

SANUPS E11B-Li

Hybrid UPS



Ver. 2.1

SANYO DENKI

SANUPS E11B-Li

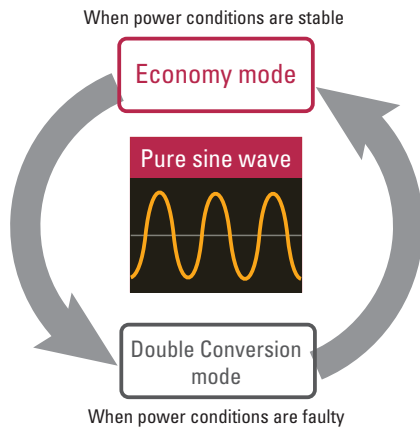
UPS That Achieves Power Quality and Efficiency and Can Be Used Worldwide



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 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	UL/CE certification	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	✓	E11BL102A001AUJ	p. 4	p. 3
	1.5	1.2		NEMA 5-20P	✓	E11BL152A001AUJ	p. 4	p. 3
	2	1.6		NEMA L5-30P	✓	E11BL202A001AUJ	p. 4	p. 3
[Single-phase 2-wire] 200 V model 200/208/220/230/240 V	1	0.8	4 min	IEC60320-C14	✓	E11BL102A002AUJ	p. 5	p. 3
				NEMA L6-20P	✓	E11BL102A012AUJ	p. 5	p. 3
	2	1.6		IEC60320-C20	✓	E11BL202A002AUJ	p. 5	p. 3
				NEMA L6-20P	✓	E11BL202A012AUJ	p. 5	p. 3

* 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

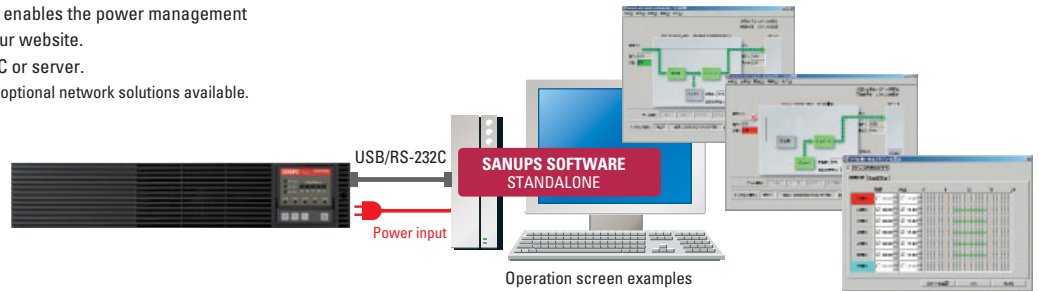
A free software program (Windows version) that enables the power management from computers is available for download from our website.

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



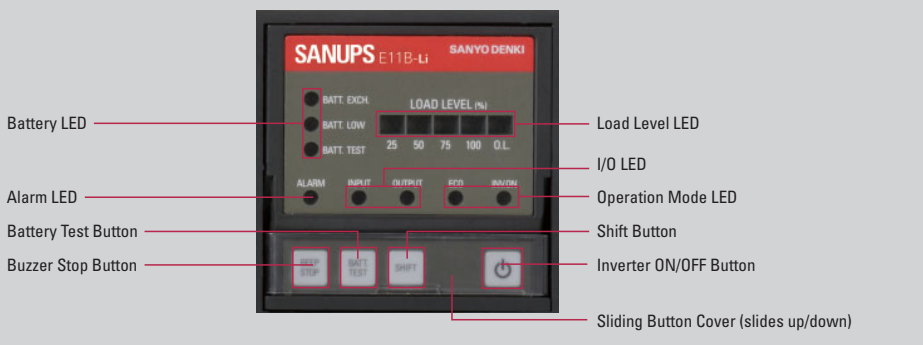
Battery Cold Start Function

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

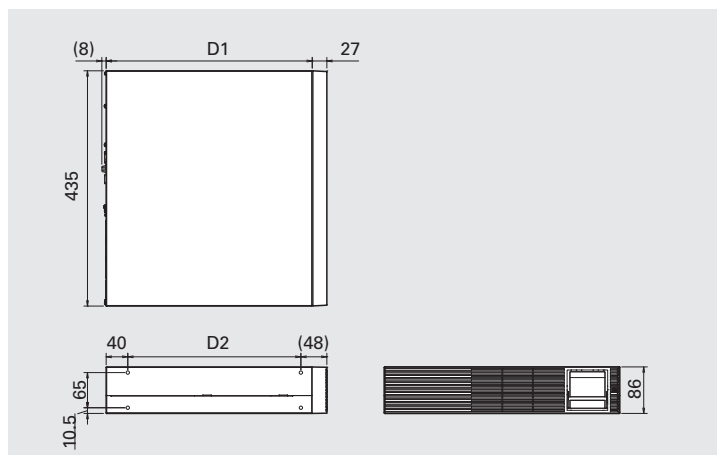
With this function enabled, the UPS can be used as an emergency power supply in the event of a natural disaster or emergency. The default setting is "Disabled."

Operating Panel

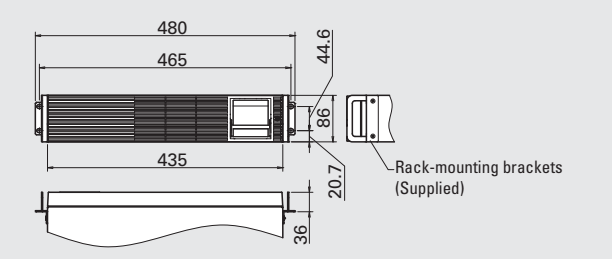
LED Panel



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

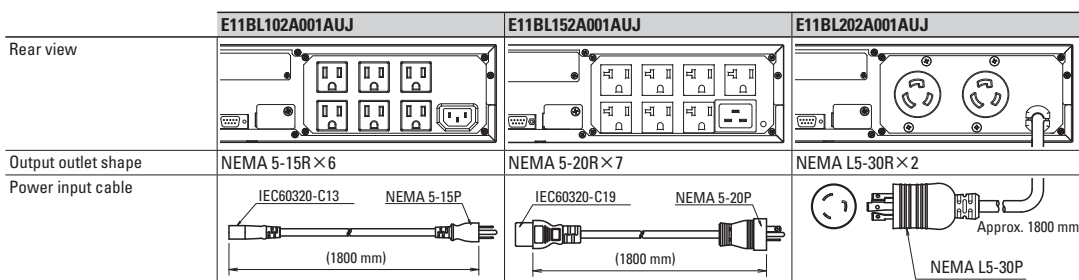
100 v model

UL/CE certified models

Model no.	E11BL102A001AUJ		E11BL152A001AUJ		E11BL202A001AUJ	
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	Hybrid ⁽¹⁾					
Cooling method	Forced air cooling					
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 144 V	
	In Economy mode		At load level >= 70%: 80 to 144 V		At load level >= 70%: 80 to 140 V	
Rated frequency	50/60 Hz (auto-sensing)					
	Within ±1% of rated frequency (Synchronization range)					
Frequency range ⁽³⁾	In Double Conversion mode fixed setting		40 to 120 Hz (Asynchronous operation range)			
	In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting is ±3%; synchronization 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					
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 battery operation		In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)	
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)			
Overcurrent protection	For abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change)			
	Automatic transfer to bypass (With automatic retransfer function)					
Overload capability	Inverter		105% (for 200 ms)			
	Bypass		200% (for 30 s), 800% (for 2 cycles)			
Type	Lithium-ion battery					
	Battery backup time ⁽⁵⁾					
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")					
PC port	RS-232C, USB Type B ⁽⁷⁾ (Cannot be used at the same time)					
	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)					
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 55022:2010 Class A, EN 62040-2:2006, EN 55024:2010					
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 40°C, 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.
 (11) A front side air intake filter for preventing dust ingress.

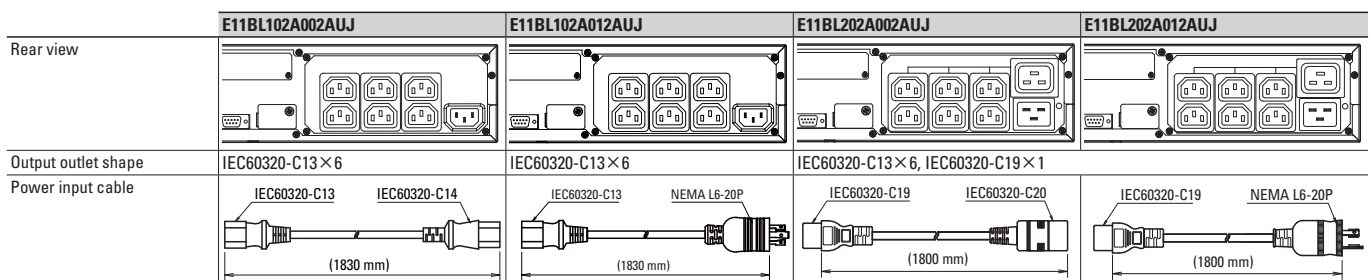


200 v model

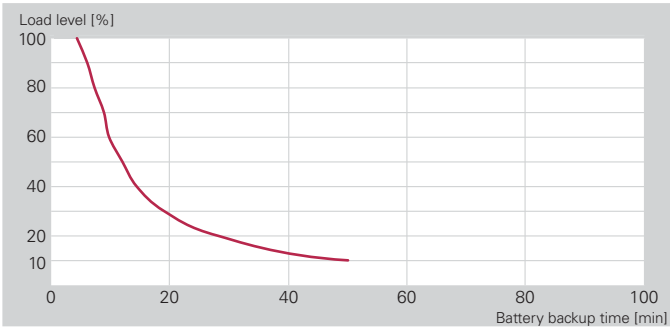
UL/CE certified models

Model no.	E11BL102A002AUJ		E11BL102A012AUJ		E11BL202A002AUJ		E11BL202A012AUJ		
UL-registered no.	E11BL102U002J		E11BL102U012J		E11BL202U002J		E11BL202U012J		
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 288 V		At load level ≥ 70%: 160 to 280 V	
	Rated frequency		50/60 Hz (auto-sensing)						
	Frequency range ⁽³⁾	In Double Conversion mode fixed setting		Within ±1% of rated frequency (Synchronization range) 40 to 120 Hz (Asynchronous operation 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 battery operation		In automatic transfer setting		Within ±1, 3, or 5% of rated frequency (Factory setting: ±3%)			
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 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		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)							
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 55022:2010 Class A, EN 62040-2:2006, EN 55024:2010							
Separate options									
Vertical stands		STAND2UA00							
Floor mounting brackets		FM2UA00							
Rack support rails ⁽¹⁰⁾		RM030-US (2U)							
Air filter ⁽¹¹⁾		FL011							

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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	IPv4/IPv6, Modbus TCP supported	PRLANIF022A
	IPv4/IPv6, Modbus TCP/RTU supported	PRLANIF024A
	IPv4/IPv6, environmental monitoring supported	PRLANIF013B-US
Dry Contact Interface Card	Terminal block output	PRCONIF007
	D-sub output connector	PRCONIF008
SANUPS SOFTWARE Download version	for Windows	PMS52□00DL⁽²⁾
	for Multi-OS ⁽¹⁾	PMS53□00DL⁽²⁾

This is an installation-based UPS management software. For the latest OS support information, refer to our website. For bulk purchase of software licenses, append an appropriate suffix to the model number as on the right.

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

(1) Supports Windows, Unix, and Linux.

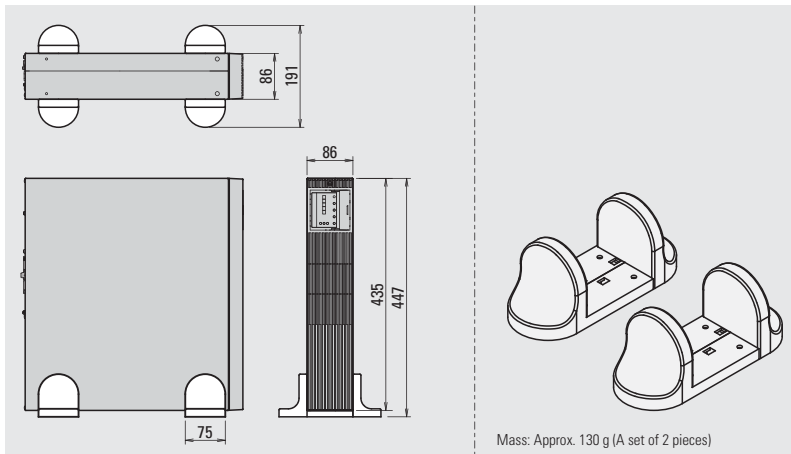
(2) The □'s denote revision characters.

Note: Optional products have different operating temperature ranges from the UPS.

Dimensions of Options (Unit: mm)

Vertical Stands

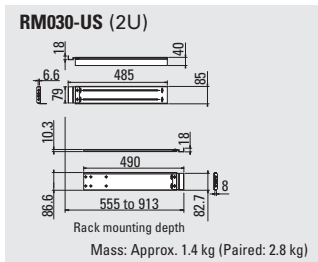
STAND2UA00



Rack Support Rails

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

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



MEMO
