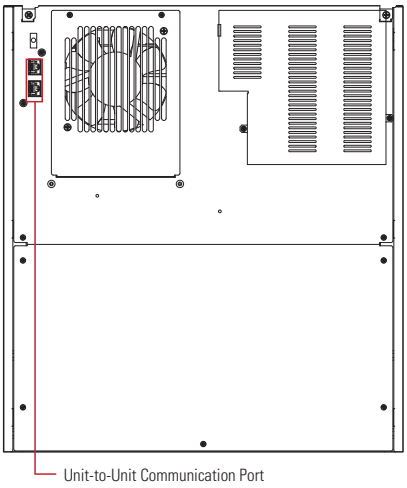
(1) Rear view of UPS unit



(2) Front interior of power distribution unit



(2) Rear view of power distribution unit



Paint color: Black (Munsell N1.5)

Specifications

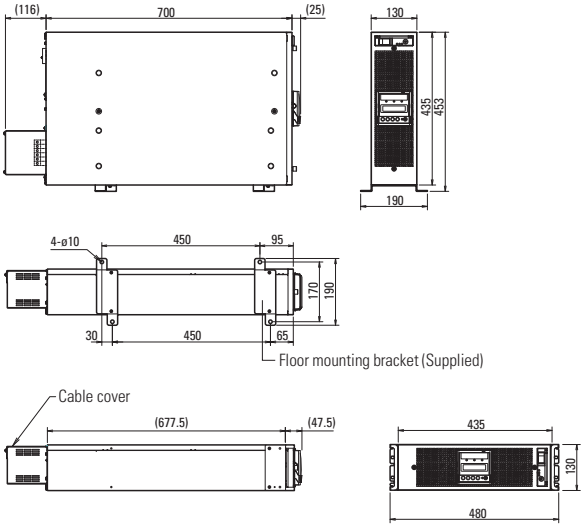
UL/CE certified models **Output capacity 5 kVA, 10 kVA**

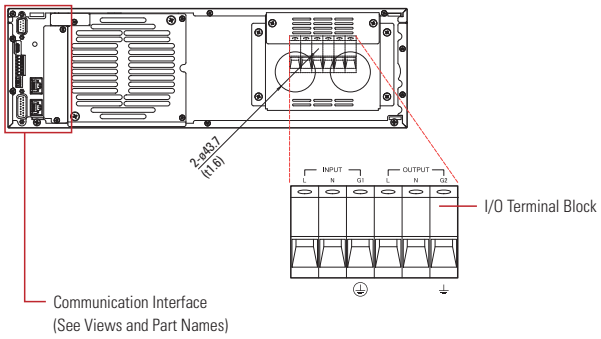
Order no.				A11N502U0TM	A11N103U0TM
UL-registered no. (Model)				A11N502U0T	A11N103U0T
Rated output capacity (apparent power / active power)		Single-unit/Parallel operation (N config.)		5 kVA / 4.5 kW	10 kVA / 9 kW
		Parallel redundant operation (N+1 config.)		—	5 kVA / 4.5 kW
Technology		Topology		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[7]				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 ≤ 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 ±5%. At the auto-sensing setting, the input frequency range is within ±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.
(7) A front side air intake filter for preventing dust ingress.
Note: Output power is supplied from the inverter at start-up. (Inverter start-up type)

Dimensions (Unit: mm)

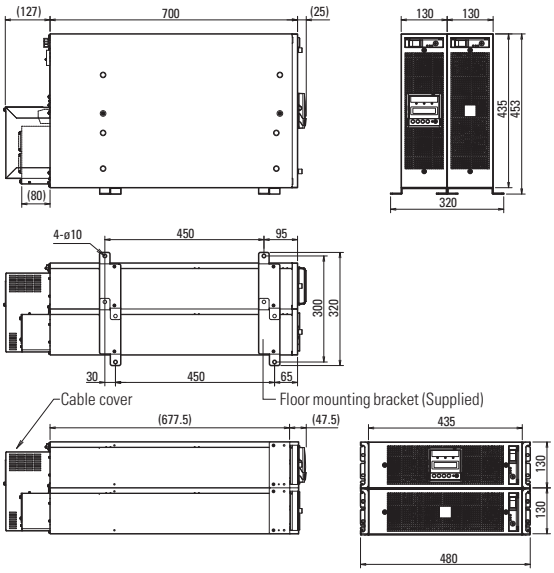
Model: **A11N502U0TM**

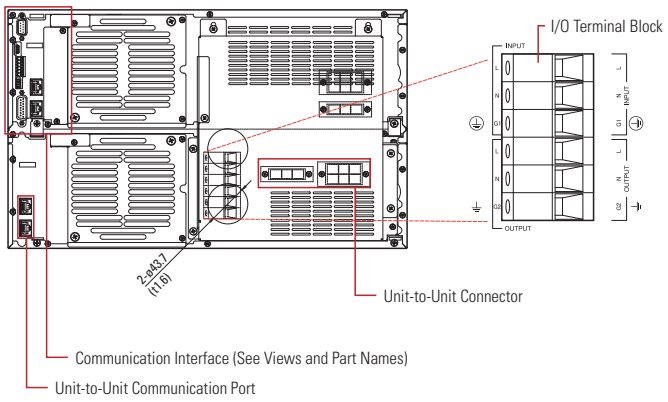




Mass: 63 kg

Model: **A11N103U0TM**





Mass: 127 kg

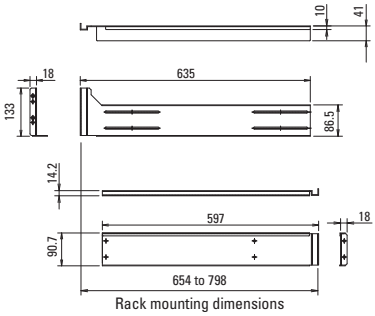
Paint color: Black (Munsell N1.5)

Dimensions (Unit: mm)

Rack support rails

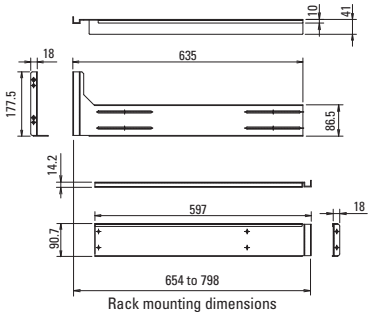
Used for mounting the UPS on a standard EIA 19-inch rack.
Rack mounting brackets for securing a UPS in a rack come included with or installed to the UPS. (A pair of left and right rails. Shown below is the left rail.)

RM027 (3U)



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

RM028 (4U)



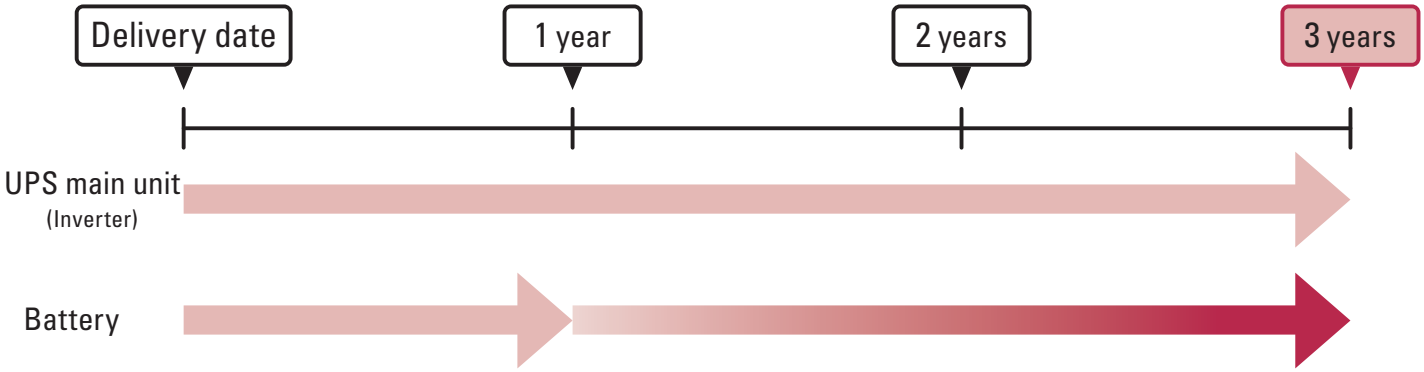
Mass: Approx. 2.7 kg
(5.4 kg for a pair of left and right rails)

MEMO

MEMO

UPS warranty period

For warranty details, see the Warranty Card included with your UPS.



Battery warranty period is one year. It can be extended to three years by registering the UPS.

Note: This benefit is limited to users in Japan.

Complete registration on our website:

https://www.sanyodenki.com/

ECO PRODUCTS

■ 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.

SANYO DENKI CO., LTD. 3-33-1 Minami-Otsuka, Toshima-ku, Tokyo 170-8451, Japan TEL: +81 3 5927 1020 https://www.sanyodenki.com/

CATALOG No.P1054B002 '23.5