SANUPS E11B

Hybrid UPS

Ver.3
English









ANUPS E11B

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





Lineup

[No. of phases/wires] Input/Output voltage	Output capaci [kVA]	ty [kW]	Battery Backup time*	Input plug	Fixed Double Conversion mode	Safety standards	Model no.	Page Specifications	Dimensions
				NEMA 5-15P	_	_	E11B102A001AM	6	4
	1	0.8	2 (5)	NEMA 5-15P	✓	_	E11B102A001DM	6	4
	1	0.0	3 min (5 min)	NEMA 5-15P	_	✓	E11B102A001AMUJ	9	4
				NEMA 5-15P	✓	✓	E11B102A001DMUJ	9	4
				NEMA 5-15P	_	_	E11B152A001AM	6	4
	1.5	1.2	2	NEMA 5-15P	✓	_	E11B152A001DM	6	4
	1.5	1.2	3 min (5 min)	NEMA 5-20P	_	✓	E11B152A001AMUJ	9	4
				NEMA 5-20P	✓	─ ✓	E11B152A001DMUJ	9	4
Single-phase 2-wire]				NEMA L5-30P	_	_	E11B202A001AM	6	4
100 \/				NEMA L5-30P	√	_	E11B202A001DM	6	4
$100\mathrm{V}$ model	2	1.0	2	NEMA L5-30P	_	$\overline{\hspace{1em}}$	E11B202A001AMUJ	9	4
00/110/115/120 V	Z	1.6	3 min (5 min)	NEMA L5-30P	$\overline{\hspace{1cm}}$	$\overline{\hspace{1em}}$	E11B202A001DMUJ	9	4
				Terminal block	_	_	E11B202A001AMT	8	4
				Terminal block	$\overline{}$	_	E11B202A001DMT	8	4
				NEMA L5-30P	_	_	E11B302A001AM	6	4
	0		3 min (5 min)	NEMA L5-30P	✓	_	E11B302A001DM	6	4
		2.4		NEMA L5-30P	_	$\overline{}$	E11B302A001AMUJ	9	4
	3			NEMA L5-30P		$\overline{}$	E11B302A001DMUJ	9	4
				Terminal block			E11B302A001AMT	8	4
				Terminal block			E11B302A001DMT	8	4
				IEC 60320-C14	_	_	E11B102A002AM	7	4
				IEC 60320-C14	√	_	E11B102A002DM	7	4
				NEMA L6-20P			E11B102A012AM	7	4
	4			NEMA L6-20P			E11B102A012DM	7	4
	1	8.0	3 min (5 min)	IEC 60320-C14			E11B102A002AMUJ	10	4
				IEC 60320-C14		$\overline{}$	E11B102A002DMUJ	10	4
				NEMA L6-20P		$\overline{}$	E11B102A012AMUJ	10	4
				NEMA L6-20P		$\overline{}$	E11B102A012DMUJ	10	4
		_		IEC 60320-C20	_	_	E11B202A002AM	7	4
				IEC 60320-C20			E11B202A002DM	7	4
Single-phase 2-wire]				IEC 60320-C20		$\overline{}$	E11B202A002AMUJ	10	4
				IEC 60320-C20	─ ✓	$\overline{}$	E11B202A002DMUJ	10	4
200 V _{model}	2	1.6	3 min (5 min)	NEMA L6-20P		$\overline{}$	E11B202A012AMUJ	11	4
00/208/220/230/240 V				NEMA L6-20P		$\overline{}$	E11B202A012DMUJ	11	4
00, 200, 220, 200, 240 V				Terminal block			E11B202A002AMT	8	4
				Terminal block			E11B202A002DMT	8	4
				IEC 60320-C20		_	E11B302A002AM	7	4
				IEC 60320-C20			E11B302A002AW	7	4
							E11B302A002DW	11	4
				IEC 60320-C20					4
	3	2.4	3 min (5 min)	IEC 60320-C20			E11B302A002DMUJ	11	
	_		(2)	NEMA LG 20P			E11B302A012AMUJ	11	4
				NEMA L6-20P			E11B302A012DMUJ	11	4
				Terminal block			E11B302A002AMT	8	4
				Terminal block	✓	_	E11B302A002DMT	8	4

Note: At a 25°C ambient temperature, 0.8 load power factor, using new, fully charged batteries. The values in parentheses are the values at a load power factor of 0.7.

Installation examples



Mountable in an EIA standard 19-inch rack

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



Vertical installation

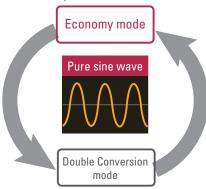
Vertical stands are optional.

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.

When power conditions are stable



When power conditions are faulty

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

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

Reduces Battery Drain and Degradation

- With its wide input voltage range,⁽²⁾ this UPS reduces the number of unnecessary transfers to battery power when input power is unstable, reducing battery drain and deterioration.
- This extends battery backup time for critical loads while reducing running costs including battery replacement.
- (2) The 100 V and 200 V models have input voltage ranges of 55 to 150 V and 110 to 300 V, respectively. The input frequency range is 40 to 120 Hz for either voltage.

Wide Operating Temperature Range

 The E11B has a wide operating temperature range of -10 to +55°C. (The upper limit is +40°C for UL/CE/UKCA certified models)
 This provides the product with a higher degree of freedom of installation, allowing it to be installed in locations with large temperature differences.

Variety of Input and Output Options Available

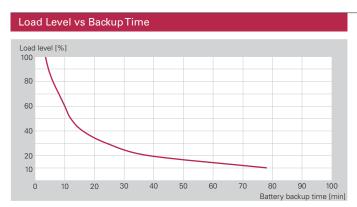
 We have a variety of input plug and output outlet options available for selection, allowing the E11B to be used in various countries.



Battery Cold Start Function

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

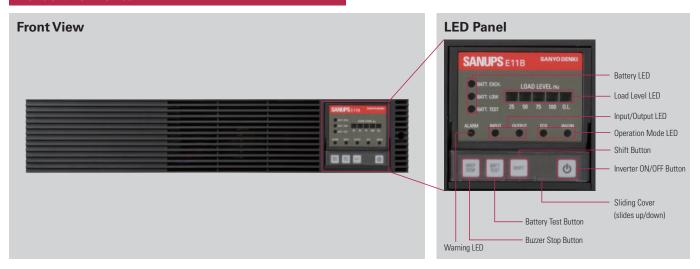
With this function enabled, the UPS can be used as an emergency power supply in the event of a natural disaster or emergency. The default setting is "Disabled."

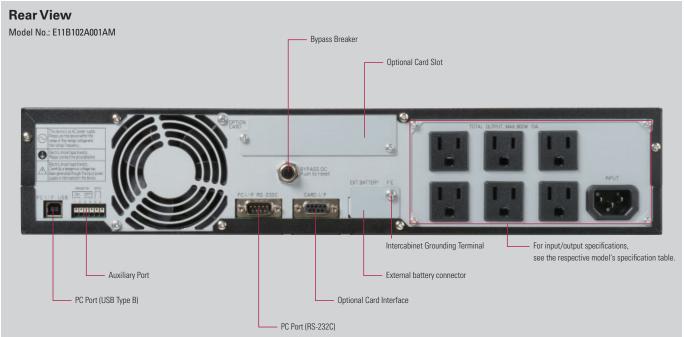


Note: Reference value at 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries.

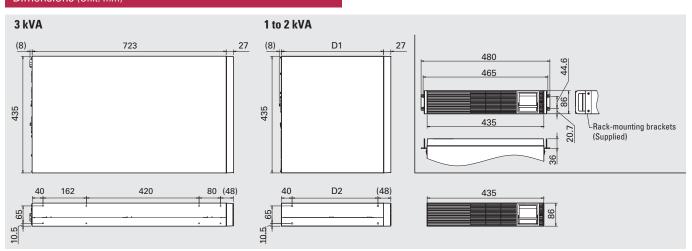
Hybrid UPS SANUPS E11B

Views and Part Names





Dimensions (Unit: mm)



Output capacity	D1	D2	Mass
1 kVA	381	320	15 kg
1.5 kVA	473	412	20 kg
2 kVA	538	477	25 kg
3 kVA	—	_	39 kg

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 options sends email notifications to system administrators for quick actions via network in the event combined with a temperature and humidity sensor (Model no.: 9CT1-T, extension cable: can also monitor the ambient temperature and humidity. Multiple servers (up to 50) can communication protocols such as SSH, Telnet, and REST API.	ent of a CARD-C	power failure. BL007), this card			
Dry Contact Interface Card	Terminal block output D-sub output connector	PRCONIF007 PRCONIF008	This card outputs no-voltage contact signals to notify UPS status. A and B contacts can be selected for each signal.					
SANUPS SOFTWARE for download	Windows version	PMS52 - 00DL(2)	SANUPS SOFTWARE is used to shut down up to 50 network-connected servers, one of w UPS via a serial cable, from the serially connected server. The software is not necess interface card PRLANIF031. For the latest OS support information, refer to our website.					
	Multi-OS version ⁽¹⁾	PMS53	For bulk purchase of software licenses, append appropriate -suffix to the model number.	-10 -50 -100	(10 licenses) (50 licenses) (100 licenses)			

⁽¹⁾ Supports Windows, Linux, and Unix.

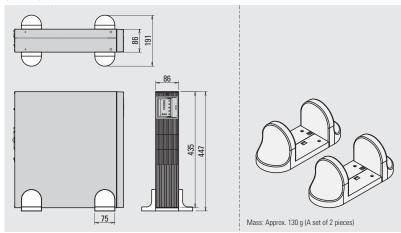
(2) The __'s denote revision characters.

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

Dimensions of Options (Unit: mm)

Vertical Stands

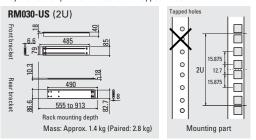
STAND2UA00



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.



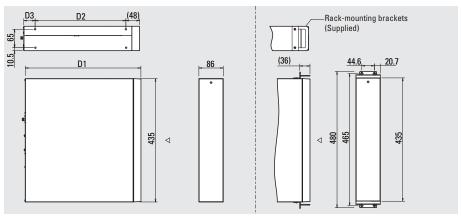
Rack mounting brackets for securing a UPS in a rack come included or installed.

Extended battery box

Model no.	Compatible UPS capacity	Backup tii	me ⁽¹⁾		Dimension	Dimensions				Mass	Floor mounting brackets + Joining brackets
		15 min	35 min	50 min	W	D1	D2	D3	Н		
BCE11B102A01	1 kVA	1 unit	2 units	3 units	435	408	320	40	86	20 kg	FM2UA00BC
BCE11B152A01	1.5 kVA	1 unit	2 units	3 units	1	500	412			26 kg	
BCE11B202A01	2 kVA	1 unit	2 units	3 units	1	565	477			34 kg	
BCE11B302A01	3 kVA	1 unit	2 units	3 units	1	750	420	202		52 kg	FM2UA01BC

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

Note: Extended battery boxes are not UL-certified.



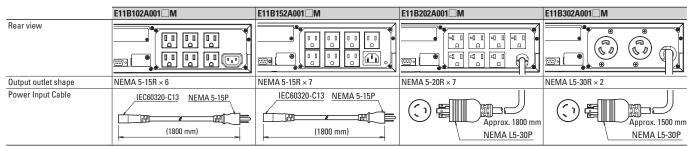
Paint color: Black (Munsell N1.5)

Specifications

100 v model

Model no.				E11B102A001AM	E11B152A001AM	E11B202A001AM	E11B302A001AM			
	ixed Double Conversion	mode)		E11B102A001DM	E11B152A001DM	E11B202A001DM	E11B302A001DM			
	t capacity (apparent pov		nwer)	1 kVA / 0.8 kW	1.5 kVA / 1.2 kW	2 kVA / 1.6 kW	3 kVA / 2.4 kW			
Technology		ver / detive p	DVV617	Hybrid ⁽¹⁾	1.5 KVA / 1.2 KVV	2 KVA / 1.0 KVV	J KVA / Z.4 KVV			
reciliology	Cooling system			Forced air cooling						
AC input	No. of phases/wires			Single-phase 2-wire(2)						
40 IIIput	Rated voltage			100/110/115/120 V (San	ao ao autaut)					
	Voltage range	In Double C	onversion mode			At lead level + 400/ . E	E +o 1E0 \/			
	voitage range	III Double C	onversion mode	At load level < 40%: 55		At load level < 40%: 5				
				At load level < 70%: 68		At load level < 70%: 6				
				At load level ≥ 70%: 80		At load level ≥ 70%: 8	J TO 140 V			
	D : 16	In Economy	mode	Within ±8% of rated v						
	Rated frequency	F: 15 11		50/60 Hz (auto-sensing						
	Frequency range	Fixed Doubl	e Conversion mode		equency (Synchronization	range)				
				40 to 120 (Asynchrono						
		In automati	c transfer setting			ıg is ±3%. Synchronization	range)			
				40 to 120 (Asynchrono						
	Required capacity ⁽⁴⁾			1.1 kVA or less	1.5 kVA or less	2.2 kVA or less	3 kVA or less			
	Input power factor			0.95 or greater			ous operation too)			
C output	No. of phases/wires			Single-phase 2-wire						
	Rated voltage (Change			100/110/115/120 V (Fac	tory setting: 100 V)					
	Voltage regulation		onversion mode	Within ±2% of rated v	oltage					
		In Economy	mode	Within -10 to +8% of ra	ted voltage					
	Rated frequency (same	as input)		50/60 Hz						
	Frequency regulation	In grid	Fixed Double Conversion mode	Within ±1% of rated f	equency					
		operation In automatic transfer setting		Within ±1/3/5% of rated frequency (Factory setting: ±3%)						
		In battery operation		Within ±0.5% of rated frequency (This applies in asynchronous operation too)						
	Voltage harmonic distortion At linear load			3% or less						
(At Lo Tra	(At rated output)	At rectifier load		8% or less						
	Load power factor	Rated		0.8 lagging (Variation range: 0.7 lagging to 1.0)						
	Transient voltage	For abrupt load change		Within ±5% of rated voltage (For 0⇔100% load step changes at rated input)						
	fluctuation		eturn of input power		oltage (At rated output)	op onangos at ratoa mpat/				
			nput voltage change	Within ±5% of rated voltage (For ±10% abrupt change)						
	Overcurrent protection		put voitage enange	Automatic transfer to bypass (With automatic retransfer function)						
	Overload capability	Inverter	In Double Conversion mode	105% (for 200 ms)	Sypuso (VVIIII automatio roti	unoror rumonom				
	Overload capability	Bypass	III Double conversion mode	200% (for 30 s), 800% (for 2 cyclas)					
Battery	Туре	Буразэ			ılated lead-acid (VRLA) batı	ton.				
Juttery	Battery backup time ⁽⁵⁾			3 min (5 min)	ilateu leau-aciu (VIILA) bat	LGTY				
	Expected life				ig temperature of 25°C. For	rafaranaa nurnacaa anlul				
		(Ah-cell)		108	162		324			
	Battery capacity	(Wh)		204	306	216 408	612			
	Pottony colf toot	(4411)			300	400	012			
ntorfooo	Battery self-test			Automatic) (Cannot be used at the con-					
nterface	PC port			RS-232C, USB Type B	(Cannot be used at the sar	ne ume)				
	Remote port				to form and the second section					
	Dry contact output				terface card is required					
	Network support			Optional LAN interface	<u> </u>	EE ID				
	ise (In Double Conversion mo		6 1	48 dB	51 dB	55 dB	000144			
			itput, after battery charging completed)	130 W	195 W	260 W	390 W			
	je current (This applies duri	ng asynchronou	us operation too)	3 mA or less		3.5 mA or less				
	nvironment					dity: 20 to 90% (non-conder				
torage env				<u> </u>		ity: 20 to 90% (non-condens	0.			
	rvice life (of the UPS uni	t excluding b	attery)		age ambient temperature. I	For reference purposes only	/)			
MC standa				VCCI 32-1 Class A						
Separate op										
ertical stan				STAND2UA00			_			
loor mounti	ng brackets			FM2UA00			FM2UA01			
Rack suppor	t rails ⁽⁹⁾			RM030-US (2U)						
Replacemen	t battery pack model no.			S-BPE11B102A0003	S-BPE11B152A0003	S-BPE11B202A0003	S-BPE11B302A0003			

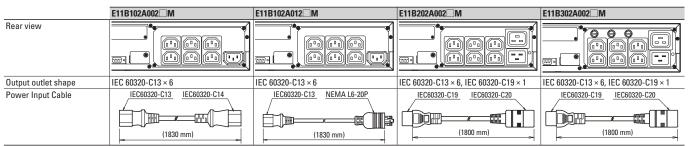
- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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. In parentheses are values at 0.7 load power factor.
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, 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, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.
- (9) Used for monting the UPS in 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.



200 v model

Model no. Model no. (Fi	ived Double Conversion	mode)		E11B102A002AM E11B102A002DM	E11B102A012AM E11B102A012DM	E11B202A002AM E11B202A002DM				
-		· · · · · · · · · · · · · · · · · · ·	ower)	1 kVA / 0.8 kW	LIIDIOZAUIZDIVI					
nateu output		ver / active p	ower)	Hybrid ⁽¹⁾		2.0 KVA / 1.0 KVV	3 KVA / Z.4 KVV			
echnology				Forced air cooling						
C output C outp	<u> </u>			Single-phase 2-wire(2)	10					
	nateu voitage			200/208/220/230/240 V (Same as output)						
		In Dauble C								
	Voltage range	In Double C	onversion mode							
	al no. (Fixed Double Conversion mode output capacity (apparent power problems) Topology Cooling system No. of phases/wires Rated voltage Voltage range In Required capacity(a) Input power factor No. of phases/wires Rated voltage (Changeable Voltage regulation In	In Faanami	ı mada	At load level ≥ 70%: 16		At load level ≥ 70%: It	00 to 280 V			
Cinnut	Datad fraguanay	III Economy	rinode	Within ±8% of rated v						
ic input	nated frequency			50/60 Hz (auto-sensing		1				
		Fixed Doub	le Conversion mode		requency (Synchronization	range)				
	(Fixed Double Conversion mode) put capacity (apparent power / active power) Topology Cooling system No. of phases/wires Rated frequency Frequency range Required capacity(4) Input power factor No. of phases/wires Rated voltage (Changeable with settings) Voltage regulation Reted frequency (same as input) Frequency regulation Frequency regulation Voltage harmonic distortion (At rated output) Load power factor Transient voltage fluctuation Overload capability Type Battery backup time(5) Expected life Battery capacity Network support Network support Noise (In Double Conversion mode In Double Conversion Noise (In Double Conversion mode) N		40 to 120 (Asynchrono		:-±20/ Cb:ti					
		In automatic transfer setting				ng is ±3%. Synchronization i	range)			
C output	Doguizad appaitu(4)			40 to 120 (Asynchrono	us operation range)	2.21.1/4	21/1/4			
				1.1 kVA or less		Z.Z KVA or less	### B202A002DM #### B1B302A002DM ####################################			
				0.95 or greater						
		abla with a t	tingol	Single-phase 2-wire	(Footony potting 200 V)					
	naced voltage (Unange				(Factory setting: 200 V)					
	Voltage regulation			Within ±2% of rated v						
	Dated from	,		Within -10 to +8% of ra	ileu voitage					
	naced frequency (same		Fixed Dauble Commission .	00,000						
	Farance L.C.	_		Within ±1% of rated f		1.00/1	-			
	Frequency regulation	<u> </u>		Within ±1/3/5% of rated frequency (Factory setting: ±3%)						
	W. I		• .	Within ±0.5% of rated frequency (This applies in asynchronous operation too)						
output		rtion		3% or less						
	-	In	At rectifier load	8% or less						
Loa	Load power factor			0.8 lagging (Variation range: 0.7 lagging to 1.0) Within ±5% of rated voltage (For 0⇔100% load step changes at rated input)						
	Iransient voltage —————					tep changes at rated input)				
		· ·		Within ±5% of rated voltage (At rated output)						
		For abrupt input voltage change		Within ±5% of rated voltage (For ±10% abrupt change) Automatic transfer to bypass (With automatic retransfer function)						
	Uvercurrent protection		1. 5. 11. 6		bypass (With automatic ret	ransfer function)				
	Overload capability	_	In Double Conversion mode	105% (for 200 ms)						
		Bypass		200% (for 30 s), 800% (
					ulated lead-acid (VRLA) bat	tery				
				3 min (5 min)						
attery		I			ng temperature of 25°C. For		T			
	Battery capacity	1		108	108	216				
		(Wh)		204	204	408	612			
	· · · · · · · · · · · · · · · · · · ·			Automatic	2)		eration too) ed input) es only) 324 612 390 W ss in-condensing)			
					(Cannot be used at the sa	me time)				
nterface	· · · · · · · · · · · · · · · · · · ·			Remote ON/OFF						
				+ ' '	nterface card is required					
				Optional LAN interfac	e card is required					
				48 dB		55 dB				
			. , , , , ,	130 W		260 W	390 W			
		ing asynchrono	us operation too)	3 mA or less		3.5 mA or less				
						idity: 20 to 90% (non-conden				
						dity: 20 to 90% (non-condens				
•		it excluding b	attery)		rage ambient temperature.	For reference purposes only	7)			
				VCCI 32-1 Class A						
ertical stan	ds			STAND2UA00			_			
loor mounti	ng brackets			FM2UA00			FM2UA01			
lack suppor	t rails ⁽⁹⁾			RM030-US (2U)	<u> </u>					
Replacement	t battery pack model no			S-BPE11B102A0003		S-BPE11B202A0003	S-BPE11B302A000			
				FL011						

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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. In parentheses are values at 0.7 load power factor.
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, 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, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.
- (9) Used for mounting the UPS in 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.



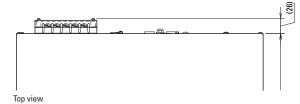
Specifications

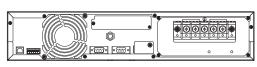
	T DIOCK type			100 v model		ZUU v model			
				E11B202A001AMT	E11B302A001AMT	E11B202A002AMT	E11B302A002AMT		
				E11B202A001DMT	E11B302A001DMT	E11B202A002DMT	E11B302A002DMT		
lated output	 	wer / active p	ower)	2 kVA / 1.6 kW	3 kVA / 2.4 kW	2 kVA / 1.6 kW	3 kVA / 2.4 kW		
echnology				Hybrid ⁽¹⁾					
				Forced air cooling					
	<u> </u>			Single-phase 2-wire(2)					
	Rated voltage (Same a	s output)		100/110/115/120 V (Sam	· · · · · · · · · · · · · · · · · · ·		E11B202A002DMT		
				At load level < 40%: 55					
	Voltage range	In Double C	Conversion mode	At load level < 70%: 68					
				At load level ≥ 70%: 80		At load level ≥ 70%: 160	to 280 V		
	D . 16	In Economy	/ mode	Within ±8% of rated v					
ic input	Rated frequency			50/60 Hz (auto-sensing					
		Fixed Doub	le Conversion mode		equency (Synchronization r	ange)			
	Frequency range			40 to 120 (Asynchronou		. 1 00/ 0	1		
		In automati	c transfer setting	Within ± 1/3/5% of rated frequency (Factory setting is ±3%. Synchronization range)					
	Popuired conseitu(4)			40 to 120 (Asynchronou		2.213/41	21/1/4		
Rated output capacity (apparent power / active power)									
				0.95 or greater					
	· .	ahla with aat	tingal	Single-phase 2-wire 100/110/115/120 V (Fact	on cotting 100 \/\	200/200/220/220/240 \/ //	Enatory pottings 200 V/		
	hateu voitage (Change			Within ±2% of rated v		200/200/220/230/240 V (I	ractory setting. 200 v)		
	Voltage regulation			Within -10 to +8% of ra	<u>Y</u>				
	Rated frequency (same		/ Illoue	50/60 Hz	leu voitage				
			Fixed Double Conversion mode	Within ±1% of rated fr	oguonov				
	Fraguency regulation	_			d frequency (Factory settin	a: +3%)	-		
	Trequency regulation		-			·	tool		
(A1	Voltago harmonio dieto		'	3% or less	rrequericy (Triis applies dui	ing asyncinonous operation	100)		
	"			8% or less					
				0.8 lagging (Variation range: 0.7 lagging to 1.0)					
	Load power ractor		load change	Within ±5% of rated voltage (For 0⇔100% load step changes at rated input)					
	_			Within ±5% of rated voltage (At rated output)					
	fluctuation				oltage (For ±10% abrupt ch	anne)			
	Overcurrent protection		par vortago onango		ypass (With automatic retra				
	· ·	1	In Double Conversion mode	105% (for 200 ms)	ypubb (vvitil datomatio rotil	anoror ranotion,			
	Overload capability			200% (for 30 s), 800% (f	or 2 cycles)				
	Type	-/			lated lead-acid (VRLA) batte	erv			
				3 min (5 min)	, , , , , , , , , , , , , , , , , , , ,	. ,			
_					g temperature of 25°C. For r	eference purposes only)			
Battery	Battery capacity	(Ah-cell)		216	324		324		
				408	612				
	Battery self-test			Automatic			-		
	· ·				(Cannot be used at the sam	ne time)			
				Remote ON/OFF					
птеттасе					terface card is required				
				Optional LAN interface		,			
Acoustic noi	ise (In Double Conversion m	ode)		55 dB	·				
Heat dissipa	tion (In Double Conversion r	mode at rated or	utput, after battery charging completed)	260 W	390 W	260 W	390 W		
nput leakag	e current (This applies dur	ing asynchrono	us operation too)	3.5 mA or less			<u> </u>		
				Ambient temperature:	10 to +55°C, ⁽⁷⁾ relative humi	dity: 20 to 90% (non-condens	ing)		
Storage env	ironment ⁽⁸⁾					ty: 20 to 90% (non-condensir			
	rvice life (of the UPS uni	it excluding b	attery)	7 years (At a 30°C avera	age ambient temperature. F	or reference purposes only)			
EMC standa	rd			VCCI 32-1 Class A					
Separate op									
Vertical stan	nds			STAND2UA00	-	STAND2UA00	-		
cı c	ing brackets			FM2UA00	FM2UA01	FM2UA00	FM2UA01		
loor mounti				RM030-US (2U)					
Floor mounti Rack suppor	rt rails ⁽⁹⁾			111000-03 (20)					
Rack suppor	rt rails ⁽⁹⁾ It battery pack model no			S-BPE11B202A0003	S-BPE11B302A0003	S-BPE11B202A0003	S-BPE11B302A000		

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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% (±1/3/5% selectable).
- (4) Max. capacity during battery recovery charging
- (5) At a 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries. In parentheses are values at a 0.7 load power factor.
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, battery charging will stop and a Device Error (minor malfunction) alarm will be gener-
- $\textbf{(8)} \ A void \ use \ or \ storage \ in \ 30^{\circ}\text{C} \ or \ higher \ temperatures \ for \ extended \ periods \ of \ time, or \ the \ battery \ life \ will \ shorten. \ If \ a \ UPS \ is \ to \ be$ stored for a long period, it will be necessary to recharge batteries once every two to six months.

 (9) Used for mounting the UPS in 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.9

Terminal block portion

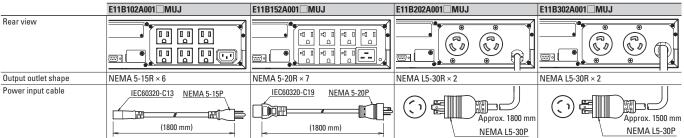




100 v model UL/CE/UKCA certified models

Model no. Model no. (F	Fixed Double Conversion	mode)		E11B102A001AMUJ E11B102A001DMUJ	E11B152A001AMUJ E11B152A001DMUJ	E11B202A001AMUJ E11B202A001DMUJ	E11B302A001AMUJ E11B302A001DMUJ			
JL-registere	ed no.			E11B102U001J	E11B152U001J	E11B202U001J	E11B302U001J			
ated outpu	it capacity (apparent pov	ver / active po	ower)	1 kVA / 0.8 kW	1.5 kVA / 1.2 kW	2 kVA / 1.6 kW	3 kVA / 2.4 kW			
chnology	Topology			Hybrid ⁽¹⁾						
eciliology	Cooling system			Forced air cooling						
Model no. (Fixed E JL-registered no. Rated output capa Topo Coolin	No. of phases/wires			Single-phase 2-wire(2)						
	Rated voltage			100/110/115/120 V (Sam	e as output)					
				At load level < 40%: 55	to 150 V	At load level < 40%: 55	to 150 V			
	Voltage range	In Double C	onversion mode	At load level < 70%: 68	to 144 V	At load level < 70%: 68	to 140 V			
	voitage range			At load level ≥ 70%: 80 t	to 144 V	At load level ≥ 70%: 80	to 140 V			
		In Economy	mode	Within ±8% of rated vo	oltage					
AC input	Rated frequency			50/60 Hz (auto-sensing)	3))					
		Fixed Double Conversion mode			equency (Synchronization r	ange)				
	Eroguanov rango	Fixed Doubl	e Conversion mode	40 to 120 (Asynchronou	s operation range)		-			
	Frequency range		- transfer cetting	Within ±1/3/5% of rate	d frequency (Factory setting	j is ±3%. Synchronization r	ange)			
		In automatic transfer setting			s operation range)					
	Required capacity(4)			1.1 kVA or less	1.5 kVA or less	2.2 kVA or less	3 kVA or less			
	Input power factor			0.95 or greater			<u> </u>			
	No. of phases/wires			Single-phase 2-wire						
	Rated voltage (Change	able with sett	ings)	100/110/115/120 V (Fact	ory setting: 100 V)					
	V I: 1 -1	In Double C	onversion mode	Within ±2% of rated vo						
	Voltage regulation	In Economy	mode	Within -10 to +8% of rat						
	Rated frequency (same	as input)		50/60 Hz	J					
	1 / /			Within ±1% of rated fr	eauencv					
	Frequency regulation	operation	In automatic transfer setting		d frequency (Factory setting	ı: ±3%)	•			
	.,,.,	In battery o		Within ±0.5% of rated frequency (This applies during asynchronous operation too)						
(A	Voltage harmonic distortion		At linear load	3% or less						
	(At rated output)		At rectifier load	8% or less						
	Load power factor	Rated		0.8 lagging (Variation ra	inge: 0.7 lagging to 1.0)					
		For abrupt I	oad change		oltage (For 0⇔100% load ste	n changes at rated input)				
	Transient voltage			Within ±5% of rated voltage (At rated output)						
	fluctuation	-	nput voltage change	Within ±5% of rated voltage (For ±10% abrupt change)						
	Overcurrent protection			Automatic transfer to bypass (With automatic retransfer function)						
	·	Inverter	In Double Conversion mode	105% (for 200 ms)						
	Overload capability	Bypass		200% (for 30 s), 800% (for 2 cycles)						
	Type	//		Small-sized valve-regulated lead-acid (VRLA) battery 3 min (5 min)						
	Battery backup time(5)									
	Expected life				g temperature of 25°C For re	ference nurnoses only)				
3attery	Battery capacity	(Ah-cell)		108	162	216	324			
	, , ,	(Wh)		204	306	408	612			
	Battery self-test			Automatic	1	1	1			
	PC port			RS-232C, USB Type B ⁽⁶⁾ (Cannot be used at the same time)						
	Remote port			Remote ON/OFF						
nterface	Dry contact output			Optional dry contact int	erface card is required					
	Network support			Optional LAN interface						
Acoustic no	ise (In Double Conversion mo	ode)		45 dB	51 dB	55 dB				
Heat dissipa	ation (In Double Conversion n	node at rated ou	tput, after battery charging completed)	130 W	195 W	260 W	390 W			
nput leakag	ge current			3 mA or less		3.5 mA or less	L			
Operating e	nvironment				10 to +40°C, ⁽⁷⁾ relative humid		sing)			
Storage env					15 to +60°C, relative humidit					
Safety stand					6092), CSA C22.2 No. 107.3-					
	ervice life (of the UPS uni	t excluding b	attery)		age ambient temperature. Fo	, .,				
EMC standa				7	15 Subpart B Class A, EN 62040-2		N 62040-2:2006, EN 55035:2017/			
Separate op						,				
Vertical star				STAND2UA00			_			
	ing brackets			FM2UA00			FM2UA01			
				RM030-US (2U)			12001			
Rack suppor	rt rails"									

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double Conversion mode for applications that require uninterrupted transfer.
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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% (±1/3/5% selectable).
- (4) Max. capacity during battery recovery charging
- (5) At a 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries. In parentheses are values at a 0.7 load power factor.
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, 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, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.
- (9) Used for mounting the UPS in 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.

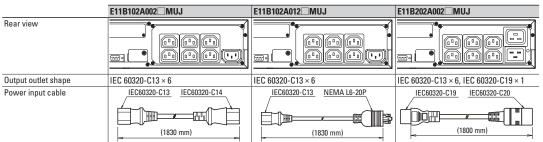


Specifications

200 y model UL/CE/UKCA certified models

		•		E11B102A002AMUJ	E11B102A012AMUJ	E11B202A002AMUJ			
THE CONTRACTOR OF THE		n mode)			E11B102A012DMUJ	E11B202A002DMUJ			
UL-registered n				E11B102U002J	E11B102U002J	E11B202U002J			
	<u> </u>	wer / active	power)	-		2 kVA / 1.6 kW			
- Co	- '			-					
Rat	ated voltage	Double Conversion mode			tput)				
				E1181020002J E1181020002J E1181020002J E1182020002J E118202002J E1182020002J E118202002J E11820202J E118202D E11820202J E11820202J E11820202J E11820202J E118202D					
Vo	oltage range	In Double C	onversion mode						
	3				_	At load level ≥ 70%: 160 to 280 V			
		In Economy	mode						
AC input Rat	ated frequency								
		Fixed Doubl	e Conversion mode	ļ	<i></i>				
Fre	tutput capacity (apparent power / active power) Topology Cooling system No. of phases/wires Rated voltage Voltage range In Double Conversion mode In Economy mode Rated frequency Frequency range Required capacity** Input power factor No. of phases/wires Rated voltage (Changeable with settings) Voltage regulation Rated frequency (same as input) Frequency regulation Frequency regulation Voltage harmonic distortion (At rated output) Load power factor Transient voltage fluctuation Overcurrent protection Overload capability Type Battery backup time* Battery capacity (Ah-cell) (Wh) Battery self-test PC port Remote port Dry contact output Network support c noise (In Double Conversion mode) Sisipation (In Double Conversion mode) Sisipation (In Double Conversion mode) Standards de service (In Gouble Conversion mode) Standards de service (In Gouble Conversion mode) Standards de service (In Gouble Conversion mode) Standards de service (If (In Gouble Conversion mode) Standards de service (In Gouble Conversion mode) Standards de service (If (In Gouble Conversion mode) Standards de options			<u> </u>		-:-			
						tion range)			
_			-		range)	0.011/4			
	· · · · · · · · · · · · · · · · · · ·					2.2 KVA or less			
		- h.l	**:\						
на	ated voitage (Change	·	-		ang: 200 V)				
Vo	oltage regulation			<u> </u>					
D.			mode						
Кат	ated frequency (same		Fixed Dauble Conversion made						
F				<u> </u>	/F				
FIE	equency regulation	•				1 +00			
AC output Vo	altaga harmania diata								
		THOII							
· ·	• •	Datad	At rectiller load		raina to 1.0\				
LUG	Jau power ractor								
Tra	ransient voltage								
flu	uctuation								
Ωv	vercurrent protection		npar voitago onango	•					
	·		In Double Conversion mode		r datedate retrainerer rametterny				
0v	verload capability		Double conversion meas						
Tyr	/pe								
	·			-	,				
Ext				5 years (At an operating temperatu	ure of 25°C. For reference purposes only	()			
Rafferv —		(Ah-cell)							
	, , ,	(Wh)		204	204	408			
Ba	attery self-test			Automatic					
PC	C port			RS-232C, USB Type B ⁽⁶⁾ (Cannot be	used at the same time)				
Interfese Re	emote port			Remote ON/OFF					
Interface Dry	ry contact output			Optional dry contact interface care	d is required				
Ne	etwork support			Optional LAN interface card is req	uired				
Acoustic noise	(In Double Conversion mo	de)							
Heat dissipation	n (In Double Conversion m	node at rated ou	tput, after battery charging completed)	130 W					
Input leakage c									
Operating envir									
Storage environ									
						•			
Safety standard		excluding ba	ttery)						
Expected service				VCCI 32-1 Class A, FCC Part 15 Subpart B	Class A, EN 62040-2 C2:2010, EN 55032:2015 Clas	s A, EN 62040-2:2006, EN 55035:2017/A11:2020			
Expected service EMC standard									
Expected service EMC standard Separate option				T==					
Expected service EMC standard Separate option Vertical stands	3								
Expected service EMC standard Separate option Vertical stands Floor mounting	s j brackets			FM2UA00					
Expected service EMC standard Separate option Vertical stands	s j brackets								

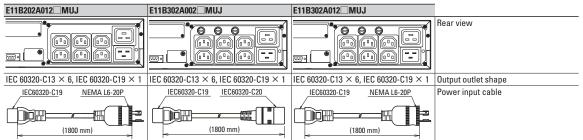
- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double $\label{lem:conversion} \mbox{Conversion mode for applications that require uninterrupted transfer.}$
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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 $\pm 3\%$ ($\pm 1/3/5\%$ selectable).
- (4) Max. capacity during battery recovery charging (5) At a 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries. In parentheses are values at a 0.7 load power factor.
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, battery charging will stop and a Device Error (minor malfunction) alarm will be generative.
- (8) Avoid use or storage in 30°C or higher temperatures for extended periods of time, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.
- (9) Used for mounting the UPS in 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.



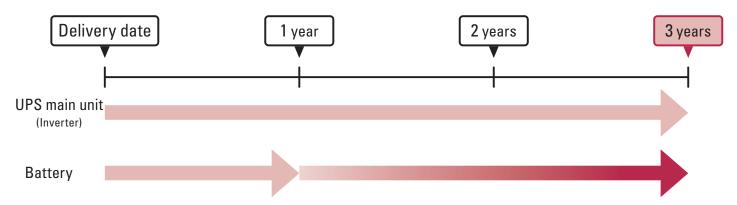
UL/CE/UKCA certified models 200 v model

E11B202A012AMUJ	E11B302A002AMUJ	E11B302A012AMUJ	Model no.					
E11B202A012DMUJ	E11B302A002DMUJ	E11B302A012DMUJ	Model no. (Fixed Double Conversion mo					
E11B202U002J	E11B302U002J	E11B302U002J	UL-registered no.					
2 kVA / 1.6 kW	3 kVA / 2.4 kW		Rated output capacity (apparent power)	/ active power)				
Hybrid ⁽¹⁾			Topology	Topology				
Forced air cooling			Cooling system	Technolog				
Single-phase 2-wire(2)			No. of phases/wires	No. of phases/wires				
200/208/220/230/240 V (Same			Rated voltage					
At load level < 40%: 110 to 300								
At load level < 70%: 136 to 280			In Double Conversion mode					
At load level ≥ 70%: 160 to 280) V			Voltage range				
Within $\pm 8\%$ of rated voltage			In Economy mode					
50/60 Hz (auto-sensing ⁽³⁾)			Rated frequency		AC input			
Within $\pm 1\%$ of rated frequen	cy (Synchronization range)		Fixed Double Conversion mode					
40 to 120 (Asynchronous oper			Tixed Double Conversion mode					
Within \pm 1/3/5% of rated freq	uency (Factory setting is $\pm 3\%$. Syn	chronization range)	In automatic transfer setting					
40 to 120 (Asynchronous oper	ation range)		in automatic transfer setting					
2.2 kVA or less	3 kVA or less		Required capacity ⁽⁴⁾					
0.95 or greater			Input power factor					
Single-phase 2-wire		No. of phases/wires						
200/208/220/230/240 V (Factor	y setting: 200 V)	Rated voltage (Changeable with settings	s)					
Within ±2% of rated voltage		Fixed Double Conversion mode	Valta a a va a ulati a a					
Within -10 to +8% of rated vol	tage	In Economy mode	Voltage regulation					
50/60 Hz			Rated frequency (same as input)		7			
Within ±1% of rated frequen	су		Fixed Double Conversion mode In grid		1			
Within ±1/3/5% of rated freq	uency (Factory setting: ±3%)	•	In automatic transfer setting operation	Frequency regulation				
	ency (This applies during asynchron	ous operation too)	In battery operation					
3% or less	7 - 11			harmonic distortion	AC output			
8% or less			At rectifier load (At rated					
0.8 lagging (Variation range: 0	1.7 lagging to 1.0)		Rated	Rated Load power factor				
00 0.	(For 0⇔100% load step changes at	rated input)	For abrupt load change	· ·	1			
Within ±5% of rated voltage			For loss/return of input power	Transient voltage				
Within ±5% of rated voltage	· · · · · · · · · · · · · · · · · · ·		For abrupt input voltage change	— fluctuation				
	(With automatic retransfer function)	Overcurrent protection		1			
105% (for 200 ms)		,	In Double Conversion mode Inverter	Overload capability	1			
200% (for 30 s), 800% (for 2 cy	cles)		Bypass					
Small-sized valve-regulated l			Туре					
3 min (5 min)	oud doid (THE I) butto. Y		Battery backup time ⁽⁵⁾		-			
	erature of 25°C. For reference purpo	nses only)	Expected life		1			
216	324	324	(Ah-cell)	Battery				
408	612	612	(Wh)					
Automatic	012	012	Battery self-test		-			
RS-232C, USB Type B ⁽⁶⁾ (Cann	ot he used at the same time)		PC port					
Remote ON/OFF	or bo dood at the bame time,		Remote port		1			
Optional dry contact interface	card is required		Dry contact output		Interface			
Optional LAN interface card i			Network support		-			
55 dB	s required							
260 W	390 W			Acoustic noise (In Double Conversion mode) Heat dissipation (In Double Conversion mode at rated output, after battery charging complet				
3.5 mA or less	350 VV		Input leakage current	t rated output, after battery chai	ging completed			
	40°C (7) relative humidity: 20 to 90%	non condensing)						
	-40°C, ⁽⁷⁾ relative humidity: 20 to 90% (-60°C, relative humidity: 20 to 90% (n	<u> </u>	Operating environment Storage environment(8)					
		on-condensing) , CE marking (EN 62040-1:2008/A1:2013)	Safety standards					
			·	uding hottons				
	nbient temperature. For reference pr		Expected service life (of the UPS unit excl	uumg battery)				
VUUI 32-1 Class A, FUU Part 15 Subp	art b Class A, EN 62040-2 C2:2010, EN 55032	:2015 Class A, EN 62040-2:2006, EN 55035:2017/A11:20						
CTANDOLIAGO			Separate options					
STAND2UA00	- -		Vertical stands					
FM2UA00	FM2UA01		Floor mounting brackets					
RM030-US (2U)			Rack support rails ⁽⁹⁾					
FL011			Air filter ⁽¹⁰⁾					

- (1) When the UPS transfers from Economy mode to battery operation, there will be an interruption of approximately 8 ms. This can be caused by abrupt changes of input voltage or frequency while a UPS operates in Economy mode. Fix the operation mode to Double $\label{lem:conversion} \mbox{Conversion mode for applications that require uninterrupted transfer.}$
- (2) If single-wire grounding the AC input and output, set the input/output ground phase according to the UPS specification. The W (N) terminal of AC input (S phase) and the W (N) terminal of AC output (V phase) are to be grounded.
- (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 $\pm 3\%$ ($\pm 1/3/5\%$ selectable).
- (4) Max. capacity during battery recovery charging
- (5) At a 25°C ambient temperature and load power factor of 0.8, using new, fully charged batteries. In parentheses are values at a 0.7 load
- (6) Use of USB interface requires driver installation.
- (7) When the ambient temperature exceeds 40°C, battery charging will stop and a Device Error (minor malfunction) alarm will be generative.
- (8) Avoid use or storage in 30°C or higher temperatures for extended periods of time, or the battery life will shorten. If a UPS is to be stored for a long period, it will be necessary to recharge batteries once every two to six months.
- (9) Used for mounting the UPS in 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.



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 20 kWh. 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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