

DC-DC POWER CONVERTER MODULE

MP 24/12V mod.02

HCO 9001



INSTRUCTION MANUAL

1 TECHNICAL DATA

1.1 General

1.1.1 The MP 24/12V mod.02 (hereinafter referred to as the MP) is designed to supply power to detectors, control and indicating equipment, and telecommunication equipment which require 3.3 V dc, 5 V dc, 7.5 V dc, 9 V dc, or 12 V dc while being used with battery backed power supplies RIP-12 and RIP-24 or similar.

1.1.2 The MP provides round-the-clock operation with specified output parameters.

1.1.3 In terms of climate tolerance, the MP meets the conditions of installation Category III as per OST 25 1099-83 to be used within the temperature range of 243 K to 323 K (-30°C to +50°C). The MP is not designed to be used in ex-hazardous premises.

1.2 Specifications

1.2.1 The MP provides technical characteristics for the ranges of input voltage¹⁾ as shown in Table 1.

Table 1

Input voltage, V	20 – 30		11.5 – 30	10 – 30	
Output voltage, V ²⁾	12	9	7.5	5	3.3
Max consumed power (at load current 2A), W	26	20	17	12	8
Min efficiency (at load current 2A), %	90		85		75

Notes:

¹⁾ – It is advised to use a Bolid manufactured RIP-12 or RIP-24 as the power input source.

²⁾ – The maximum deviation of output voltage in the range of ambient temperatures specified in 1.1.3 and the range of output current values 0 to 2 A doesn't exceed $\pm 10\%$. The factory set value of output voltage is 12 V.

1.2.2 Maximum load current: – 2 A

1.2.3 Output current at a short circuit failure: – 3 A max

1.2.4 Ripples of the output voltage (peak-to-peak)
at maximum load current: – 50 mV max

1.2.5 Overall dimensions: – 75x75x46 mm max

1.2.6 Weight: – 0.1 kg max

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

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

1.2.9 Radio interference resulted from the MP operations does not exceed values as specified in GOST R 51318.22-2006.

1.2.10 The MP provides immunity to electromagnetic interference of the second severity level as per Russian Standard GOST R 50009-2000. Proper operation of the MP cannot be guaranteed if the electromagnetic environment does not meet the operating conditions.

1.2.11 Ingress protection rating: IP30.

1.2.12 Average lifetime: 8 years min.

1.2.13 According to the content of precious materials the product does not require accounting for storage, writing-off, and/or disposal.

1.3 Standard Delivery

- | | |
|-----------------------|-----------|
| 1) MP 24/12V mod.02 | – 1 pc.; |
| 2) Instruction Manual | – 1 copy; |
| 3) Woodscrew | – 3 pcs.; |
| 4) Wall plug 6x30 | – 3 pcs.; |
| 5) Packing | – 1 pc. |

2 OPERATING INSTRUCTIONS

2.1 Safety Precautions

2.1.1 Do always shut off mains utility power for a device which the MP is connected to before mounting, wiring, and maintaining the MP.

2.1.2 Only qualified staff certified with the third or higher safety qualification level can mount and maintain the MP.

2.2 Mounting and Getting Started

2.2.1 The MP is to be installed on walls or other structures of secure facilities at places protected against atmospheric fallouts, mechanical damage, and unauthorized access.

2.2.2 Attach the MP to a wall at a relevant place. The overall dimensions are shown in Figure 1.

2.2.3 Connect input power circuits (10 to 30 V) to the XT1 terminal block of the MP (see **Table 1, Section 1.2**).

Terminal blocks and connection polarity are marked on the top side of the PCB.

XT1 is marked as ВХОД (INPUT) and XT2 is marked as ВЫХОД (OUTPUT) - see Figure 2.

2.2.4 Connect the load to the XT2 terminal block. The load current should not exceed 2 A.

2.2.5 Select the required output voltage by setting the jumper to the relevant position (see Figure 2).

ATTENTION: The factory set value of the output voltage is 12 V

2.2.6 Turn on the external power of the power supply. The green HL1 indicator on the MP printed circuit board (see Figure 2) shall illuminate indicating the presence of output voltage.

2.2.7 In case of a short circuit failure the HL1 indicator on the PC board of the MP turns off. When this happens the source of overload must be cleared.

3 WARRANTY

3.1 The manufacturer guarantees that the MP meets technical requirements specified in the manuals if the user follows the instructions for shipment, storage, installation, and usage.

3.2 Warranty period is 18 months but no more than 24 months from the manufacturer's date of issue.

3.3 When submitting the product for repair, it shall be accompanied with descriptions of possible fault.

Claims shall be submitted to the following address:

NVP BOLID CJSC, Pionerskaya #4, Korolyov, Moscow region, Russia, 141070.

Phone/fax: +7 (495) 775-71-55 (PXB), 516-93-72.

E-mail: info@bolid.ru; Support : support@bolid.ru, <http://bolid.ru>.

4 CONFORMITY CERTIFICATES

4.1 MP 24/12V Mod.02 DC-DC Power Converter Module complies with requirements of Russian standards and has Certificate of Conformity to requirements of Technical Regulations of Custom Union TR CU 020/2011 № RU C-RU.MJI66.B.05672.

4.2 MP 24/12V Mod.02 is a part of Orion Addressable Fire Alarm System which is approved by Conformity Certificate № BY/112 02.01.033 00251 issued by Republican Centre for Certification and Expertise of Licensable Activities Of Ministry for Emergency Situations of the Republic of Belarus, 73a Zakharova Str., Minsk, 220088.

4.3 The MP 24/12V Mod.02 production is certified according to GOST ISO 9001-2011 and has Conformity Certificate No. ROSS RU.ИК32.K00153.

5 ACCEPTANCE CERTIFICATE

5.1 MP 24/12V Mod.02 DC-DC Power Converter Module

Product Name

Serial Number

Produced and accepted according to the mandatory requirements of Russian standards and engineering documentation and approved as proper for operation.

5.2 MP 24/12V Mod.02 DC-DC Power Converter Module is packaged in the Bolid Company in accordance with actual engineering documentation.

Responsible for Acceptance and Packaging

QCD

Full Name

Date, Month, Year

