

Unicont SPb Ltd

**Power supply unit
PS-103-20A**

Technical Documentation

(103-2-21012011)

St. Petersburg
2011

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1. General information

Power supply unit PS-103-20A (further - PS) is intended for supply various ship and industrial equipment by the not stabilized voltage of a direct current 24 V.

2. Delivery Set

- | | |
|-----------------------------|---------|
| 1. Power supply unit PS-103 | 1 piece |
| 2. Technical manual | 1 piece |

3. Performance specification

Power supply:	alternating current circuit ~110/220 VAC, 50Hz
Output voltage:	24 VDC
Nominal load current:	20 A
Pulsation:	0.5 V
Nominal power:	500 W
Efficiency:	93%
Overall dimensions:	380 x 375 x 115 mm
Working temperature:	-20.. +55 C°
Storage temperature:	-60.. +70 C°
Weight:	12 kg
Index of protection:	IP 22
Count of terminals for load connection:	4

Galvanic isolation output power supply from a power line

4. General functions and technical specification

PS-103-20A executed in the metal case with fastening for installation on vertical wall inside a ship. On a sidewall of the case there is a switch with the indication of an input voltage (in the manual-on position).

A PS-103-20A supply from an alternating current circuit ~110/220V, 50Hz and generates direct voltage 24V. Design of the device provides four output terminals for simultaneous connection of four loadings.

Electric circuit PS-103-20A includes step-down transformer, electronic rectifier, circuit of switching to emergency supply and alarm signaling.

In case of malfunctions in work of the device in order to provide no failure of the equipment connected to PS-103-20A, except for the basic power, it is brought emergency supply from reserve sources (accumulators) on terminal XS9.

Switching PS-103-20A to the reserve power occurs automatically in case of refusal, de-energizing and absence of the basic power supply on PS-103- 20A. It is possible to accompany transition to emergency supply by an alarm signal. Indication or sound signal can be an alarm signal, in this case terminal LS1 could be utilized any way the user likes.

The alarm signal is adjusted to the absence of an entrance power and realized on disconnection of relay LS1 dry contacts (see Figure 1).

5. Device installation

It is recommended to install the device in the following order:

1. Choose the place for the device installation to provide an easy cables admission and their ends cutting. One of the best places is a vertical wall inside a ship;
2. Fix strongly PS-103 case on a vertical wall and with an effort of a hand check up the security of attachment (for overall dimensions see Figure 2);
3. Remove the body face;
4. Route and pass connecting cables from external devices through cable entries, disposed on the PS-103 bottom part;
5. Connect passed cables to the corresponding plugs on board;
6. Power the device with the switch which is on the left wall of the case. Check the correctness of the device connection in consideration of the indicator's inclusion and serviceability of the connected equipment, alarming absence.
- 7. To switch input voltage to 110 VAC unplug wire "3" of the transformer T1 from PCB's terminal block and plug wire "2". Isolate open part of the wire "3".**

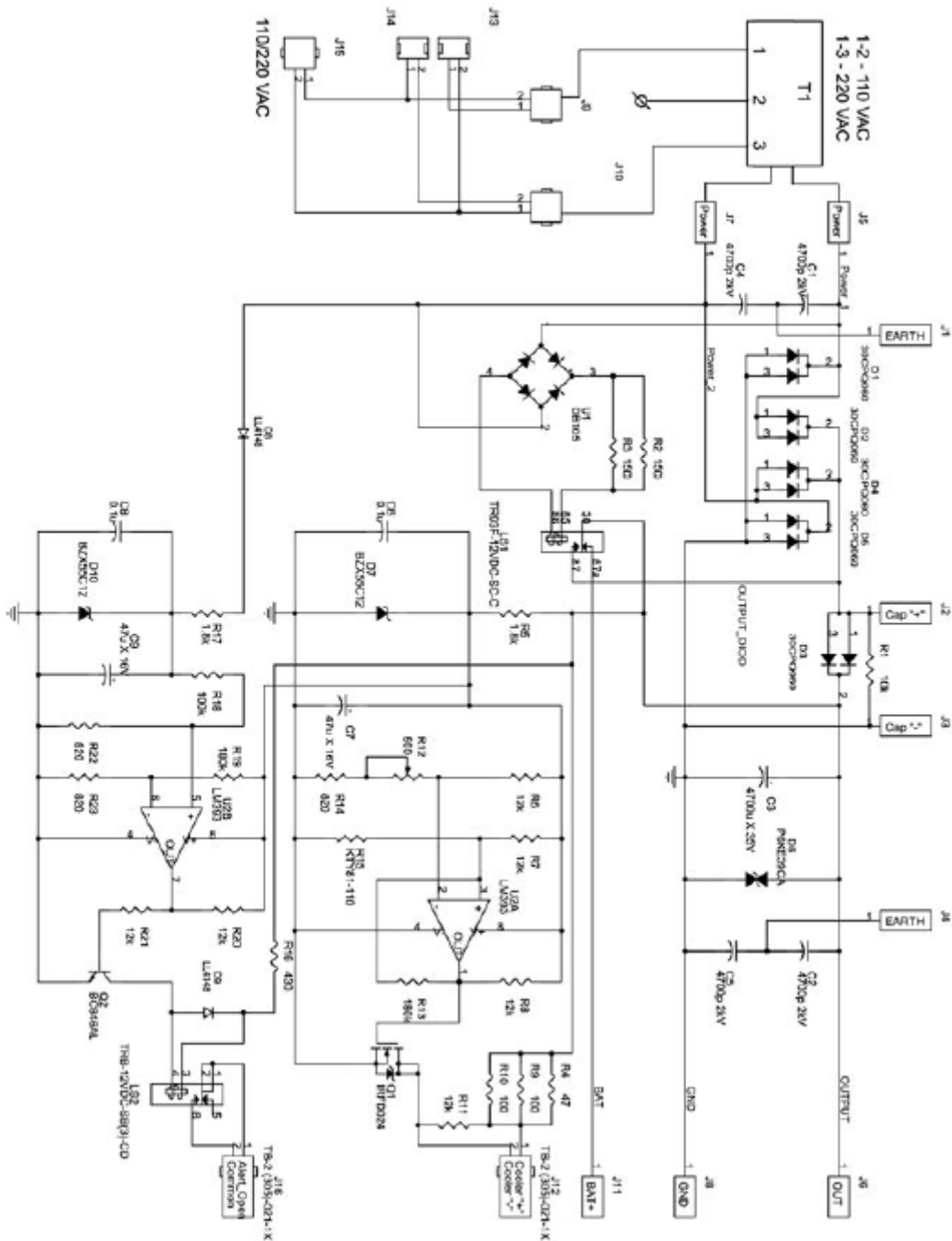


Figure 1. PS-103-20A Electric Diagram

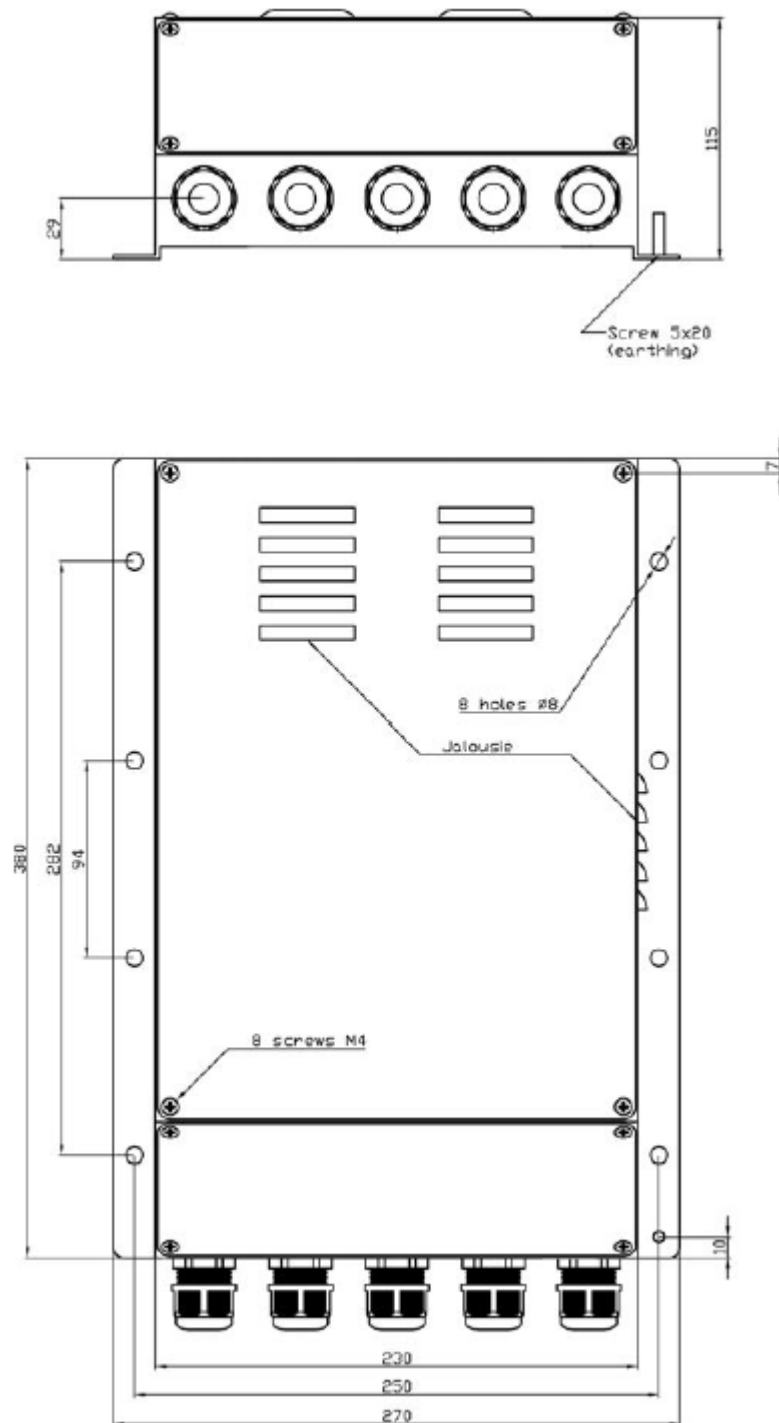


Figure 2 PS-103-20A overall dimensions.

Safety precautions:

- avoid any ingress of moisture;
- in order to avoid damages to the applied decals do not use organic solvents while cleaning the device surface;

Prohibited:

- device exposure to the impacts, to the connected cables tension;
- device connection to the power circuits with characteristics that are not declared in this documentation;
- running faulty device;

- device setting at a distance of less than 1 meter from the magnetic compass.

6. Service

1. At external examination check up set availability, labeling, mechanical damages absence, plugs condition.
2. Check up isolating and output voltage characteristics with the help of measuring devices.
3. Other servicing is reduced to the operating rules observance, storage and transportation observance. Servicing needs to be realized at least once a year.

7. Transport and storage

PS-103-20A transportation and storage have to be realized in compliance with RST (Road Standard Transportation) 20790-82. Transportation is authorized by railway, motor and water transport. Observance of the rules and requirements, which are in force for these types of transport, is obligatory.

8. Warranty

The manufacturer guarantees the unit PS-103-20A 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

9. DATE OF PACKING

Power supply unit	PS-103-20A	№
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
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year, month, day

10. ACCEPTANCE DETAILS

Power supply unit	PS-103-20A	№
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
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year, month, day

11. DATE OF COMMISSIONING

Power supply unit	PS-103-20A	№
name of article	designation	serial number

The unit has been put into operation.

Date of installation: _____

Place of installation: _____

Person in charge of installation: _____