



# UO-4S Revision 02 GSM Four-Input Alarm Panel

## Installation Manual

This Installation Manual describes how to install UO-4S rev.02 GSM Four-Input Alarm Panel (hereinafter referred to as the device or UO-4S) and to prepare it for operation.

Please refer to UO-4S User's Manual to get a description of the device and the rules to program and operate it (this manual can be found online at the company site <http://bolid.ru> in the PRODUCTS section on the page of UO-4S rev.02).

### 1 SAFETY PRECAUTIONS



- *When installing and operating the device please follow Safety Rules for Operation of Customers' Electrical Installations and Operational Code for Customers' Electrical Installations.*
- *There are no potential hazard circuits within the UO-4S.*
- *The design of the UO-4S meets the requirements of electric and fire safety in accordance with Russian standards ГOCT 12.2.007.0-75 and ГOCT 12.1.004-91.*
- *The UO-4S is designed to provide its fire safety while emergency operating and on violations of operation rules in accordance with ГOCT 12.1.004-91.*
- ***Do SHUT OFF panel power prior to mounting, wiring, or maintaining this one.***
- *Mounting and maintenance of the UO-4S should be carried out by persons with the second or higher electric safety qualification level.*

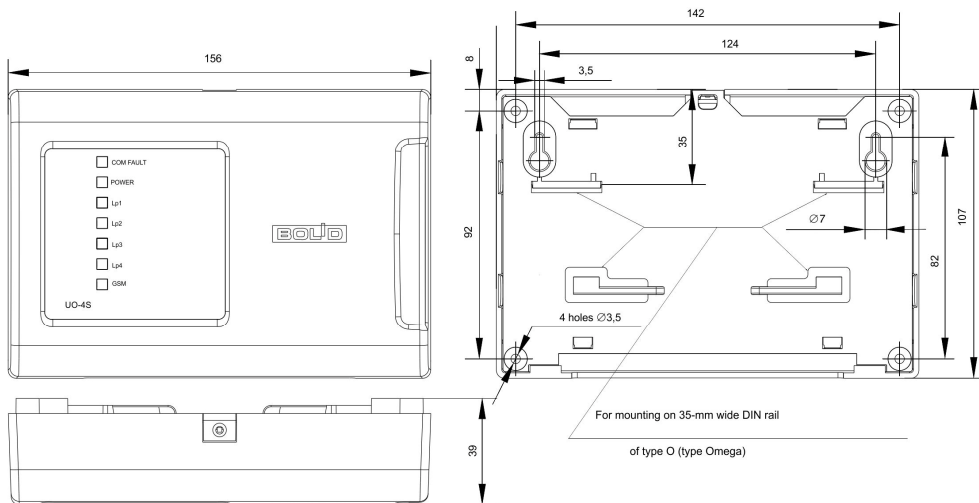
### 2 MOUNTING

2.1 Figure 1 shows the appearance and overall and mounting dimensions of the UO-4S.

2.2 The panel is to be mounted on walls or other structures in the premises at places protected against atmospheric fallouts, mechanical damage, and unauthorized access.

2.3 External connections are to be performed as shown in Figure 5.

2.4 Mounting the panel should be performed in line with Russian Regulatory Document ПД.78.145-92 "Works Execution and Acceptance Rules. Intrusion and Fire Alarm Equipment". If the device is supposed to be installed in unprotected premises it is recommended to attach this one at a height at least 2.2 m above the floor.



**Figure 1. Overall and Mounting Dimensions of the UO-4S Revision 2**

### 3 MOUNTING ROUTINE

3.1 Please read this Installation Manual completely before using the mounting pattern.

#### 3.2 Mounting on a Wall

3.2.1 Please ensure that the wall the device is to be mounted on is solid, flat, clean, and dry.

3.2.2 Attach the device to the wall in accordance with Variant 1 or Variant 2 below.

3.2.3 **Variant 1.** Apply the mounting pattern to the wall (Figure 9). Drill three holes (A, B, and C or D at your option).

3.2.4 Insert wall plugs into the holes and screw provided woodscrews into the two upper holes so that the distance between a screw head and the wall is about 7 mm.

3.2.5 Remove the cover from the device as shown in Figure 2.

3.2.6 Hang the device on the two screws. Screw the third screw into the bottom mounting hole and fasten the device to the wall.

3.2.7 **Variant 2.** Apply the mounting pattern to the wall (Figure 9). Drill three holes (E, F, and C or D at your option).

3.2.8 Insert wall plugs to the holes.

3.2.9 Remove the cover from the device as shown in Figure 2.

3.2.10 Put the device on the wall so that the mounting holes agree with the wall plugs.

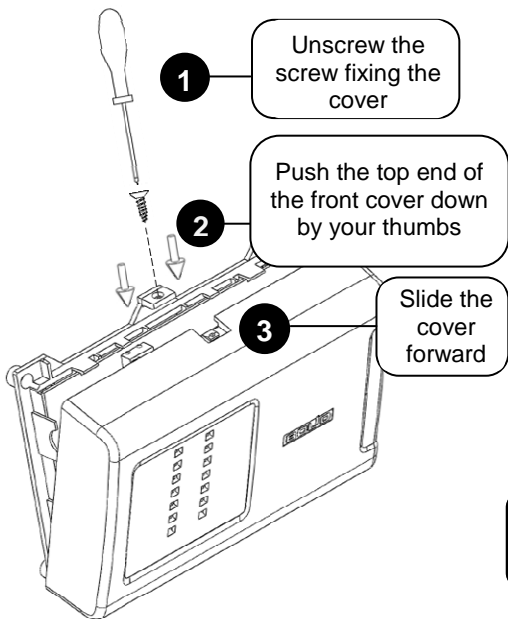
3.2.11 Screw the woodscrews to the mounting holes and secure the device to the wall.

#### 3.3 Mounting on a DIN-rail

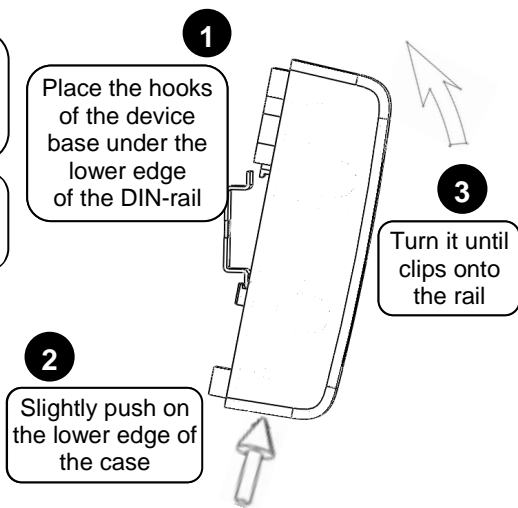
3.3.1 Select the mounting location where free access to the tapping screw at the upper end of the device front cover is provided.

3.3.2 Install the device on the DIN-rail as shown in Figure 3.

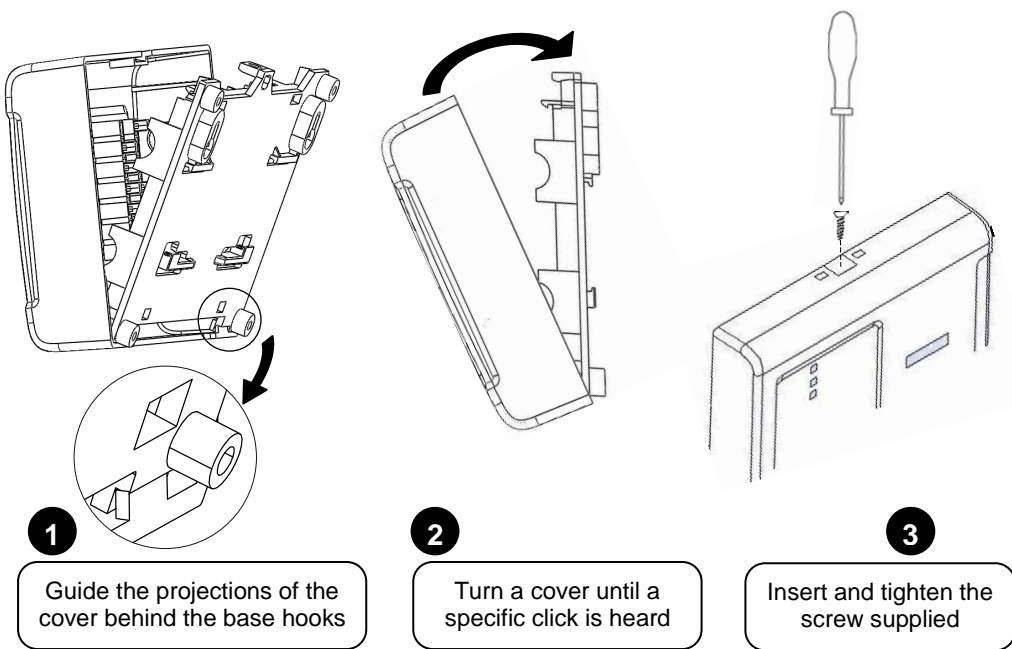
3.3.3 Remove the device front cover as shown in Figure 2.



**Figure 2. How to Remove the Cover**



**Figure 3. Mounting on a DIN-rail**



**Figure 4. How to Close the Cover**

## 4 CONNECTING THE DEVICE

4.1 If the UO-4S rev.02 is intended to operate as part of an Orion ISS under an S2000M or in Master / Slave mode then connect A and B lines of the RS-485 interface bus to the terminals "A" and "B" of the terminal block respectively.

4.2 The maximum wire cross section is 1.5 mm<sup>2</sup>.

4.3 If the UO-4S rev.02, or the S2000M panel, or other Orion ISS devices connected to the RS-485 interface are powered by various power supplies then couple their 0 V circuits.

4.4 Unless the UO-4S rev.02 is the last device in the RS-485 interface bus remove the jumper from XP3 terminals located on the UO-4S PCB closely to the "A" and "B" terminals.

4.5 Connect alarm loop circuits and if necessary a patrol check circuit and an operating loop circuit in accordance with Figure 6.

4.6 Connect a reader in accordance with one of the schematics in Figure 7.

4.7 Make sure Mode Selection Jumper XP2 is closed (must be closed prior to programming).

4.8 Prior to inserting SIM cards into the UO-4S rev.02 turn off asking PIN codes on them by means of a cell phone and check the signal level at the mounting location of the UO-4S rev.02. While using the ID Contact and SMS notification types the GSM signal level should be at least half on the scale of the mobile phone.

4.9 Make sure the SIM card is registered in network (COM FAULT shall stop flashing).

4.10 When wiring is completed close the device front cover as shown in Figure 4.

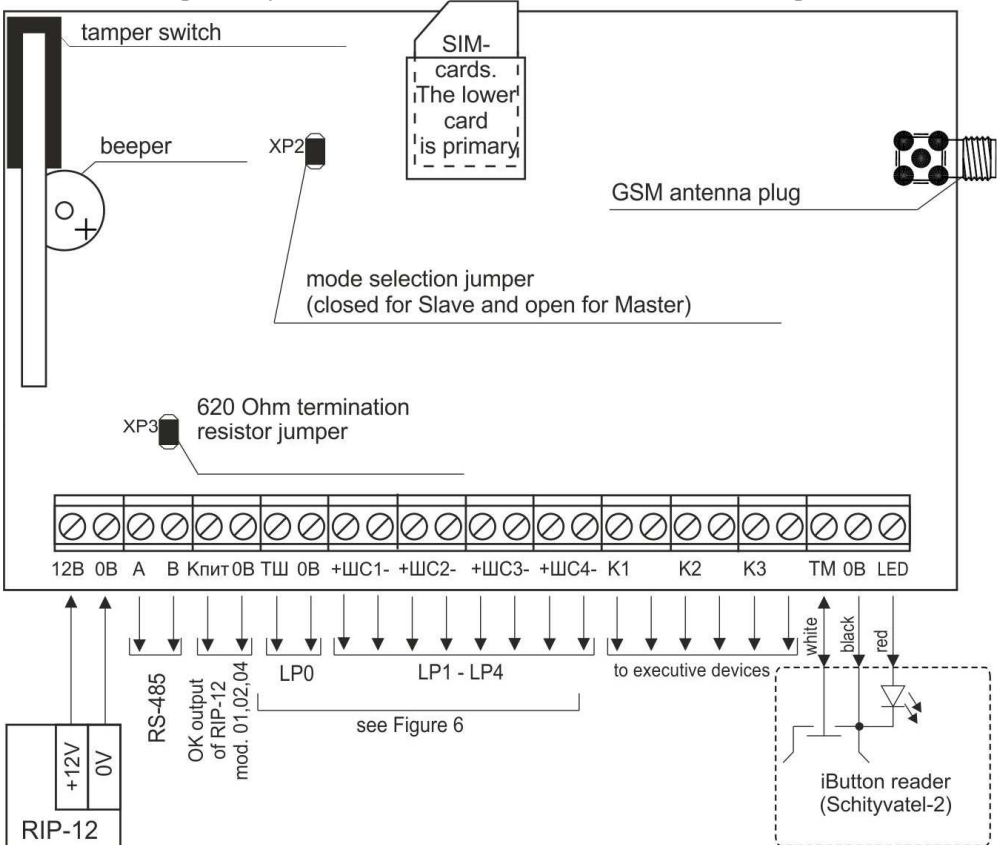
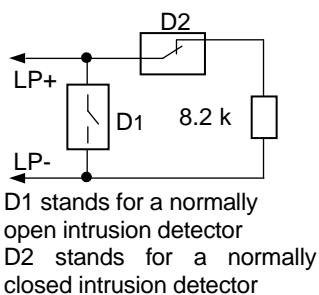
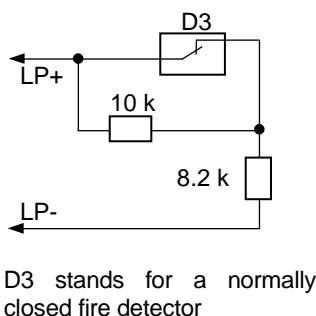


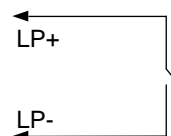
Figure 5. UO-4S Rev.02 External Connection Diagram



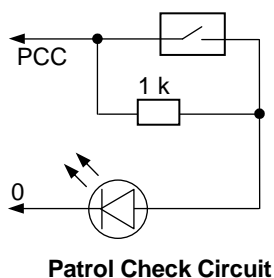
**Intrusion Alarm Loop**



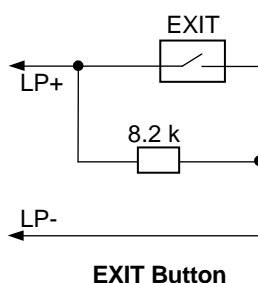
**Fire Alarm Loop**



**Operating Loop**



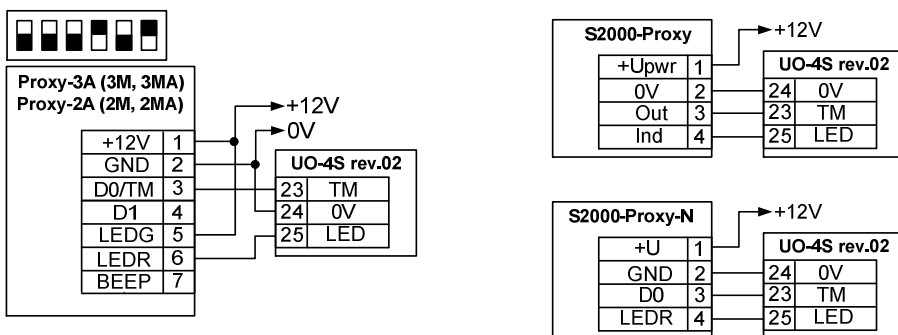
**Patrol Check Circuit**



**EXIT Button**

**Figure 6. Diagrams for Connecting Alarm Loops, Operating Loop, Patrol Check Circuit, and Exit Button**

Four-wire detectors (with external powering) shall be used as fire detectors. After receiving a Fire event power of the relevant detector shall be switched off and then switched on again. For doing so one of the panel relay outputs can be used (the tactics «Switch Off upon Arming»).



**Figure 7. Reader Connection Diagrams**

## 5 TESTING THE PANEL

5.1 The panel should be tested by maintenance engineering personnel with at least third electrical safety qualification level.

5.2 The device should be tested under the following ambient conditions in line with Russian GOST 15150-69:

- Relative humidity: (45 – 80) %;
- Ambient temperature: (25 ± 10)°C;
- Atmospheric pressure: (630 – 800) mm Hg, (84 – 106.7) kPa.

5.3 Preparing the UO-4S rev.02 for testing:

- Inspect the packing and unpack the device;
- Ensure the packing details are the same as specified in UO-4S rev.02 Datasheet;
- Make sure the panel enclosure is not mechanically damaged;
- Shake the panel to make sure there are no foreign bodies inside it;
- Check the fastening of the terminal blocks;
- Ensure that the panel number and the release date are the same as specified in UO-4S rev.02 Datasheet.

### 5.4 Checking Basic Parameters

5.4.1 Prior to connecting the UO-4S rev.02 make sure that there are no mechanical defects in its PCB.

5.4.2 Connect a milliammeter into the power supply circuit of the panel.

5.4.3 Connect the UO-4S rev.02 to the power supply. Measure the current consumed by the UO-4S rev.02 with the ammeter. The measured value shall not exceed 60 mA.

5.4.4 Within a minute since powering the UO-4S rev.02 up the POWER LED shall turn on (if input power voltage is lower than 11 V or more than 15 V then the indicator turns on with amber for a short time twice per second).

5.4.5 For operating the UO-4S rev.02 as part of an Orion security system connect interface bus of the S2000M to the “A” and “B” terminals of the panel under test.

5.4.6 Apply power to the S2000M and UO-4S rev.02.

5.4.7 On the expiry of a pre-operation time the panel shall proceed to the quiescent mode, the S2000M shall display its founding a device with the network address assigned to the UO-4S rev.02 (the factory address of the panel is 127). Figure 8 demonstrates the display of the control panel with the relevant message.

5.4.8 If several messages accumulated in the device event log has been received by the S2000M panel you can browse them by the arrow buttons «◀» and «▶» of the S2000M.



Figure 8

## 6 PREPARING FOR WORK

In order the UO-4S rev.02 to operate as part of an Orion system under an S2000M panel or Orion Pro software it is necessary to assign a unique network address to it and to perform relevant settings (see User's Manual).

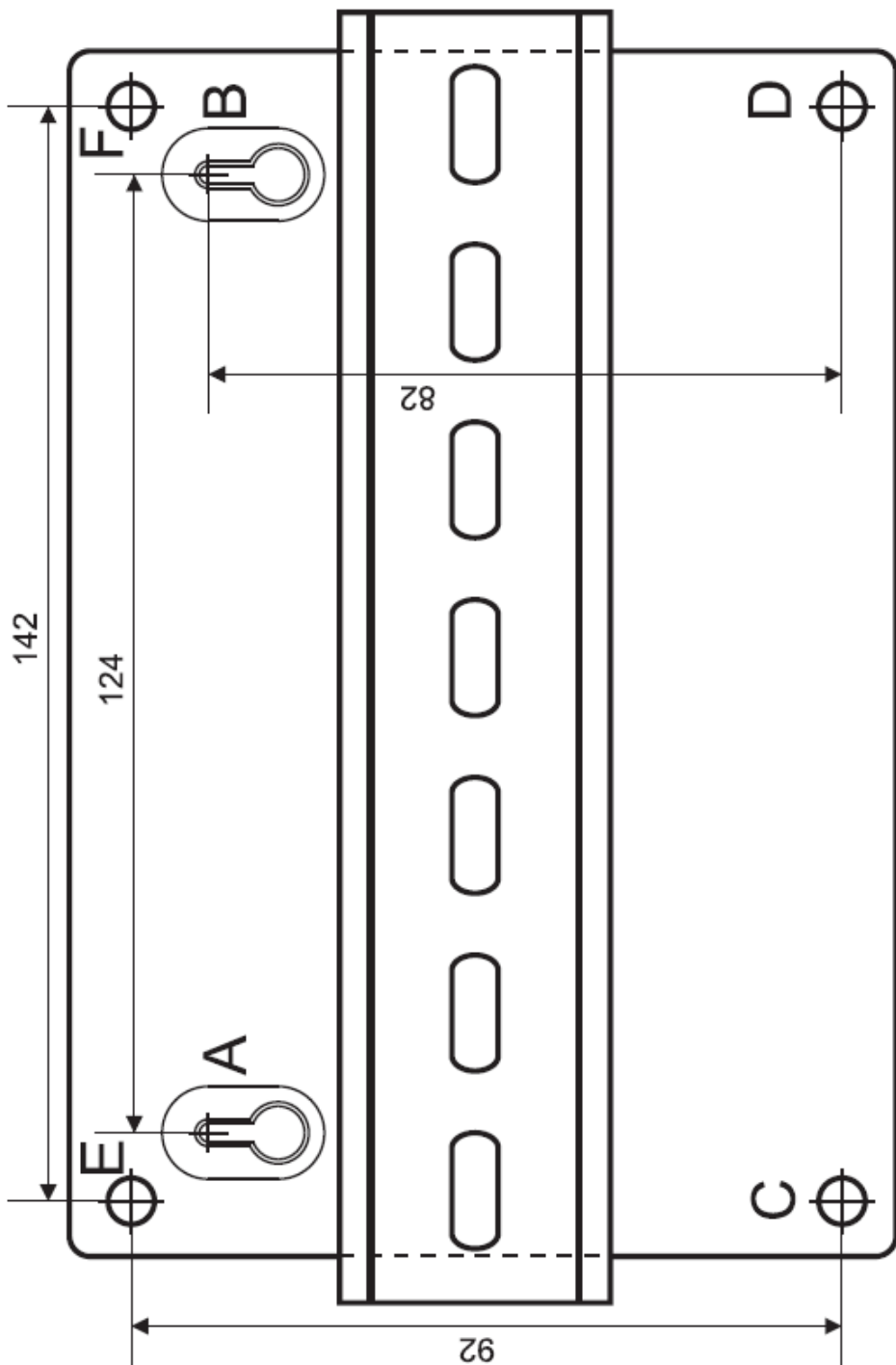


Figure 9. Mounting Pattern