

Unicont SPb Ltd

**Power Supply Unit
PS-203-40A**

Technical Documentation

(20340-2-13072011)

St. Petersburg
2011

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1. Purpose

The PS-203-40A power supply unit (PSU) is designed to feed unregulated 24 VDC to various pieces of shipboard or industrial equipment and various devices needing uninterrupted power supply.

2. Delivery Set

- | | |
|---------------------------------|---------|
| 1. Power supply unit PS-203-40A | 1 piece |
| 2. Operation manual | 1 piece |

3. Specifications

| | |
|----------------------|------------------------------|
| Supply voltage | 90 – 132 VAC / 180 – 264 VAC |
| AC Input Frequency: | 47 – 63 Hz |
| Rated output voltage | 24 VDC |
| Rated load current | 41,7 A |
| Rated power | 1000,8 W |
| Maximum ripple | 200 mV |
| Efficiency | 88% |

General characteristics:

| | |
|---------------------|----------------------|
| Overall dimensions | 433 x 305 x 130.4 mm |
| Working temperature | -20...+55 °C |
| Storage temperature | -60...+70 °C |
| Maximum weight | 15 kg |
| Index of protection | IP 22 |

Input voltage (220 VAC) is indicated with a yellow LED.

When the main power supply is ON, the output voltage (24 VDC) is indicated with a green LED.

The output power supply is galvanically isolated from the mains.

4. Basic Functions and Technical Description

The PSU gets 220 VAC, 50/60 Hz from the mains and provides 24 VDC at the output. The PSU circuitry includes a step-down transformer, an electronic rectifier, emergency supply switching circuits and an output for an external alarm unit.

In addition to the mains, the *BATT* terminals of the PSU are powered from standby sources or from rechargeable batteries so as to ensure trouble-free operation of the equipment connected to the PSU.

The PSU will be switched over to a standby source automatically if the main power source fails, is turned off or is unavailable at the PSU. If there is a failure in the input power supply, dry contacts of the relay open and an alarm signal of the PSU is generated in response to that. The *OUT_ALARM* terminal block is powered from rechargeable batteries in order to feed the external alarm unit. Thus, no additional supply circuit powered from another source is required for the alarm unit.

There is a circuit breaker to protect the PSU from any short circuit that may occur in the output circuit. If the PSU is switched off due to a short circuit, it will be necessary to eliminate the cause of such short circuit and switch the circuit breaker on.

5. Installation and Connection of the PSU

1) Install the PSU on a vertical bulkhead or on a mounting panel as shown in the dimension-and-installation drawing (Fig. 1). There are special holes in the PSU body to attach the PSU. The fasteners (such as screws and bolts) are fitted inside the body.

2) Connect cables of external devices and power supply sources to the PSU terminals as shown in Fig. 2.

3) Switch on the PSU with the switch that is on the side panel of the body.

4) Make sure the PSU is working properly (feed output power to the equipment connected to the PSU).

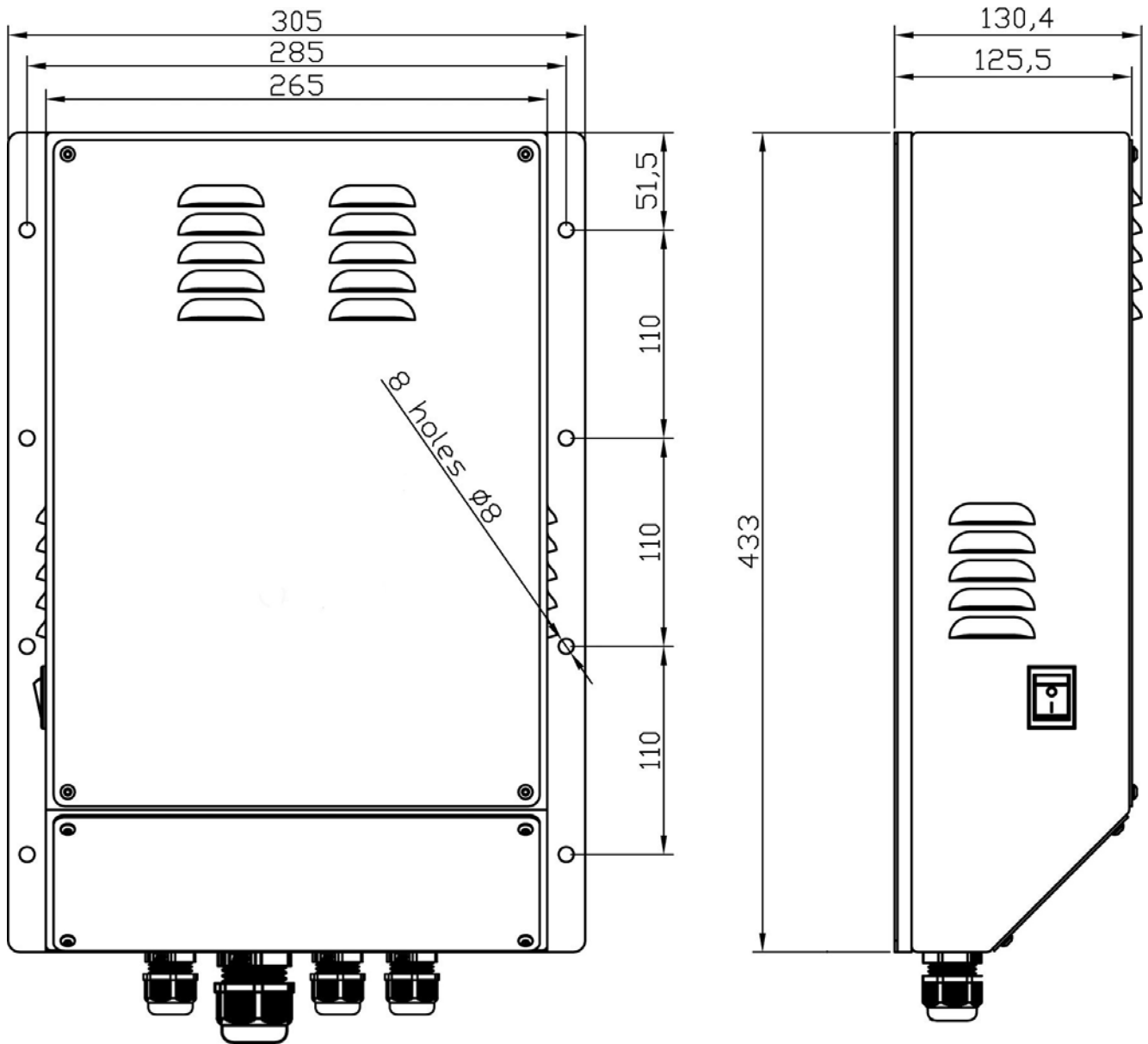


Figure 1. The PSU dimension-and-installation drawing

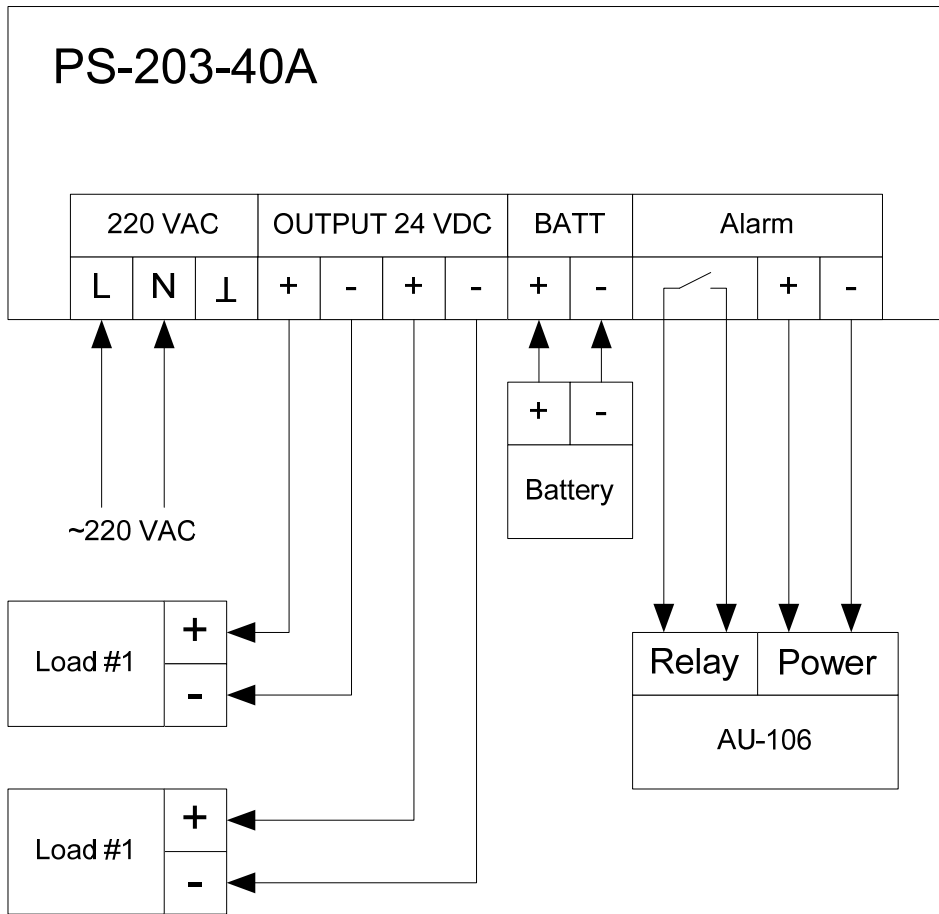


Figure 2. The PS-203-60A connection diagram

6. Transportation and Storage

The device shall be stored in heated space at air temperature of +5 °C to +35 °C (maximum values of –60 °C to +70 °C), at relative humidity of air not exceeding 95 % at temperature of +25 °C and content of dust, oil, moisture and aggressive admixtures in the air not exceeding the norms envisaged by GOST 12.1.005-88 for the working zone of production areas.

The device shall be transported in transport container of the manufacturer in closed transport.

Means of transport:

- automobile and railway closed transport (covered wagons, universal containers)
- by air (in pressurized and heated bays of airplane)
- by sea (in dry service spaces).

The device shall be transported in accordance with the transport regulations in force for the particular transport.

During handling operations and transportations strictly observe the requirements of handling marks on boxes and do not allow bumps and impacts which can affect preservation and serviceability of the device.

Packed devices shall be reliably secured in vehicles.

After storage in stores or transportation at temperature below +10 °C the devices shall be unpacked only in heated spaces after keeping them unpacked in under normal climatic conditions for 12 hours.

7. Warranty

The manufacturer guarantees the unit PS-203-40A complies with this manual provided that the operation, transportation and storage conditions are adhered to during the warranty period.

The unit's warranty period expires 24 months from the date of its shipping from the manufacturer's storehouse.

Within the warranty period, the owner is entitled for a free repair, or a replacement of a separate part, provided that the malfunction occurred through the manufacturer's fault.

Warranty repair is provided if the unit is submitted with the manufacturer's label and a legible serial number available on it, as well as this operating manual.

The manufacturer is not responsible and cannot guarantee the unit's operation:

1. After the warranty period is over;
2. In case of the failure to observe the unit's operation, transportation, storage and installation rules and conditions;
3. If the unit is in an unmarketable condition, or has a damaged body, and other causes beyond the manufacturer's control;
4. If self-made electrical devices were used.
5. If there was an attempt to repair the unit by a person who is not an authorized representative of the manufacturer.

If the owner loses this operating manual or the manufacturer's label with a serial number, the manufacturer shall not provide their copies, and the owner shall be divested of the right for a free repair during the warranty period.

Upon the warranty expiry, the manufacturer shall facilitate the repair of the unit at the owner's expense.

Note: in case of warranty repair, the unit's disassembling from the installation site and its delivery to the manufacturer's service center are done at the owner's expense.

Visit the manufacturer's website www.unicont.spb.ru (section "support/warranty") to find:

- forms to fill in claims,
- full warranty description;
- full description of the warranty service rendering procedure.

The manufacturer service center's address and contact details:

Unicont SPb, Ltd.

Bld. 26E Kibalchich Str., Saint Petersburg, 192174, Russia

tel.: +7 (812) 622 23 10, +7 (812) 622 23 11

fax: +7 (812) 362 76 36

e-mail: service@unicont.spb.ru

8. DATE OF PACKING

Power Supply Unit

PS-203-40A

№

name of article

designation

serial number

Packed Unicont SPb Ltd., Russia.

Manufacturer

according to the requirements of the current technical documentation.

post

signature

clarification of signature

year, month, day

9. ACCEPTANCE DETAILS

Power Supply Unit

PS-203-40A

№

name of article

designation

serial number

was manufactured and accepted in accordance with the regulatory requirements of the state standards and applicable technical documentation, and is suitable for operation.

Quality control representative

Stamp

here _____

signature

clarification of signature

year, month, day

10. DATE OF COMMISSIONING

Power Supply Unit

PS-203-40A

№

name of article

designation

serial number

The unit has been put into operation.

Date of installation: _____

Place of installation: _____

Person in charge of installation: _____