

SANUPS E11B-Li

Hybrid UPS



SANYO DENKI

SANUPS E11B-Li

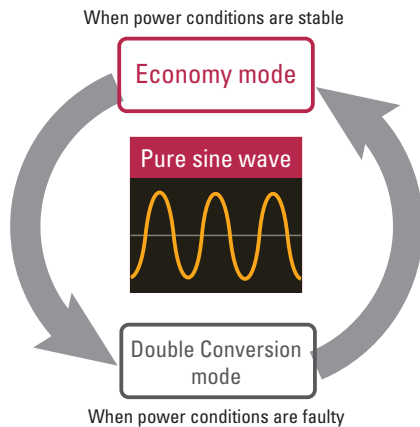
UPS That Achieves Power Quality and Efficiency and Can Be Used Worldwide



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 about every 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	Pending	E11BL102A001AUJ	p. 4	p. 3
	1.5	1.2		NEMA 5-20P	Pending	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	Pending	E11BL102A002AUJ	p. 5	p. 3
	1	0.8		NEMA L6-20P	Pending	E11BL102A012AUJ	p. 5	p. 3
	2	1.6		IEC60320-C20	✓	E11BL202A002AUJ	p. 5	p. 3
	2	1.6		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.



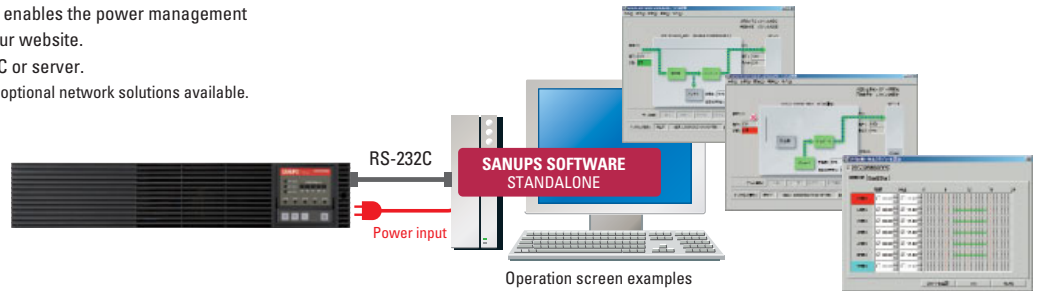
Vertical installation
 Vertical stands are optional.

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

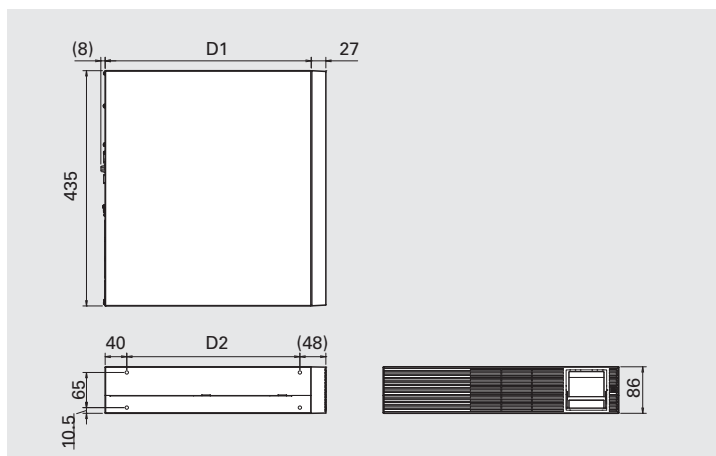
Batteries can start up the UPS even when grid AC power is not available, enabling inverter operation. The default setting is "Disabled."

Operating Panel

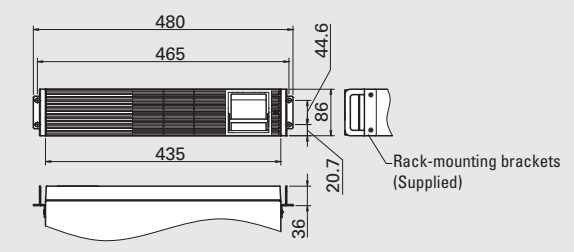
LED Panel



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⁾							
Topology	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			
			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)							
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		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)								
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	Rated		Within ±5% of rated voltage (For 0↔100% load step changes at rated input)					
			For abrupt load change		Within ±5% of rated voltage (At rated output)			
	For abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change)					
Overcurrent protection								
Overload capability	Inverter	In Double Conversion mode		Automatic transfer to bypass (With automatic retransfer function)				
				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 (At 15-minute rate)		132 Wh (66×2)		198 Wh (66×3)		264 Wh (66×4)		
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)			49 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								
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)								
EMC standard								
VCCI 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					
Rack support rails ⁽¹⁰⁾			RMO30 (2U)					

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption less than 8 ms. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (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 25°C.
- (7) Use of USB interface requires driver installation.
- (8) Battery charging will stop when battery temperature exceeds the specified operating temperature range.
- (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.

	E11BL102A001AUJ	E11BL152A001AUJ	E11BL202A001AUJ
Rear view			
Output outlet shape	NEMA 5-15R×6	NEMA 5-20R×7	NEMA L5-30R×2
Power input cable	IEC60320-C13 NEMA 5-15P (1800)	IEC60320-C19 NEMA 5-20P (1800)	NEMA L5-30P Approx. 1.8 m

200 V model

UL/CE certified models

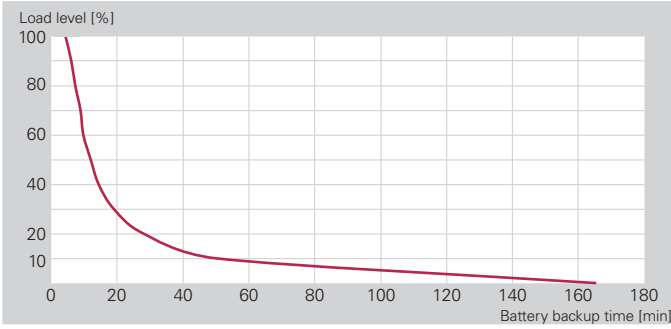
Model no.	E11BL102A002AUJ		E11BL102A012AUJ		E11BL202A002AUJ		E11BL202A012AUJ		
UL-registered no.	E11BL102U002J		E11BL102U012J		E11BL202U002J		E11BL202U012J		
Rated output capacity (apparent power / active power)	1.0 kVA / 0.8 kW				2.0 kVA / 1.6 kW				
Technology	Topology		Hybrid ⁽¹⁾						
	Cooling method		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 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 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 (At 15-minute rate)		132 Wh (66×2)		264 Wh (66×4)				
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)		52 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		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)							
EMC standard		VCCI 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							
Rack support rails ⁽¹⁰⁾		RM030 (2U)							

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption less than 8 ms. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (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 25°C.
- (7) Use of USB interface requires driver installation.
- (8) Battery charging will stop when battery temperature exceeds the specified operating temperature range.
- (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.

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	IPv4/IPv6, Modbus TCP supported	PRLANIF022A
	IPv4/IPv6, Modbus TCP/RTU supported	PRLANIF024A
	IPv4/IPv6, environmental monitoring supported	PRLANIF013B
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⁾

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

(1) Supports Windows, Unix, and Linux.

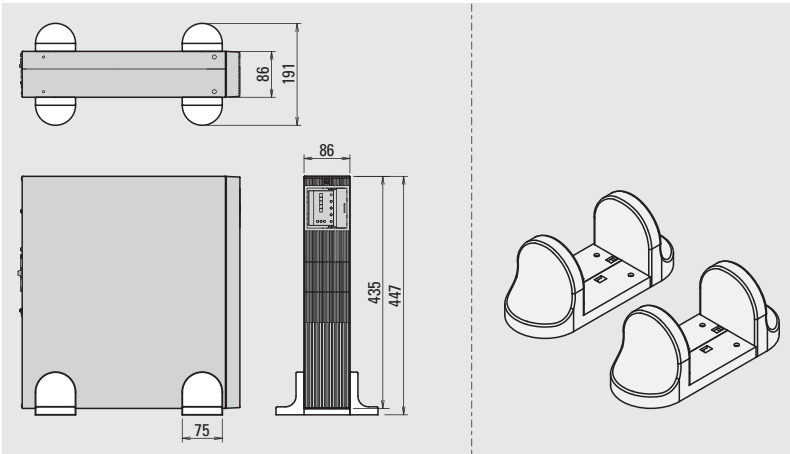
(2) The □ 's denote revision characters.

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

Dimensions of Options (Unit: mm)

Vertical Stands

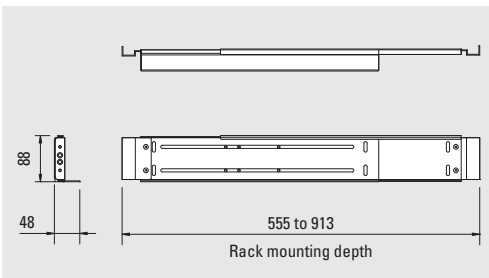
STAND2UA00



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 below is the left rail.)

RM030

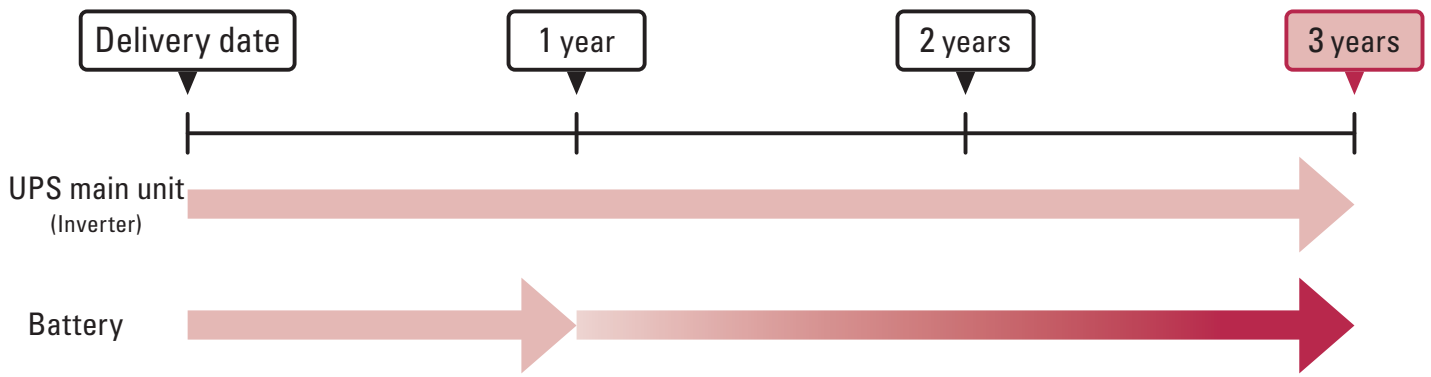


Rack mounting brackets are included with the UPS.

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

SANYO DENKI's ECO PRODUCTS are designed with the concept of lessening impact on the environment in the process from product development to waste. The product units and packaging materials are designed for reduced environmental impact. We have established our own assessment criteria on the environmental impacts applicable to all processes, ranging from design to manufacture. Those products that satisfy the criteria 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.

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<https://www.sanyodenki.com>

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Specifications are subject to change without notice.

CATALOG No. P1050B001 '21.3