

# BATTERY BACKED POWER SUPPLY

## RIP-12 Mod.51 (RIP-12-3/17P1-R-RS)

**ИСО 9001**

OPERATIONS MANUAL



### 1 DESCRIPTION AND OPERATION

#### 1.1 Purpose

1.1.1 The battery backed power supply RIP-12 mod.51 (RIP-12-3/17P1-R-RS) (hereinafter referred to as the RIP) is designed to provide continuous operating power to a group of automatic fire-fighting equipment, detectors, control and indicating equipment of a fire / intrusion alarm system, and other devices that require power of 12 Volts dc.

1.1.2 The RIP provides round-the-clock operation with specified output parameters and automatic monitoring and recharging of the sealed backup battery. The RIP provides shutting off the battery from a load to avoid unacceptable discharge. The RIP provides protection of battery connection circuit against open and short circuit failures.

1.1.3 The RIP provides light and audible indication of current conditions including presence or absence of mains power voltage, battery charge, missed battery, shutting the battery off in case of its discharge, short circuit failures or overloads at the output.

1.1.4 The RIP protects its output against overvoltage and short circuit failures with recovering output voltage automatically after repairing the failures.

1.1.5 The RIP shall be operated at locations where it is protected against atmospheric precipitations and mechanical damage. The design of the RIP doesn't provide operating it in explosion and fire hazardous premises.

1.1.6 The RIP is designed to be operated in residential, commercial, and industrial areas.

1.1.7 The RIP is classed as a restorable and periodically maintained item.

#### 1.2 Specifications

**Table 1**

No.	Parameter	Value
1.2.1	Power inputs	2
1.2.2	Primary power supply: The mains utility AC power 230 V, 50/60 Hz, work range, V	150...253
1.2.3	Backup power supply: Bolid series battery AB 1217 (type C or M)* or similar, 12V, 17 A·h, pcs.	1
1.2.4	Output DC voltage:	while powered by the mains, V
		while powered by battery, V
1.2.5	Maximum power consumed from the mains, V·A / W	155 / 80
1.2.6	Maximum current consumed from the mains, A	0.9
1.2.7	Current consumed from the battery by the RIP itself, mA, max	40
1.2.8	Ripples of the output voltage (peak-to-peak) at rated load current, mV, max	100
1.2.9	Low battery shutdown voltage, V	10.2±0.6
1.2.10	Rated / maximum load current, A	3 / 4 **
1.2.11	Time to charge a fully discharged battery, hours, max	48
1.2.12	Maximum battery charge current, A	1.2
1.2.13	Interface (Orion Protocol)	RS-485
1.2.14	Trouble output (solid state relay), (80 V, 50 mA) max, pcs.	1
1.2.15	Electric shock protection class as per GOST 12.2.007.0-75	I

No.	Parameter	Value
1.2.16	Enclosure protection degree as per GOST 14254-2015	IP30
1.2.17	Resistance to mechanical exposure as per OST 25 1099-83	Arrangement Category III
1.2.18	Vibration exposure: - Frequency range, Hz; - Max acceleration, g	1-35; 0.5
1.2.19	Environmental category as per OST 25 1099-83	O3
1.2.20	Operating temperatures, °C	Minus 10 through +40
1.2.21	Relative humidity, %	93
1.2.22	RIP weight without battery / with battery, kg, max	1.5 / 8
1.2.23	Overall dimensions, mm	230×320×110
1.2.24	MTBF, hours, at least	40,000
1.2.25	Survival probability (after 1000 hours)	0.975
1.2.26	Expected lifetime, years	10

\* The letters C and M define the battery service life as 12 and 15 years respectively.

\*\* The maximum load current is 4.0 A (for short-duration periods of up to 2 minutes at intervals of at least one hour provided that the mains power is available and the battery is connected). When the output current exceeds 3.5 A, the RIP disables the charger. If the output current exceeds the maximum value of 4.0 A, the RIP shuts output voltage off.

1.2.27 The RIP provides monitoring for mains voltage, output DC voltage, and battery voltage and sends messages about availability of all the relevant voltages as well as about battery discharge or battery shutting off. The RIP sends messages over the RS-485 interface.

1.2.28 The RIP provides an option of muting sounds by means of its tamper switch.

1.2.29 The RIP becomes ready for operation within 10 s max after applying power to it.

1.2.30 As to immunity to man-made radio disturbance, the RIP meets the requirements of the third severity level as per relevant standards listed in Appendix 'B' to GOST R 53325-2012.

1.2.31 The RIP passes the industrial interference standards prescribed for Class 'B' equipment as per GOST R 30805.22.

1.2.32 The RIP is equipped with no external controls.

1.2.33 The RIP provides monitoring for tampering its enclosure by means of the tamper switch. The tamper switch contacts are closed when the RIP cover is closed and they are open when the RIP cover is open. The tamper switch is located inside the enclosure on the PC board.

1.2.34 The RIP is designed to provide its fire safety while emergency operating and in case of violations of operation rules as per GOST 12.1.004-91.

1.2.35 The insulating strength of the live parts of the RIP is at least 2000 V (50 Hz) between circuits connected to mains 230 V and the enclosure as well as between circuits connected to mains 230 V and any circuits not connected with the mains.

1.2.36 The electrical insulation resistance between circuits mentioned above in para 1.2.35 is at least 20 mega ohms (in normal conditions in accordance with Section 5.14.6 of GOST 52931-2008).

### 1.3 Scope of Delivery

1.3.1 The scope of delivery for the RIP is as shown in Table 2.

Table 2

Item	Q-ty, pcs.
RIP-12 mod.51 (RIP-12-3/17P1-R-RS)*	1
RIP-12 mod.51 (RIP-12-3/17P1-R-RS) Operations Manual	1
Fuse 218 002 (similar to 'BITT6-10 2,0A')	1
Fasteners: (screw and wall plug)	4
Grommet	2
Package	1
<b>* No battery is included in the standard delivery</b>	

## 2 INTENDED USE

2.1 The design of the RIP meets the requirements of electric and fire safety including emergency operation in accordance with Russian standards GOST 12.2.007.0-75 and GOST 12.1.004-91.

2.2 The RIP is to be wired as per the connection diagram on the RIP cover.

2.3 Do SHUT OFF power from the RIP before mounting, installing, and inspecting outer conditions of this one.

2.4 Operating restrictions, design, mounting, connecting, settings, testing and operation procedures for the RIP are defined in details in its User's Manual (the full version), which is available online at [bolid.ru](http://bolid.ru) in the section Products on the page of RIP-12 mod.51 (RIP-12-3/17P1-R-RS).



2.5 If a technical failure of the unit has been found, the equipment shall be taken out of operation and sent for repair in accordance with para 4.

## 3 MAINTENANCE

3.1 The RIP shall be maintained by persons qualified for electrical safety of Level III or higher.

3.2 Maintenance works for the RIP are described in its User's Manual (the full version), please see para 2.4 of this document.

## 4 REPAIR

4.1 Repair of faulty equipment is to be conducted by the manufacturer or in authorized repair centers. The product shall be sent for repair in compliance with Company Standard QMS 8.5.3-2015, which can be found online at our website <https://bolid.ru/support/remont/>.

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### Warning!



The equipment shall be submitted for repair being assembled and clean and along with all the parts listed in the documentation.

Claims are accepted only if a reclamation report describing the failure is applied to the submitted equipment.

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4.2 An equipment fault resulted from consumer's not observing rules of mounting and operation is not a reason for claims and warranty repair.

4.3 Claims shall be submitted to the following address:

NVP BOLID, #4 Pionerskaya Str., Korolyov, Moscow Region, 141070, Russia

Phone: +7 (495) 775-71-55, E-mail: [info@bolid.ru](mailto:info@bolid.ru).

4.4 In case of any issue related to use of the product, please contact the technical support:

+7 (495) 775-71-55 or e-mail: [support@bolid.ru](mailto:support@bolid.ru).

## **5 STORAGE**

5.1 Storage in a transport container is permitted at ambient temperatures minus 30°C through plus 50°C and relative humidity up to 95% at plus 35°C.

5.2 Storage in the consumer package is permitted only in heated premises at temperatures plus 5 through plus 40°C and relative humidity up to 80 % at plus 20°C.

5.3 Batteries shall be stored as per the rules and storage conditions established by the battery manufacturer.

## **6 TRANSPORTING**

6.1 The RIP can be transported in a transport container at ambient temperatures minus 30°C through plus 50°C and relative humidity up to 95 % at plus 35°C.

## **7 DISPOSAL**

7.1 The RIP is to be disposed of considering that there are no toxic components in it.

7.2 Batteries are classed as hazardous waste of Class II, so used up batteries shall be disposed of by a specialized company that is licensed for this activity.

7.3 The content of precious materials: doesn't require accountability for storage, retirement, and disposal (Clause 1.2 of GOST 2.608-78).

7.4 The content of non-ferrous metals: does not require accountability for retirement and further disposal.

## **8 MANUFACTURER WARRANTY**

8.1 The manufacturer guaranties the product meets with technical requirements stated in the manuals if the user follows the instructions for transportation, storage, installation, and usage.

8.2 The warranty period is 18 months since putting the product into operation but no more than 24 months from the manufacturer's date of production.

## **9 CERTIFICATION INFORMATION**

9.1 For unit certification details, please refer to its User's Manual (the full version), see para 2.4 of this document.

## **10 ACCEPTANCE AND PACKING CERTIFICATE**

is manufactured, accepted in line with mandatory requirements of national standards and applicable technical documentation, approved as ready for use, and packed by the NVP Bolid Company.

Responsible for Acceptance and Packing

