

# SANUPS A13A

Online UPS

Ver. 1  
English



# SANUPS A13A

## Lineup

| [No. of phases/wires]<br>Input/Output voltage               | Output capacity |      | Battery backup time* |               | Model   |
|---|-----------------|------|----------------------|---------------|---------|
|   | [kVA]           | [kW] | Built-in battery     | Battery panel |         |
| [3-phase 3-wire]<br>200 V <sub>model</sub><br>200/210/220 V | 6.25            | 5    | 8 min                | 30/60 min     | A13A622 |
|   | 12.5            | 10   |                      |               | A13A123 |
|   | 18.75           | 15   |                      |               | A13A183 |
|   | 25              | 20   |                      |               | A13A253 |

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



### High Efficiency

- This UPS achieves a conversion efficiency of 92%, contributing to reduced power consumption and CO<sub>2</sub> emissions.

### High Reliability

- By combining 6.25 kVA UPS modules, output capacity can be expanded to up to 25 kVA, or up to 18.75 kVA for parallel redundant operation. The parallel redundant operation allows one unit to be used as a spare, delivering a highly reliable and stable power supply to loads.

### Wide Input Voltage Range

- Its wide operating voltage range reduces the number of unnecessary transfers to battery power, preventing battery degradation.

|                      |                                     |
|----------------------|-------------------------------------|
| At load levels ≥ 80% | Within ±15% of rated voltage        |
| At load levels < 80% | Within -30 to +15% of rated voltage |

### ■ Inverter panel



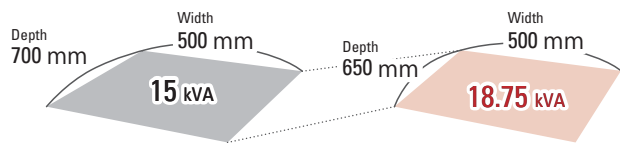
|                              |                 |                  |                   |                   |
|------------------------------|-----------------|------------------|-------------------|-------------------|
| Parallel operation           | 6.25 kVA / 5 kW | 12.5 kVA / 10 kW | 18.75 kVA / 15 kW | 25 kVA / 20 kW    |
| Parallel redundant operation | —               | 6.25 kVA / 5 kW  | 12.5 kVA / 10 kW  | 18.75 kVA / 15 kW |

### Long Service Life

- The UPS has a long expected life of 15 years, reducing capital investment and replacement costs.

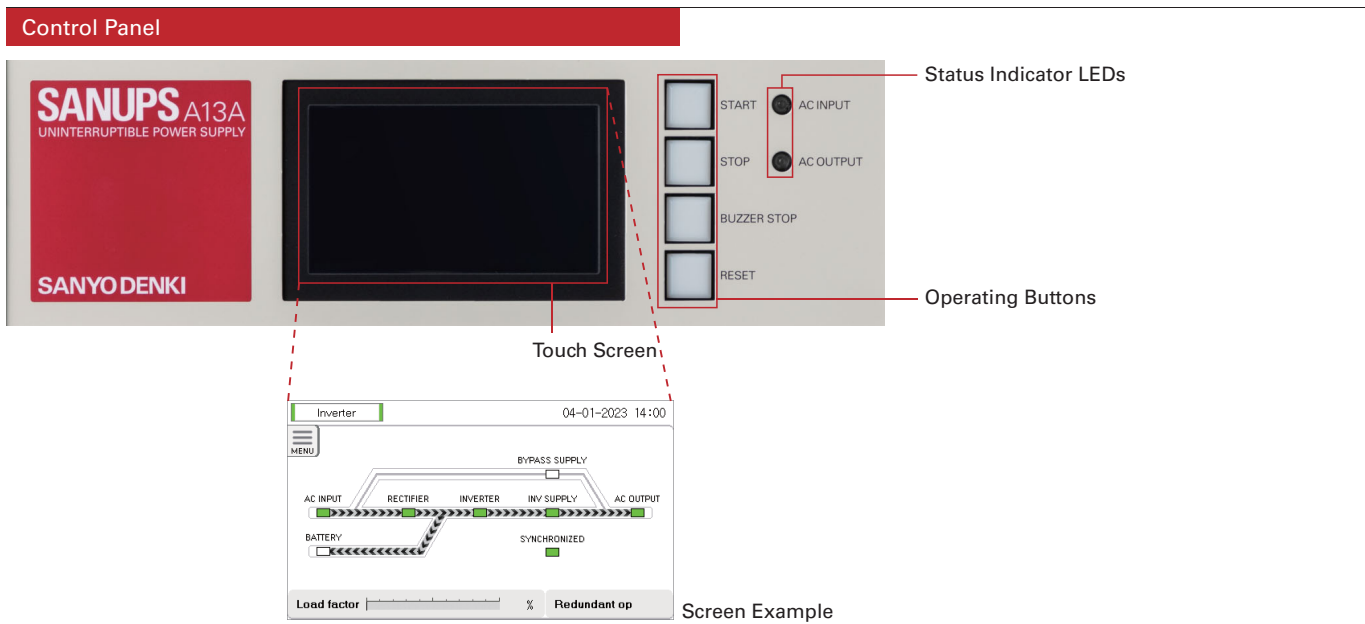
### Space-Saving

- The footprint per unit of output capacity has been reduced by 10% compared to our current product.

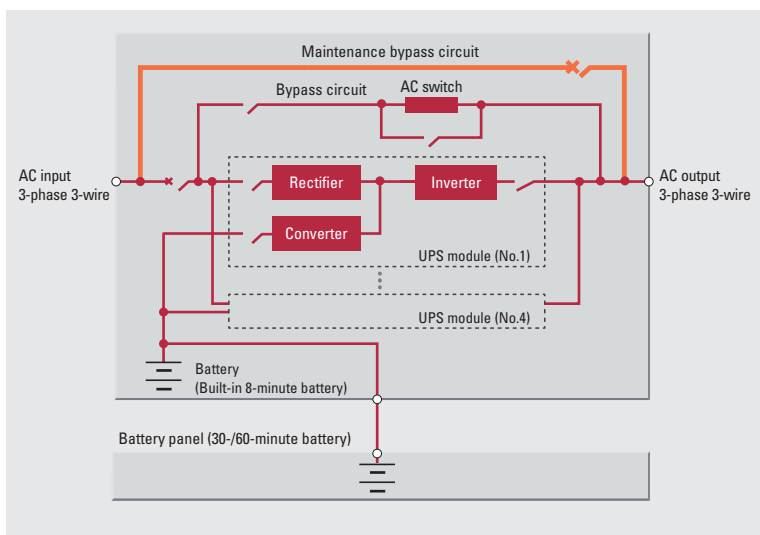


### Bypass Circuit Diagnostics (patent being processed)

- Bypass circuit abnormalities can be diagnosed while the load is powered by the inverter. If an abnormality is detected, the bypass circuit can be replaced without interrupting the power supply from the inverter. Running diagnostics before maintenance work provides peace of mind.



**Circuit Block Diagram**



By combining four UPS modules, output capacity can be expanded to up to 25 kVA or up to 18.75 kVA for parallel redundant operation. Redundant operation can be performed by having one UPS module in excess as a spare unit.

**Network Options**

| Item               | Model no.         | Remarks  |
|--------------------|-------------------|--|
| LAN interface card | <b>PRLANIF032</b> | 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. The LAN interface card will be shipped installed in the UPS.<br>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. |

**Specifications**

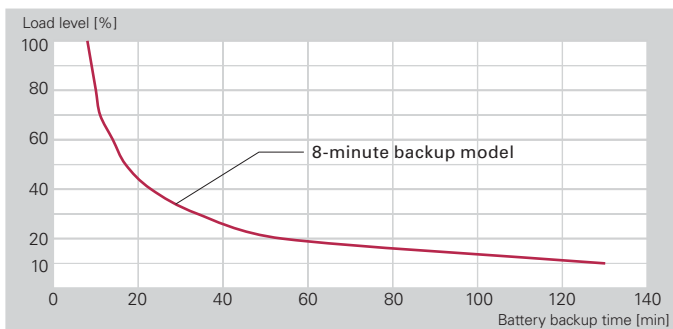
| Model   | A13A622  | A13A123  | A13A183                             | A13A253                  | Remarks  |   |
|---|--|--|-------------------------------------|--------------------------|--|---|
| Rated output capacity (apparent power / active power)     | 6.25 kVA / 5 kW  | 12.5 kVA / 10 kW   | 18.75 kVA / 15 kW                   | 25 kVA / 20 kW           |  |   |
| Technology  | Topology   | Double conversion online   |                                     |                          |  |   |
|   | Cooling system   | Forced air cooling   |                                     |                          |  |   |
|   | Rectifier  | High power factor converter  |                                     |                          |  |   |
|   | Inverter   | High-frequency PWM, instantaneous waveform control   |                                     |                          |  |   |
| AC input  | No. of phases/wires  | 3-phase 3-wire   |                                     |                          |  |   |
|   | Rated voltage  | 200/210/220 V  |                                     |                          | Same as AC output  |   |
|   | Voltage range  | At load levels $\geq 80\%$ : Within $\pm 15\%$ of rated voltage<br>At load levels $< 80\%$ : Within -30 to +15% of rated voltage |                                     |                          |  |   |
|   | Rated frequency  | 50/60 Hz   |                                     |                          | To be selected at the time of order                              |   |
|   | Frequency range  | Within $\pm 10\%$ of rated frequency   |                                     |                          | Operation guaranteed within this range                           |   |
|   | Current harmonic distortion  | 10% or less  |                                     |                          | At rated output  |   |
|   | Input power factor   | 0.98 or greater  |                                     |                          | At rated output  |   |
| AC output   | No. of phases/wires  | 3-phase 3-wire   |                                     |                          |  |   |
|   | Rated voltage  | 200/210/220 V  |                                     |                          | To be selected at the time of order                              |   |
|   | Voltage regulation   | Within $\pm 2\%$ of rated voltage  |                                     |                          | In grid operation  |   |
|   | Rated frequency  | 50/60 Hz   |                                     |                          | Same as AC input   |   |
|   | Frequency regulation   | Within $\pm 0.5\%$ of rated frequency  |                                     |                          | At free run (asynchronous)                                       |   |
|   | Grid synchronized range  | Within $\pm 15\%$ of 200/210/220 V, within $\pm 1\%$ of rated frequency ( $\pm 1/3/5\%$ selectable)                              |                                     |                          | To be selected at the time of order                              |   |
|   | Voltage harmonic distortion  | At linear load   | Within 2%                           |                          |  | At rated input operation                            |
|   |  | At rectifier load  | Within 5%                           |                          |  | At rated input operation and at 100% rectifier load |
|   | Voltage unbalance  | Within 2%  |                                     |                          | At 100% unbalanced load  |   |
|   | Load power factor  | Rated  | 0.8 (lagging)                       |                          |  |   |
|   |  | Variation range  | 0.7 to 1.0 (lagging)                |                          |  |   |
|   | Transient voltage fluctuation <sup>(1)</sup>                                   | Abrupt input voltage change  | Within $\pm 2\%$ of rated voltage   |                          |  | For loss/return of input power                      |
|   |  | Abrupt load change   | Within $\pm 5\%$ of rated frequency |                          |  | For 0 $\leftrightarrow$ 100% load step changes      |
|   |  | Output transfer  | Within $\pm 5\%$ of rated voltage   |                          |  | During bypass to inverter transfer at rated output  |
| Overload capability                                       | Inverter   | 125% (for 10 min), 150% (for 1 min)  |                                     |                          | At rated input and rated load power factor                       |   |
|   | Bypass   | 200% (for 30 s), 800% (for 2 cycles)   |                                     |                          | At rated input and rated load power factor                       |   |
| Overcurrent protection                                    | Uninterrupted transfer to bypass at approx. 150% or more                       |  |                                     |                          | Automatic retransfer after restored to normal condition          |   |
| Acoustic noise  | 50 dB or less  | 50 dB or less  | 55 dB or less                       | 55 dB or less            | 1 m from front of UPS, A-weighting (With a linear load)          |   |
| Heat dissipation  | 0.5 kW   | 1.0 kW   | 1.5 kW                              | 2.0 kW                   | At rated output, after battery charging completed <sup>(2)</sup> |   |
| Cooling airflow   | 3 m <sup>3</sup> /min  | 6 m <sup>3</sup> /min  | 8 m <sup>3</sup> /min               | 10 m <sup>3</sup> /min   | At rated output, after battery charging completed <sup>(2)</sup> |   |
| Battery type  | Small-sized valve-regulated lead-acid (VRLA) battery                           |  |                                     |                          |  |   |
| Ventilation rate required in battery panel <sup>(3)</sup> | 0.18 m <sup>3</sup> /min   | 0.37 m <sup>3</sup> /min   | 0.53 m <sup>3</sup> /min            | 0.72 m <sup>3</sup> /min |  |   |
| Operating environment                                     | Temperature: 0 to 40°C, humidity: 30 to 90% RH (non-condensing)                |  |                                     |                          |  |   |
| Expected service life (of the UPS unit excluding battery) | 15 years (At a 30°C average ambient temperature. For reference purposes only.) |  |                                     |                          |  |   |

(1) Complies with the transient voltage fluctuation characteristics (classification 1) in JEC-2433:2016

(2) Calculated using conditions of the rated load power factor, a 40°C room temperature, and a 30°C outside temperature.

(3) Calculated using the maximum charge current of the UPS.

**Load Level vs Backup Time**



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

**Dimensions (Unit: mm)**

**Inverter panel**

| Model          | Capacity  | W   | D   | H1   | H2  | Mass*        |
|----------------|-----------|-----|-----|------|-----|--------------|
| <b>A13A622</b> | 6.25 kVA  | 500 | 650 | 1075 | 125 | 220 (170) kg |
| <b>A13A123</b> | 12.5 kVA  | 500 | 650 | 1075 | 125 | 320 (220) kg |
| <b>A13A183</b> | 18.75 kVA | 500 | 650 | 1370 | 125 | 430 (270) kg |
| <b>A13A253</b> | 25 kVA    | 650 | 650 | 1545 | 125 | 550 (340) kg |

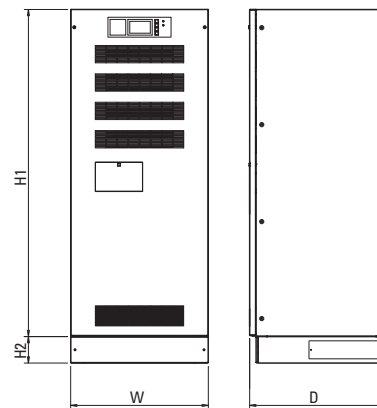
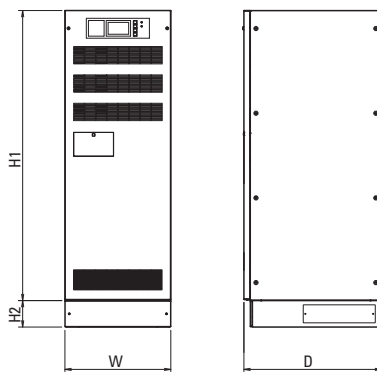
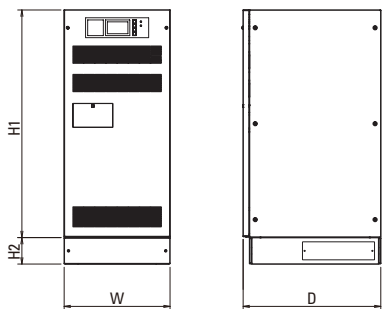
A dustproof filter (option) can be installed to the air duct of the device. Consult us for details at the time of order.

\* The values in parentheses are the mass excluding the built-in battery.

Model no.: **A13A622 / A13A123**

Model no.: **A13A183**

Model no.: **A13A253**

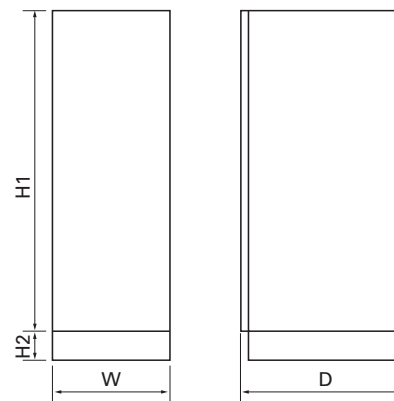


Paint color: Ivory (Munsell 6.6Y 8.3/0.8)

**Battery panel**

| Capacity  | Backup time* | Battery         |           | W   | D   | H1   | H2  | Mass    | Number of faces |
|-----------|--------------|-----------------|-----------|---|-----|------|-----|---------|-----------------|
|           |              | Number of cells | Capacity  |   |     |      |     |         |                 |
| 6.25 kVA  | 8 min        | 108             | 9Ah       | Battery is built into the inverter panel. |     |      |     |         |                 |
|           | 30 min       |                 | 28 Ah     | 500                                       | 700 | 1075 | 125 | 420 kg  | 1               |
|           | 60 min       |                 | 44 Ah     | 600                                       |     |      |     | 550 kg  | 1               |
| 12.5 kVA  | 8 min        | 108             | 9Ah × 2   | Battery is built into the inverter panel. |     |      |     |         |                 |
|           | 30 min       |                 | 28 Ah × 2 | 500                                       | 700 | 1825 | 125 | 590 kg  | 1               |
|           | 60 min       |                 | 44 Ah × 2 | 600                                       |     |      |     | 820 kg  | 1               |
| 18.75 kVA | 8 min        | 108             | 9Ah × 3   | Battery is built into the inverter panel. |     |      |     |         |                 |
|           | 30 min       |                 | 44 Ah × 2 | 600                                       | 700 | 1825 | 125 | 820 kg  | 1               |
|           | 60 min       |                 | 44 Ah × 3 | 700                                       |     |      |     | 1250 kg | 1               |
| 25 kVA    | 8 min        | 108             | 9Ah × 4   | Battery is built into the inverter panel. |     |      |     |         |                 |
|           | 30 min       |                 | 44 Ah × 3 | 700                                       | 700 | 1825 | 125 | 1250 kg | 1               |
|           | 60 min       |                 | 44 Ah × 4 | 1200                                      |     |      |     | 1640 kg | 2               |

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



Paint color: Ivory (Munsell 6.6Y 8.3/0.8)

# MEMO

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# *MEMO*

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## ■ 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 (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.
- Refrain from modifying or processing the product 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 maintenance support period after discontinuation is 6 years.
- 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.
- Products that have lithium-ion batteries listed in the catalog cannot be transported by air. When transporting by sea, transport must be carried out according to the International Maritime Dangerous Goods (IMDG) Code. Also, some countries and regions have their own regulations, so please consult with the shipping company in advance.

For any inquiry or consultation, please contact a SANYO DENKI sales representative.