

Hybrid UPS

SANUPS E11B

UPS Achieving Power Quality and Efficiency For Use Around the Globe

Lineup

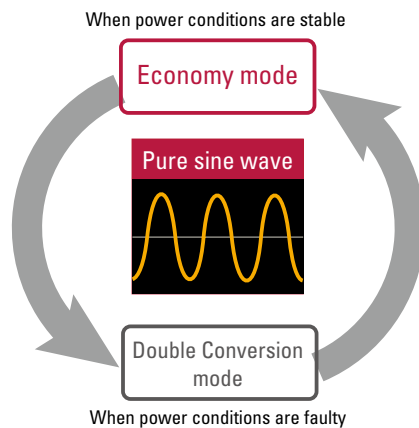
[No. of phases/wires] Input/Output voltage	Output capacity		Battery backup time*
	[kVA]	[kW]	Standard
[Single-phase 2-wire] 100 V model 100/110/115/120 V	1	0.8	3 min
[Single-phase 2-wire] 200 V model 200/208/220/230/240 V	1	0.8	3 min

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



Power Quality Mode and Energy-Saving Mode

- The E11B employs a hybrid UPS topology.* The UPS automatically selects the optimal mode of operation for any given input power conditions. It achieves energy savings while providing high-quality power to loads when needed.



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

Wide Input Voltage Range

- The 100 V and 200 V models have wide input voltage ranges of 55 to 150 V and 110 to 300 V,** respectively. Both models have a wide input frequency range of 40 to 120 Hz.
- Even with poor power conditions, these wide ranges reduce the number of unnecessary transfers to battery power, minimizing battery drain.

** At a load level less than 40%.

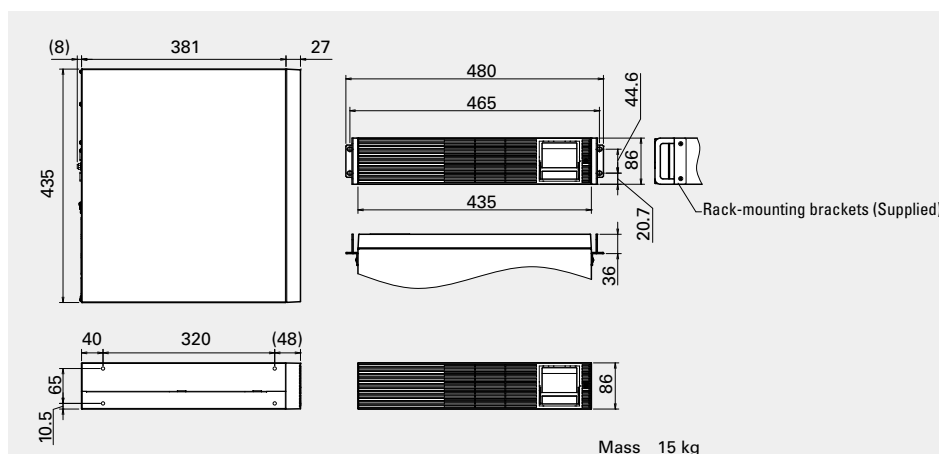
Wide Operating Temperature Range

- The E11B has a wide operating temperature range of -10 to +55°C.

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.

Dimensions (Unit: mm)



Specifications

Model no.	E11B102A001AM		E11B102A002AM	Remarks	
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	100/110/115/120 V	200/208/220/230/240 V	Same as AC output	
	Voltage range	During Double Conversion mode	At load level < 40%: 55 to 150 V	At load level < 40%: 110 to 300 V	
			At load level < 70%: 68 to 144 V	At load level < 70%: 136 to 288 V	
		During 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)		
		In automatic transfer setting	40 to 120 Hz (Asynchronous operation range)		
	Required capacity ⁽⁴⁾	1.1 kVA			
	Input power factor	0.95 or greater			
AC output	No. of phases/wires	Single-phase 2-wire			
	Rated voltage	100/110/115/120 V (Factory setting: 100 V)	200/208/220/230/240 V (Factory setting: 200 V)	Changeable with settings	
	Voltage regulation	During Double Conversion mode	Within ±2% of rated voltage		
		During Economy mode	Within -10 to +8% of rated voltage		
	Rated frequency	50/60 Hz		Same as the input rated frequency	
	Frequency regulation	During grid operation	In Double Conversion mode fixed setting	Within ±1% of rated frequency	
			In automatic transfer setting	Within ±1, 3, or 5% of the rated frequency (Factory setting: ±3%)	
		During battery operation	Within ±0.5% of rated frequency (This applies during asynchronous operation too)		
	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 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	105% (for 200 ms)			
	Bypass	200% (for 30 s), 800% (for 2 cycles)			
Battery	Type	Small-sized valve-regulated lead-acid (VRLA) battery			
	Battery backup time ⁽⁵⁾	3 min			
	Expected life	Approx. 5 years			
	Battery capacity [W]	34		@15minute-rate	
	Battery self-test	Automatic			
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 (during Economy mode)	40 dB				
Heat dissipation (during Double Conversion mode)	130 W (At rated operation, after battery charging completed)				
Input leakage current	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)				
EMC standard	VCCI Class A				
Separate options					
UPS unit rack support rail ⁽⁹⁾	RM030 (2U)				

(1) When the UPS transfers from Economy mode to battery operation, interruption of less than 8 ms will occur. Please fix the operation mode to Double Conversion mode for applications that require uninterrupted transfers.

(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.

(6) Use of USB interface requires driver installation.

(7) Battery charging will stop when battery temperature exceeds 40°C.

(8) To extend battery life, avoid use or storage for extended periods of time in environments exceeding +30°C. If a UPS is stored without being operated for a long period, the batteries require recharging once every six months.

(9) Used for mounting a UPS unit or battery unit on a standard 19-inch rack.