

SANUPS E11B-Li

Hybrid UPS

Ver.3.1
English



SANUPS E11B-Li

UPS That Achieves Power Quality and Efficiency
and Can Be Used Worldwide

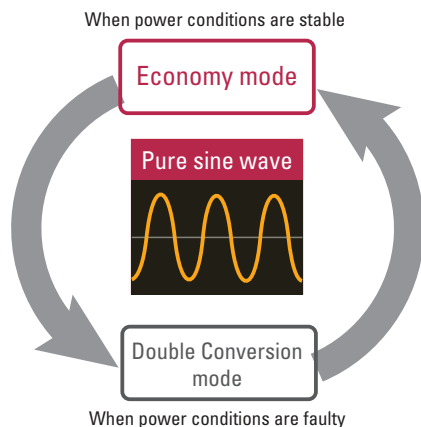


UPS unit

3-year
warranty

Achieves Both High-Quality Power Supply and Energy Saving

- This UPS provides high-quality, reliable power to loads while achieving energy saving.
- Thanks to the hybrid topology,⁽¹⁾ the UPS automatically selects the optimal mode of operation for any given input power conditions.



(1) A UPS design that automatically switches the double conversion and standby topologies according to the input power conditions.

Reduced Maintenance Work

- Our conventional UPSs⁽²⁾ using lead-acid batteries require battery replacement in about 5 years. Thanks to Li-ion batteries, this UPS doesn't require battery replacement for 10 years.⁽³⁾ Thus, the cost of battery replacement can be reduced.

(2) Conventional UPS: E11B (with lead-acid batteries)

(3) At a 30°C ambient temperature.

Wide Operating Temperature Range

- The operating temperature range is -10 to +55°C.
- This provides the product with a higher degree of freedom of installation, allowing it to be installed in locations with large temperature differences.

Compliance with Safety Standards

- This UPS conforms to UL and EN safety standards and CE/UKCA Marking. It can be used with confidence in various regions.

Lineup:

[No. of phases/wires] Input/Output voltage	Output capacity		Battery backup time*	Input plug	Safety standards	Fixed Double Conversion mode	Model no.	Page	
	[kVA]	[kW]						Specifications	Dimensions
[Single-phase 2-wire] 100 V model 100/110/115/120 V	1	0.8	4 min	NEMA 5-15P	✓	—	E11BL102B001AUJ	p. 4	p. 3
						✓	E11BL102B001DUJ		
	1.5	1.2		NEMA 5-20P	✓	—	E11BL152B001AUJ	p. 4	p. 3
						✓	E11BL152B001DUJ		
[Single-phase 2-wire] 200 V model 200/208/220/230/240 V	2	1.6	4 min	NEMA L5-30P	✓	—	E11BL202B001AUJ	p. 4	p. 3
						✓	E11BL202B001DUJ		
	1	0.8		IEC60320-C14	✓	—	E11BL102B002AUJ	p. 5	p. 3
						✓	E11BL102B002DUJ		
				NEMA L6-20P	✓	—	E11BL102B012AUJ	p. 5	p. 3
						✓	E11BL102B012DUJ		
				IEC60320-C20	✓	—	E11BL202B002AUJ	p. 5	p. 3
						✓	E11BL202B002DUJ		
	2	1.6		NEMA L6-20P	✓	—	E11BL202B012AUJ	p. 5	p. 3
						✓	E11BL202B012DUJ		

* At a 25°C ambient temperature, 0.8 load power factor, using new, fully charged batteries.

Installation examples



Mountable in an EIA standard 19-inch rack
Rack-mounting brackets are included as standard. Rack support rails are optional.



Vertical installation
Vertical stands are optional.

SANUPS SOFTWARE STANDALONE

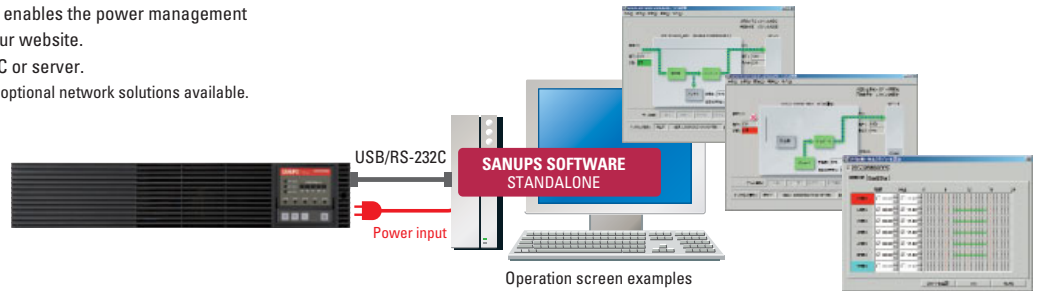
A free software program (Windows version) that enables the power management from computers is available for download from our website.

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

Note: 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



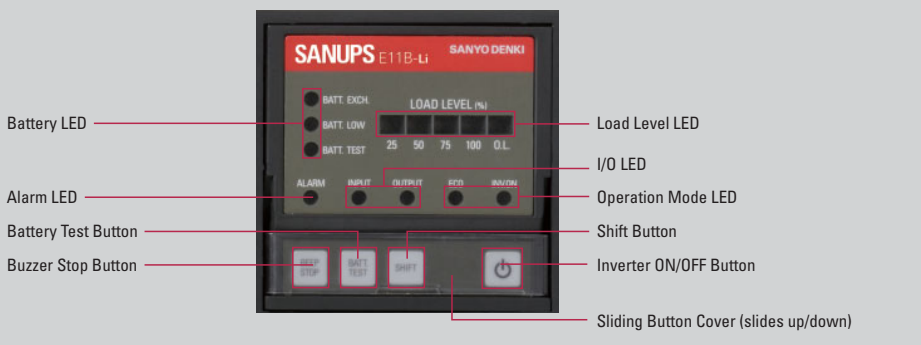
Battery Cold Start Function

Batteries can start up the UPS even when grid AC power is not available, enabling inverter operation.

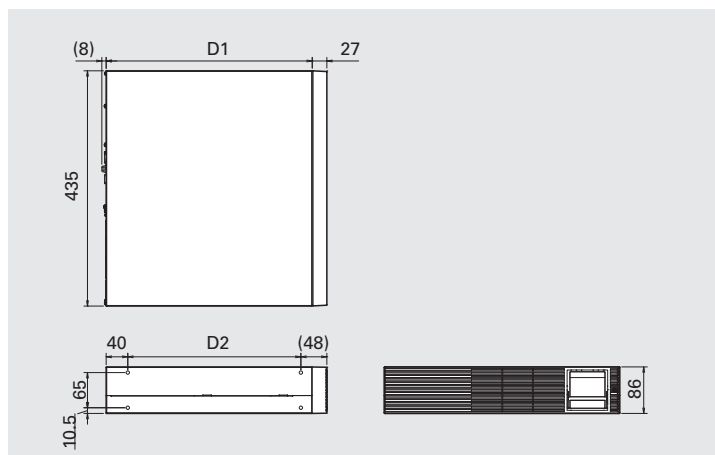
With this function enabled, the UPS can be used as an emergency power supply in the event of a natural disaster or emergency. The default setting is "Disabled."

Operating Panel

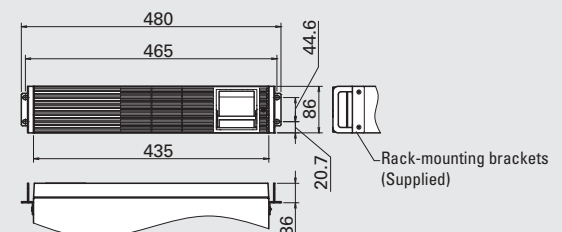
LED Panel



Dimensions (Unit: mm)



Rack mount



Output capacity	D1	D2	Mass
1 kVA	381	320	12 kg
1.5 kVA	473	412	15 kg
2 kVA	538	477	18 kg

Specifications

100 V model

UL/CE/UKCA certified models

Model no.			E11BL102B001AUJ		E11BL152B001AUJ		E11BL202B001AUJ			
Model no. (FixedDoubleConversionmode)			E11BL102B001DUJ		E11BL152B001DUJ		E11BL202B001DUJ			
UL-registered no.			E11BL102U001J		E11BL152U001J		E11BL202U001J			
Rated output capacity (apparent power / active power)			1.0 kVA / 0.8 kW		1.5 kVA / 1.2 kW		2.0 kVA / 1.6 kW			
Technology	Topology		Hybrid ⁽¹⁾							
	Cooling method		Forced air cooling							
AC input	No. of phases/wires		Single-phase 2-wire ⁽²⁾							
	Rated voltage (Same as output)		100/110/115/120 V							
	Voltage range	In Double Conversion mode		At load level < 40%: 55 to 150 V				At load level < 70%: 68 to 140 V		
				At load level < 70%: 68 to 144 V						
		In Economy mode		At load level ≥ 70%: 80 to 144 V				At load level ≥ 70%: 80 to 140 V		
				Within ±8% of rated voltage						
	Rated frequency		50/60 Hz (auto-sensing ⁽³⁾)							
	Frequency range	In Double Conversion mode fixed setting		Within ±1% of rated frequency (Synchronization range)						
		In automatic transfer setting		40 to 120 Hz (Asynchronous operation range)						
			Within ±1, 3, or 5% of rated frequency (Factory setting is ±3%; synchronization range)							
		40 to 120 Hz (Asynchronous operation range)								
Required capacity ⁽⁴⁾			1.1 kVA or less		1.5 kVA or less		2.2 kVA or less			
Input power factor			0.95 or greater							
AC output	No. of phases/wires		Single-phase 2-wire							
	Rated voltage (Changeable with settings)		100/110/115/120 V (Factory setting: 100 V)							
	Voltage regulation	In Double Conversion mode		Within ±2% of rated voltage						
		In Economy mode		Within -10 to +8% of rated voltage						
	Rated frequency (same as input)		50/60 Hz							
	Frequency regulation	In grid operation	In Double Conversion mode fixed setting		Within ±1% of rated frequency					
			In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)					
		In battery operation		Within ±0.5% of rated frequency (Including during asynchronous operation)						
	Voltage harmonic distortion (At rated output)		At linear load		3% or less					
			At rectifier load		8% or less					
	Load power factor	Rated	0.8 lagging (Variation range: 0.7 lagging to 1.0)							
	Transient voltage fluctuation	For abrupt load change		Within ±5% of rated voltage (For 0⇔100% load step changes at rated input)						
		For loss or return of input power		Within ±5% of rated voltage (At rated output)						
		For abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change)						
Overcurrent protection			Automatic transfer to bypass (With automatic retransfer function)							
Overload capability	Inverter	In Double Conversion mode		105% (for 200 ms)						
		Bypass		200% (for 30 s), 800% (for 2 cycles)						
Battery	Type		Lithium-ion battery							
	Battery backup time ⁽⁵⁾		4 min							
	Expected life ⁽⁶⁾		Approx. 10 years							
	Battery capacity		40 Ah-cell		60 Ah-cell		80 Ah-cell			
	Battery self-test		Can be enabled (Factory setting: “disabled”)							
Interface	PC port		RS-232C, USB Type B ⁽⁷⁾ (Cannot be used at the same time)							
	Remote port		Remote ON/OFF							
	Dry contact		Optional dry contact interface card is required							
	Network support		Optional LAN interface card is required							
Acoustic noise (In Double Conversion mode)			51 dB		52 dB		55 dB			
Heat dissipation (In Double Conversion mode at rated output, after battery charging completed)			130 W		195 W		260 W			
Input leakage current (Including during asynchronous operation)			3 mA or less					3.5 mA or less		
Operating environment			Ambient temperature: -10 to +55°C, ⁽⁸⁾ relative humidity: 20 to 90% (non-condensing)							
Storage environment ⁽⁹⁾			Ambient temperature: -15 to +60°C; relative humidity: 20 to 90% (non-condensing)							
Expected service life (of the UPS unit excluding battery)			10 years (At a 30°C average ambient temperature. For reference purposes only.)							
Safety standard			UL 1778 5th edition (E226092), CSA C22.2 No. 107.3-14 (3rd edition), CE marking (EN 62040-1:2008/A1:2013)							
EMC standard			VCCI 32-1 Class A FCC Part 15 Subpart B Class A, EN 62040-2 C2:2010, EN 55032:2015 Class A, EN 62040-2:2006, EN 55035:2017/A11:2020							
Separate options										
Vertical stands			STAND2UA00							
Floor mounting brackets			FM2UA00							
Rack support rails ⁽¹⁰⁾			RM030-US (2U)							
Air filter ⁽¹¹⁾			FL011							

(1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. In the event of an abrupt input voltage or frequency change while in Economy mode, the UPS might transfer to battery operation. For use without interruption, fix the operation mode to Double Conversion mode.

(2) When grounding, connect the grounded phase of the AC input power to the UPS's W (N) input terminal (S-phase).

(3) The inverter synchronizes with AC input and allows an uninterrupted transfer to bypass provided that the AC input frequency is within a range of the rated frequency ±3% (1, 3, or 5% selectable).

(4) Max. capacity during battery recovery charging

(5) At 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries.

(6) At an operating temperature of 30°C.

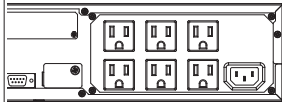
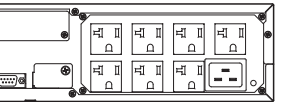
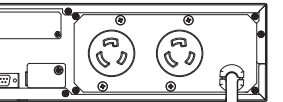
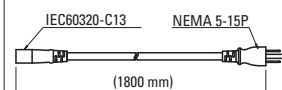
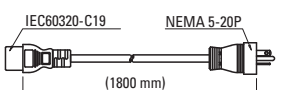
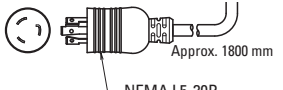
(7) Use of USB interface requires driver installation.

(8) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.

(9) Avoid use or storage in +30°C or higher temperatures for extended periods of time, or the battery's life will be shortened. When a UPS is stored without being operated for a long period, the batteries require recharging once every six months.

(10) Used for mounting the UPS on a standard 19-inch rack. Prior to purchase, check that the rails are mountable to your 19-inch rack.

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

	E11BL102B001□UJ	E11BL152B001□UJ	E11BL202B001□UJ
Rear view			
Output outlet shape	NEMA 5-15R×6	NEMA 5-20R×7	NEMA L5-30R×2
Power input cable			

200 V model

UL/CE/UKCA certified models

Model no.			E11BL102B002AUJ	E11BL102B012AUJ	E11BL202B002AUJ	E11BL202B012AUJ	
Model no. (Fixed Double Conversion mode)			E11BL102B002DUJ	E11BL102B012DUJ	E11BL202B002DUJ	E11BL202B012DUJ	
UL-registered no.			E11BL102U002J		E11BL202U002J		
Rated output capacity (apparent power / active power)			1.0 kVA / 0.8 kW		2.0 kVA / 1.6 kW		
Technology	Topology		Hybrid ⁽¹⁾				
	Cooling method		Forced air cooling				
AC input	No. of phases/wires		Single-phase 2-wire ⁽²⁾				
	Rated voltage (Same as output)		200/208/220/230/240 V				
	Voltage range	In Double Conversion mode		At load level < 40%: 110 to 300 V			
				At load level < 70%: 136 to 288 V		At load level < 70%: 136 to 280 V	
		In Economy mode		At load level ≥ 70%: 160 to 288 V		At load level ≥ 70%: 160 to 280 V	
	Within ±8% of rated voltage						
	Rated frequency		50/60 Hz (auto-sensing ⁽³⁾)				
	Frequency range	In Double Conversion mode fixed setting		Within ±1% of rated frequency (Synchronization range)			
				40 to 120 Hz (Asynchronous operation range)			
	Frequency range	In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting is ±3%; synchronization range)			
40 to 120 Hz (Asynchronous operation range)							
Required capacity ⁽⁴⁾		1.1 kVA or less		2.2 kVA or less			
Input power factor		0.95 or greater					
AC output	No. of phases/wires		Single-phase 2-wire				
	Rated voltage (Changeable with settings)		200/208/220/230/240 V (Factory setting: 200 V)				
	Voltage regulation	In Double Conversion mode		Within ±2% of rated voltage			
		In Economy mode		Within -10 to +8% of rated voltage			
	Rated frequency (same as input)		50/60 Hz				
	Frequency regulation	In grid operation	In Double Conversion mode fixed setting		Within ±1% of rated frequency		
			In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)		
		In battery operation		Within ±0.5% of rated frequency (Including during asynchronous operation)			
	Voltage harmonic distortion (At rated output)		At linear load		3% or less		
			At rectifier load		8% or less		
	Load power factor	Rated		0.8 lagging (Variation range: 0.7 lagging to 1.0)			
	Transient voltage fluctuation	For abrupt load change		Within ±5% of rated voltage (For 0⇔100% load step changes at rated input)			
		For loss or return of input power		Within ±5% of rated voltage (At rated output)			
		For abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change)			
Overcurrent protection			Automatic transfer to bypass (With automatic retransfer function)				
Overload capability	Inverter	In Double Conversion mode		105% (for 200 ms)			
				200% (for 30 s), 800% (for 2 cycles)			
Battery	Type		Lithium-ion battery				
	Battery backup time ⁽⁵⁾		4 min				
	Expected life ⁽⁶⁾		Approx. 10 years				
	Battery capacity		40 Ah-cell		80 Ah-cell		
	Battery self-test		Can be enabled (Factory setting: "disabled")				
Interface	PC port		RS-232C, USB Type B ⁽⁷⁾ (Cannot be used at the same time)				
	Remote port		Remote ON/OFF				
	Dry contact		Optional dry contact interface card is required				
	Network support		Optional LAN interface card is required				
Acoustic noise (In Double Conversion mode)			51 dB		55 dB		
Heat dissipation (In Double Conversion mode at rated output, after battery charging completed)			130 W		260 W		
Input leakage current (Including during asynchronous operation)			3 mA or less		3.5 mA or less		
Operating environment			Ambient temperature: -10 to +55°C, ⁽⁸⁾ relative humidity: 20 to 90% (non-condensing)				
Storage environment ⁽⁹⁾			Ambient temperature: -15 to +60°C; relative humidity: 20 to 90% (non-condensing)				
Expected service life (of the UPS unit excluding battery)			10 years (At a 30°C average ambient temperature. For reference purposes only.)				
Safety standard			UL 1778 5th edition (E226092), CSA C22.2 No. 107.3-14 (3rd edition), CE marking (EN 62040-1:2008/A1:2013)				
EMC standard			VCCI 32-1 Class A				
			FCC Part 15 Subpart B Class A, EN 62040-2 C2:2010, EN 55032:2015 Class A, EN 62040-2:2006, EN 55035:2017/A11:2020				
Separate options							
Vertical stands			STAND2UA00				
Floor mounting brackets			FM2UA00				
Rack support rails ⁽¹⁰⁾			RM030-US (2U)				
Air filter ⁽¹¹⁾			FL011				

(1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. In the event of an abrupt input voltage or frequency change while in Economy mode, the UPS might transfer to battery operation. For use without interruption, fix the operation mode to Double Conversion mode.

(2) When grounding, connect the grounded phase of the AC input power to the UPS's W (N) input terminal (S-phase).

(3) The inverter synchronizes with AC input and allows an uninterrupted transfer to bypass provided that the AC input frequency is within a range of the rated frequency ±3% (1, 3, or 5% selectable).

(4) Max. capacity during battery recovery charging

(5) At 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries.

(6) At an operating temperature of 30°C.

(7) Use of USB interface requires driver installation.

(8) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.

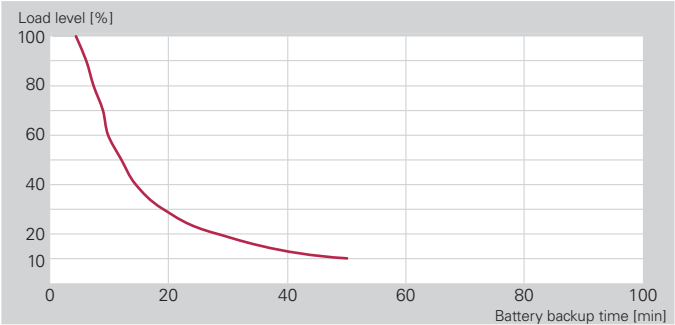
(9) Avoid use or storage in +30°C or higher temperatures for extended periods of time, or the battery's life will be shortened. When a UPS is stored without being operated for a long period, the batteries require recharging once every six months.

(10) Used for mounting the UPS on a standard 19-inch rack. Prior to purchase, check that the rails are mountable to your 19-inch rack.

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

	E11BL102B002 UJ	E11BL102B012 UJ	E11BL202B002 UJ	E11BL202B012 UJ
Rear view				
Output outlet shape	IEC60320-C13×6		IEC60320-C13×6, IEC60320-C19×1	
Power input cable				

Load Level vs Backup Time



Note: Reference value at 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries.

Network Options

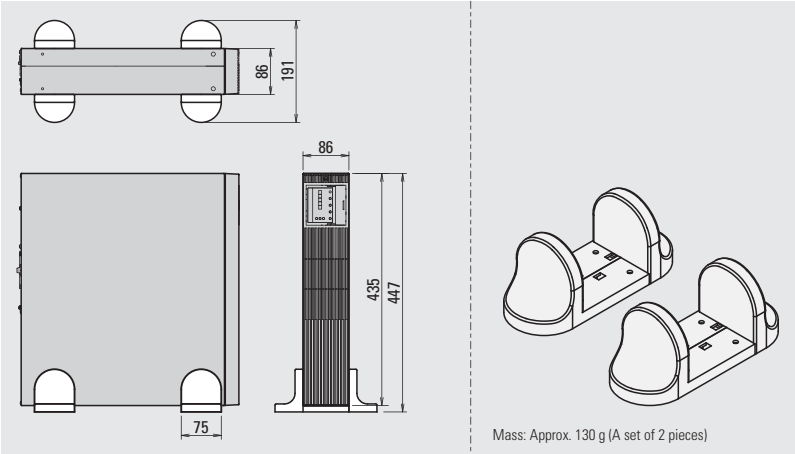
Item		Model no.	Remarks
LAN interface card		PRLANIF031	When installed in the optional card slot, this card enables 24/7 monitoring of UPS operations and status, and sends email notifications to system administrators for quick actions via network in the event of a power failure. Combined with a temperature and humidity sensor (Model no.: 9CT1-T, extension cable: CARD-CBL007), this card can also monitor the ambient temperature and humidity. Multiple servers (up to 50) can be shut down through communication protocols such as SSH, Telnet, and REST API.
Dry Contact Interface Card	Terminal block output	PRCONIF007	This card outputs no-voltage contact signals to notify UPS status. A and B contacts can be selected for each signal.
	D-sub output connector	PRCONIF008	
SANUPS SOFTWARE for download	Windows version	PMS52 ☐ 00DL ⁽²⁾	SANUPS SOFTWARE is used to shut down up to 50 network-connected servers, one of which is connected to the UPS via a serial cable, from the serially connected server. The software is not necessary when using the LAN interface card PRLANIF031. For the latest OS support information, refer to our website.
	Multi-OS version ⁽¹⁾	PMS53 ☐ 00DL ⁽²⁾	
			For bulk purchase of software licenses, append appropriate -suffix to the model number.
			-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.

Dimensions of Options (Unit: mm)

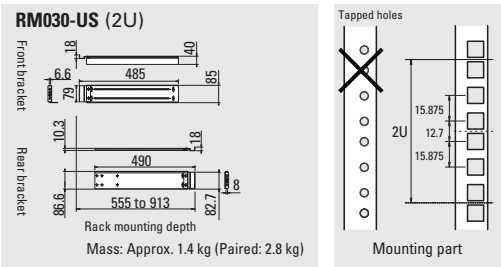
Vertical Stands

STAND2UA00



Rack Support Rails

Used for mounting the UPS on a standard 19-inch rack. A pair of left and right rails. Shown is the left rail. They are not compatible with racks with tapped holes.

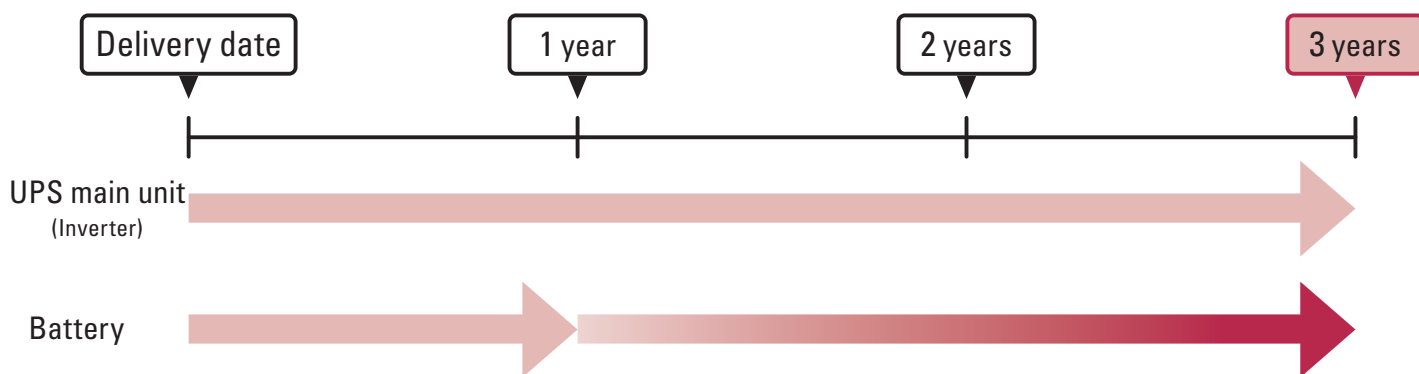


Rack mounting brackets for securing a UPS in a rack come included or installed.

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 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.
- Never attempt to disassemble or alter the products 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 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.
- The products listed in this catalog are equipped with lithium-ion batteries. When transporting the products, do not transport by air. When transporting by sea, transport must be carried out according to the International Maritime Dangerous Goods (IMDG) Code. Also, depending on the country and region, there are cases where regulations are established independently, 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/>

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Specifications are subject to change without notice.

CATALOG No.P1050B006 '24.5