

# DC-DC POWER CONVERTER MODULE

## MP 24/12 V

**HCO 9001**

OPERATIONS MANUAL



### 1 DESCRIPTION AND OPERATION

#### 1.1 Purpose

1.1.1 MP 24/12V DC-DC Power Converter Module (hereinafter referred to as the MP) is designed to supply power to equipment of fire and intrusion alarm systems that require 12 V dc.

1.1.2 MP is intended for round-the-clock operation with specified output parameters when cooperating with RIP-24 battery backed power supplies. The actual list of RIP-24 can be found at <http://bolid.ru/production/reserve/rip/>.

1.1.3 The design of the MP doesn't imply operating it in ex-hazardous and flammable premises.

1.1.4 The MP provides protection against short circuit failures with recovering output voltage automatically after repairing the failures.

1.1.5 The MP provides protection against reverse polarity of input voltage with further restoration of performance.

#### 1.2 Specifications

**Table 1**

No.	Parameter	Value
1.2.1	Input DC voltage range	20 through 30 V
1.2.2	Rated output voltage	(12.6 ± 0.6) V
1.2.3	Load current	0.5 A permanently 0.8 A for a time up to 2 min
1.2.4	Current consumed by the module itself	8 mA max
1.2.5	Power consumed from the input PSE at maximum load current	7 W max
1.2.6	Ripples of the output voltage (peak-to-peak) at rated load current	50 mV max
1.2.7	Enclosure protection degree as per GOST 14254-2015	IP20
1.2.8	Resistance to mechanical exposure as per OST 25 1099-83	Arrangement Category III
1.2.9	Vibration exposure: - Frequency range - Max acceleration	1-35 Hz; 0.5 g
1.2.10	Environmental category as per OST 25 1099-83	O3
1.2.11	Operating temperature range	Minus 30 through +50 °C
1.2.12	Relative humidity	93 %
1.2.13	MP weight	0.1 kg
1.2.14	MP overall dimensions	55×38×20 mm
1.2.15	MTBF in the quiescent mode	40,000 hours
1.2.16	Survival probability for 1,000 hours	0.975
1.2.17	Expected service life of MP	10 years

1.2.18 MP is ready to operate within one second upon input power supply turning on.

1.2.19 As to immunity to man-made radio disturbance, MP meets the requirements for Test Severity Level II as per GOST R 50009.

1.2.20 MP passes the industrial interference standards prescribed for Class ‘B’ equipment as per GOST R 30805.22.

### 1.3 Standard Delivery

The standard delivery for MP is shown in Table 2.

Table 2

Item	Quantity, pcs.
MP 24/12V DC-DC Power Converter Module	1
MP 24/12V Operations Manual	1
Fasteners (woodscrew and wall plug)	2
Package	1

## 2 INTENDED USE

2.1 The design of the equipment meets the requirements of fire and electrical safety including operation in emergency in accordance with GOST 12.2.007.0-75 and GOST 12.1.004-91.

2.2 MP is to be connected in accordance with the label on the MP casing.

2.3 Do shut off power from the equipment before mounting, installing, and maintaining this one.

2.4 Operating restrictions, design, mounting, connecting, settings, testing and operation procedures for the module 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 MP 24/12 V.



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

## 3 MAINTENANCE

3.1 MP shall be maintained by persons qualified for Accident Prevention of Level II or higher.

3.2 MP is to be maintained according to a planned preventive strategy which provides annual scheduled maintenance.

3.3 Maintenance works for the MP are described in its User’s Manual (the full version).

## 4 REPAIR

4.1 Repair of faulty equipment is to be performed by the manufacturer or in authorized repair centers. The equipment 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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### Attention!

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 failure resulted from consumer’s not observing rules of mounting and operation is not a reason for claims and warranty repair.

4.3 Claims should be submitted to the following address:

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

Phone: +7 (495) 775-71-55 (PBX). 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 In a transport container the equipment can be stored at ambient temperatures ranged from minus 30°C to +50°C and relative humidity of up to 95% at +35°C.

5.2 In the consumer package the equipment can be stored only in heated premises at ambient temperatures +5°C through +40°C and relative humidity up to 80% at +20°C.

## **6 TRANSPORTING**

MP can be transported in a transport container at ambient temperatures ranged from minus 50°C to +50°C and relative humidity of 95% at +35°C.

## **7 DISPOSAL**

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

7.2 The content of precious materials: does not require accountability for storage, retirement and disposal (Clause 1.2 of GOST 2.608-78).

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

## **8 MANUFACTURER WARRANTY**

8.1 The manufacturer guaranties the MP 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 CERTIFICATES**

For certification information, please refer to MP 24/12 V User's Manual (the full version).

## **10 ACCEPTANCE AND PACKING CERTIFICATE**

MP 24/12 V DC-DC Power Converter Module, Serial Number \_\_\_\_\_, 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

QCD \_\_\_\_\_  
Full Name

\_\_\_\_\_  
Date, Month, Year