SANYO DENKI

SANUPS E11B-Li

Hybrid UPS

Ver.4

English



SANUPS E11B-Li

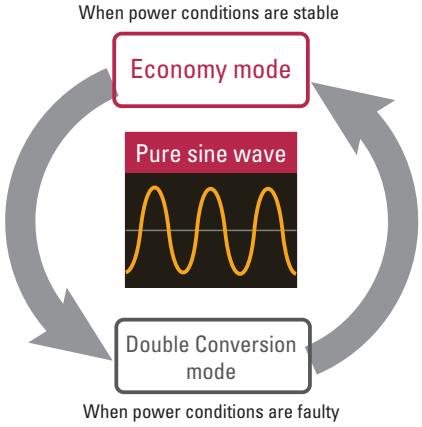
High-Quality, Energy-Efficient UPS for Global Applications



UPS unit
3-year warranty

Both High-Quality Power Supply and Energy Saving

- This UPS provides high-quality, reliable power to loads while achieving energy saving.
  Using a hybrid topology,(1) the UPS automatically selects the optimal operating mode according to 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. With Li-ion batteries, this UPS requires no battery replacement for 10 years,(3) reducing replacement costs.

(2) Conventional UPS: SANUPS 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.
  Using a hybrid topology,(1) the UPS automatically selects the optimal operating mode according to input power conditions.

Compliance with Safety Standards

- The product complies with UL and EN safety standards and carries CE and UKCA markings for global use.

Lineup:

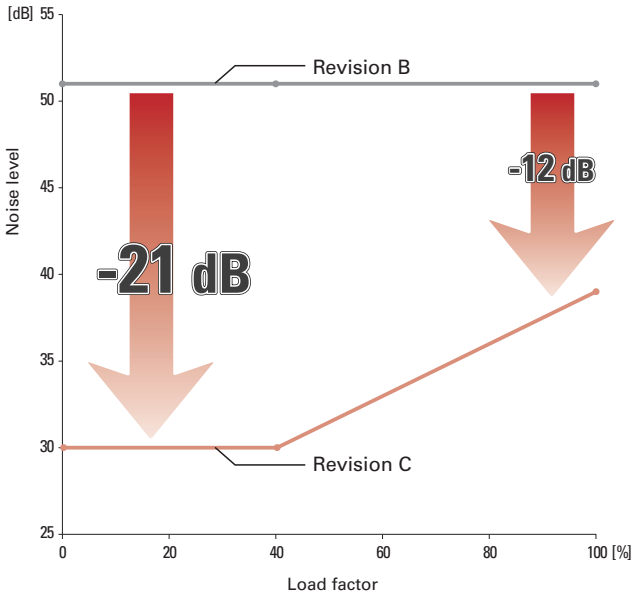
[No. of phases/wires] Input/Output voltage	Output capacity [kVA]	Output capacity [kW]	Battery backup time*	Input plug	Safety standards	Fixed Double Conversion mode	Model no.	Page: Specifications	Page: Dimensions
[Single-phase 2-wire] 100 V model 100/110/115/120 V	1	0.8	4 min	NEMA 5-15P	✓	—	E11BL102□001AUJ	p. 4	p. 3
						✓	E11BL102□001DUJ		
	1.5	1.2		NEMA 5-20P	✓	—	E11BL152□001AUJ	p. 4	p. 3
						✓	E11BL152□001DUJ		
	2	1.6		NEMA L5-30P	✓	—	E11BL202B001AUJ	p. 4	p. 3
						✓	E11BL202B001DUJ		
[Single-phase 2-wire] 200 V model 200/208/220/230/240 V	1	0.8	4 min	IEC60320-C14	✓	—	E11BL102□002AUJ	p. 5	p. 3
						✓	E11BL102□002DUJ		
				NEMA L6-20P	✓	—	E11BL102□012AUJ	p. 5	p. 3
						✓	E11BL102□012DUJ		
	2	1.6		IEC60320-C20	✓	—	E11BL202B002AUJ	p. 5	p. 3
						✓	E11BL202B002DUJ		
				NEMA L6-20P	✓	—	E11BL202B012AUJ	p. 5	p. 3
						✓	E11BL202B012DUJ		

The □'s denote revision characters. B or C may appear in this position.
* At a 25°C ambient temperature, 0.8 load power factor, using new, fully charged batteries.
Models certified under Thailand Industrial Standards (TIS) are also available. Contact us for more information.

Revision C Models for Quieter Operation

- Revision B maintains a constant noise level in each of its two operating modes. Revision C adjusts noise level according to load conditions, enabling quieter operation under light-load conditions. Its low-noise design makes it suitable for quiet environments such as offices, hospitals, control rooms, and research facilities.
- Customers can choose between Revision B models, which maintain a constant noise level, and Revision C models, which adjust noise level according to load conditions, depending on the installation environment and application.

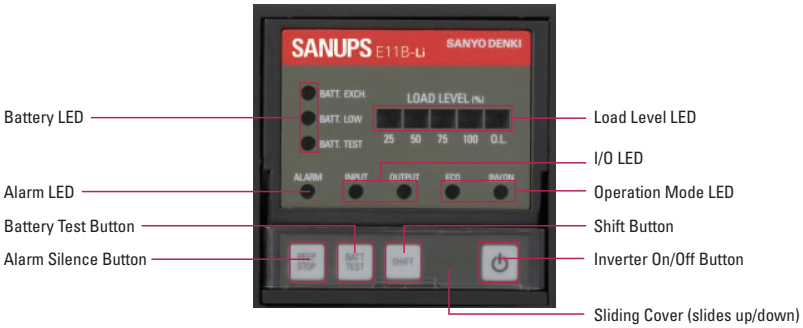
Noise Level vs. Load Factor



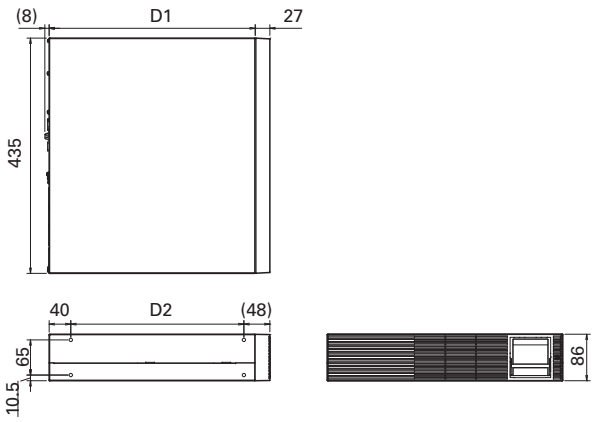
Note: Measured in Double Conversion mode on 100 V models with a 1 kVA output capacity, at rated input voltage and an ambient temperature of 40°C or below.

Operating Panel

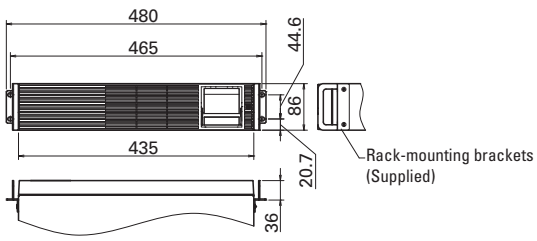
LED Panel



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

Installation examples



Mountable in an EIA standard 19-inch rack

Rack-mounting brackets are included as standard. Rack support rails are optional.



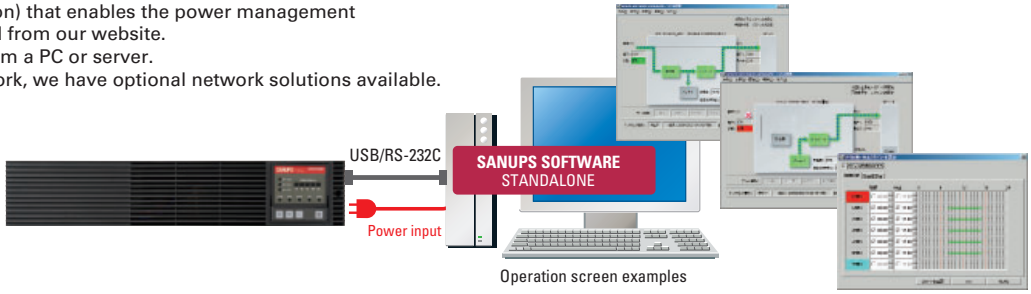
Vertical installation

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

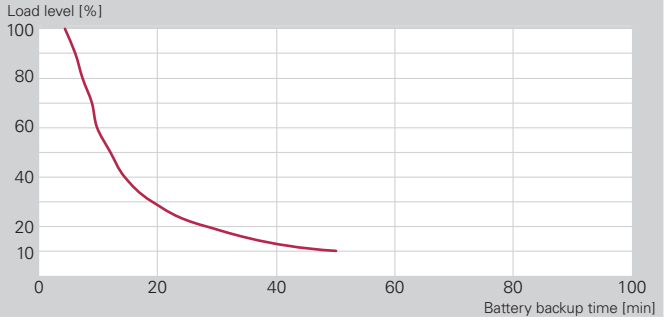


Operation screen examples

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."

Load Level vs Backup Time



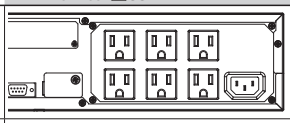
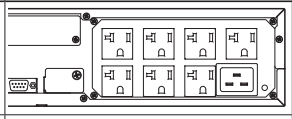
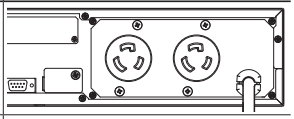
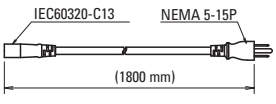
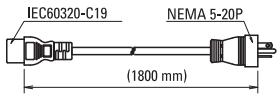
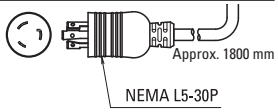
Note: Reference value at 25˚C ambient temperature and load power factor of 0.8, using new, fully charged batteries.

Specifications

100 V model | Revision **B** | **UL/CE/UKCA certified models**

Model no.				**E11BL102B001AUJ**	**E11BL152B001AUJ**	**E11BL202B001AUJ**
Model no. (Fixed Double Conversion mode)				**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 144 V At load level ≥ 70%: 80 to 144 V		At load level < 40%: 55 to 150 V At load level < 70%: 68 to 140 V At load level ≥ 70%: 80 to 140 V
		In Economy mode		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)		
		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	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			Approx. 10 years (At an operating temperature of 30° C.)		
	Battery capacity	(Ah-cell)		40	60	80
		(Wh)		132	198	264
	Battery self-test			Can be enabled (Factory setting: disabled)		
Interface	PC port			RS-232C, USB Type B(6) (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;(7) relative humidity: 20 to 90% (non-condensing)		
Storage environment(8)				Ambient temperature: -15 to +60° C; relative humidity: 20 to 90% (non-condensing)		
Expected service life				10 years (At a 30°C average ambient temperature. For reference purposes only.)		
Safety standard				UL 1778 (E226092), CSA C22.2 No.107.3-14, EN62040-1		
EMC standard				VCCI 32-1 Class A, FCC Part 15 Subpart B Class A, IEC62040-2 C2		
Separate options						
Vertical stands				STAND2UA00		
Floor mounting brackets				FM2UA00		
Rack support rails(9)				RM030-US (2U)		
Air filter(10)				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 when 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) Use of USB interface requires driver installation.
(7) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.
(8) Avoid use or storage in 30°C or higher temperatures for extended periods of time, as this will shorten battery life. If the UPS is stored for an extended period, recharge the batteries once every six months.
(9) 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.
(10) A front side air intake filter for preventing dust ingress.

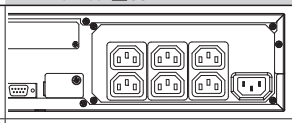
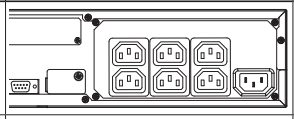
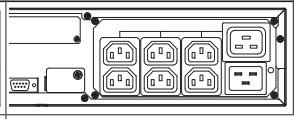
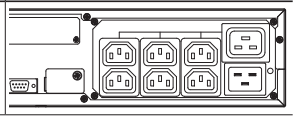
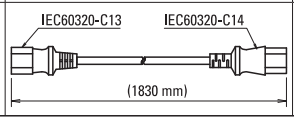
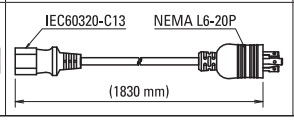
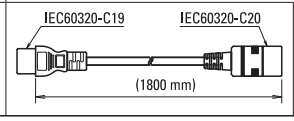
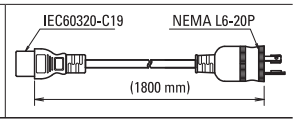
	E11BL102B001□UJ	E11BL152B001□UJ	E11BL202B001□UJ
Rear view			
Output outlet	NEMA 5-15R×6	NEMA 5-20R×7	NEMA L5-30R×2
Input power cord			

Specifications

200 V model | Revision B | 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 < 40%: 110 to 300 V	
				At load level < 70%: 136 to 288 V		At load level < 70%: 136 to 280 V	
				At load level ≥ 70%: 160 to 288 V		At load level ≥ 70%: 160 to 280 V	
		In Economy mode		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)			
		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)			
		Bypass		200% (for 30 s), 800% (for 2 cycles)			
Battery	Type			Lithium-ion battery			
	Battery backup time[5]			4 min			
	Expected life			Approx. 10 years (At an operating temperature of 30° C.)			
	Battery capacity	(Ah-cell)		40		80	
		(Wh)		132		264	
	Battery self-test			Can be enabled (Factory setting: disabled)			
Interface	PC port			RS-232C, USB Type B[6] (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;[7] relative humidity: 20 to 90% (non-condensing)			
Storage environment[8]				Ambient temperature: -15 to +60° C; relative humidity: 20 to 90% (non-condensing)			
Expected service life				10 years (At a 30°C average ambient temperature. For reference purposes only.)			
Safety standard				UL 1778 (E226092), CSA C22.2 No.107.3-14, EN62040-1			
EMC standard				VCCI 32-1 Class A, FCC Part 15 Subpart B Class A, IEC62040-2 C2			
Separate options							
Vertical stands				STAND2UA00			
Floor mounting brackets				FM2UA00			
Rack support rails[9]				RM030-US (2U)			
Air filter[10]				FL011			

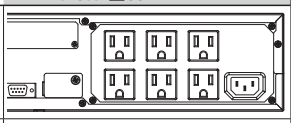
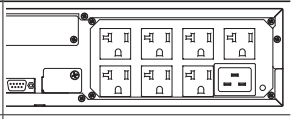
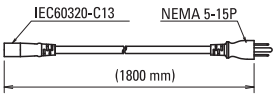
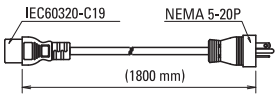
(1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. In the event of an abrupt input voltage or frequency change while in Economy mode, the UPS might transfer to battery operation. For use without interruption, fix the operation mode 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 when 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) Use of USB interface requires driver installation.
(7) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.
(8) Avoid use or storage in 30°C or higher temperatures for extended periods of time, as this will shorten battery life. If the UPS is stored for an extended period, recharge the batteries once every six months.
(9) 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.
(10) A front side air intake filter for preventing dust ingress.

	E11BL102B002□UJ	E11BL102B012□UJ	E11BL202B002□UJ	E11BL202B012□UJ
Rear view				
Output outlet	IEC60320-C13×6	IEC60320-C13×6	IEC60320-C13×6, IEC60320-C19×1	
Input power cord				

100 V model | Revision **C** | **UL/CE/UKCA certified models**

Model no.				**E11BL102C001AUJ**	**E11BL152C001AUJ**
Model no. (Fixed Double Conversion mode)				**E11BL102C001DUJ**	**E11BL152C001DUJ**
UL-registered no.				E11BL102U001J	E11BL152U001J
Rated output capacity (apparent power / active power)				1.0 kVA / 0.8 kW	1.5 kVA / 1.2 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 144 V	
				At load level ≥ 70%: 80 to 144 V	
		In Economy mode		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)	
		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	1.5 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			Approx. 10 years (At an operating temperature of 30˚C.)	
	Battery capacity	(Ah-cell)		40	60
		(Wh)		132	198
	Battery self-test			Can be enabled (Factory setting: disabled)	
Interface	PC port			RS-232C, USB Type B[6] (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				34 dB or lower (load factor: 40% or lower)	31 dB or lower (load factor: 40% or lower)
				35 dB or lower (load factor: 40% to 60%)	35 dB or lower (load factor: 40% to 60%)
				38 dB or lower (load factor: 60% to 80%)	37 dB or lower (load factor: 60% to 80%)
When ambient temperature exceeds 40ºC, noise level remains at the maximum value regardless of load factor.				39 dB or lower (load factor: 80% to 100%)	39 dB or lower (load factor: 80% to 100%)
Acoustic noise (Max.)				46 dB or lower	49 dB or lower
Heat dissipation (In Double Conversion mode at rated output, after battery charging completed)				130 W	195 W
Input leakage current (Including during asynchronous operation)				3 mA or less	
Operating environment				Ambient temperature: -10 to +55˚ C;[7] relative humidity: 20 to 90% (non-condensing)	
Storage environment[8]				Ambient temperature: -15 to +60˚ C; relative humidity: 20 to 90% (non-condensing)	
Expected service life				10 years (At a 30ºC average ambient temperature. For reference purposes only.)	
Safety standard				UL 1778 (E226092), CSA C22.2 No.107.3-14, EN62040-1	
EMC standard				VCCI 32-1 Class A, FCC Part 15 Subpart B Class A, IEC62040-2 C2	
Separate options					
Vertical stands				STAND2UA00	
Floor mounting brackets				FM2UA00	
Rack support rails[9]				RM030（2U）	
Air filter[10]				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 when 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) Use of USB interface requires driver installation.
(7) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.
(8) Avoid use or storage in 30ºC or higher temperatures for extended periods of time, as this will shorten battery life. If the UPS is stored for an extended period, recharge the batteries once every six months.
(9) 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.
(10) A front side air intake filter for preventing dust ingress.

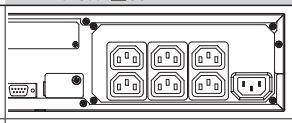
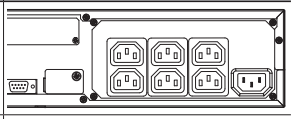
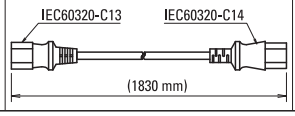
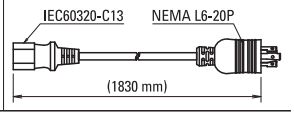
	E11BL102C001□UJ	**E11BL152C001□UJ**
Rear view		
Output outlet	NEMA 5-15R×6	NEMA 5-20R×7
Input power cord		

Specifications

200 V model | Revision **C** | **UL/CE/UKCA certified models**

Model no.				**E11BL102C002AUJ**	**E11BL102C012AUJ**
Model no. (Fixed Double Conversion mode)				**E11BL102C002DUJ**	**E11BL102C012DUJ**
UL-registered no.				E11BL102U002J	
Rated output capacity (apparent power / active power)				1.0 kVA / 0.8 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%: 160 to 288 V	
		In Economy mode		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)	
		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	
	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)	
		Bypass		200% (for 30 s), 800% (for 2 cycles)	
Battery	Type			Lithium-ion battery	
	Battery backup time[5]			4 min	
	Expected life			Approx. 10 years (At an operating temperature of 30˚C.)	
	Battery capacity	(Ah-cell)		40	
		(Wh)		132	
	Battery self-test			Can be enabled (Factory setting: disabled)	
Interface	PC port			RS-232C, USB Type B[6] (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				30 dB or lower (load factor: 40% or lower)	
				32 dB or lower (load factor: 40% to 60%)	
				37 dB or lower (load factor: 60% to 80%)	
When ambient temperature exceeds 40°C, noise level remains at the maximum value regardless of load factor.				39 dB or lower (load factor: 80% to 100%)	
Acoustic noise (Max.)				48 dB or lower	
Heat dissipation (In Double Conversion mode at rated output, after battery charging completed)				130 W	
Input leakage current (Including during asynchronous operation)				3 mA or less	
Operating environment				Ambient temperature: -10 to +55˚ C;[7] relative humidity: 20 to 90% (non-condensing)	
Storage environment[8]				Ambient temperature: -15 to +60˚ C; relative humidity: 20 to 90% (non-condensing)	
Expected service life				10 years (At a 30°C average ambient temperature. For reference purposes only.)	
Safety standard				UL 1778 (E226092), CSA C22.2 No.107.3-14, EN62040-1	
EMC standard				VCCI 32-1 Class A, FCC Part 15 Subpart B Class A, IEC62040-2 C2	
Separate options					
Vertical stands				STAND2UA00	
Floor mounting brackets				FM2UA00	
Rack support rails[9]				RM030（2U）	
Air filter[10]				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 when 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) Use of USB interface requires driver installation.
(7) When the ambient temperature exceeds the specified range, battery charging will stop and a Device Error (minor malfunction) alarm will be generated.
(8) Avoid use or storage in 30°C or higher temperatures for extended periods of time, as this will shorten battery life. If the UPS is stored for an extended period, recharge the batteries once every six months.
(9) 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.
(10) A front side air intake filter for preventing dust ingress.

	E11BL102C002□UJ	**E11BL102C012□UJ**
Rear view		
Output outlet	IEC60320-C13×6	IEC60320-C13×6
Input power cord		

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. For bulk purchase of software licenses, append appropriate -suffix to the model number.
	Multi-OS version(1)	**PMS53□00DL**(2)	

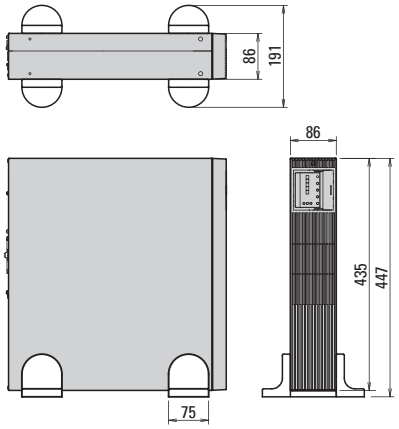
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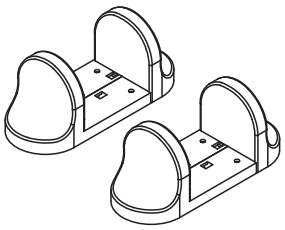
(1) Supports Windows, Unix, and Linux.
(2) The □'s denote revision characters.
Note: Optional products have different operating temperature ranges from the UPS.

Dimensions of Options (Unit: mm)

Vertical Stands

STAND2UA00



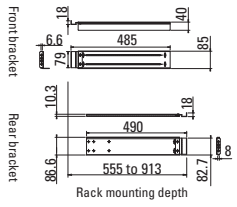


Mass: Approx. 130 g (A set of 2 pieces)

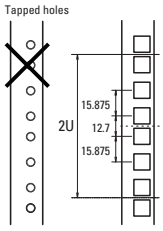
Rack Support Rails

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.

RM030-US (2U)



Mass: Approx. 1.4 kg (Paired: 2.8 kg)



Mounting part

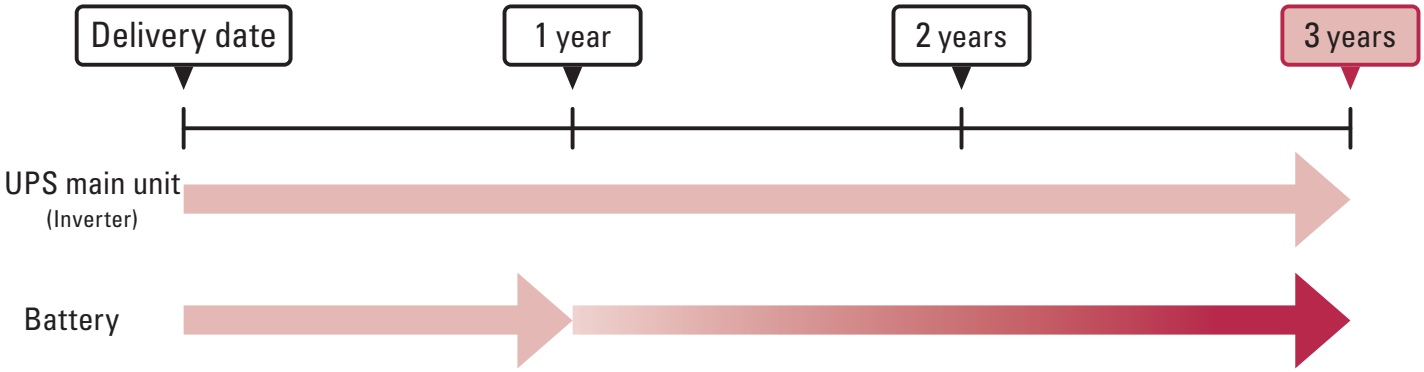
Rack mounting brackets for securing a UPS in a rack come included or installed.

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.
- 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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