

**M-Z box**

Zone expansion module

User manual



**"Tiras-12" LTD**  
Ukraine, Vinnytsia,  
Khmelnyskoho Shose lane 2, b. 8



More information on the site  
[tiras.technology](https://tiras.technology)

## 1 GENERAL INFORMATION

M-Z box is a zone expansion module (further – module) designed to expand in 8 zones the security alarm system, based on the Orion NOVA L (LTE) security control panel (further – SCP). The module is connected to the SCP via the RS-485 interface.

The module is designed for continuous 24h work in premises with regulated climatic conditions without the direct influence of climatic factors of the environment.

## 2 SPECIFICATIONS

Specifications of the module are shown in Table 2.1.

Table 2.1 – Specifications of the module

Parameter	Value
Supply voltage, V (inputs + 12V, GND)	9.3 – 15.2
Maximum current consumption, mA	60
Number of zones	8
Degree of the case protection (IEC 60529)	IP30
Overall dimensions (L×W×H), mm	100×100×30
Net weight, kg	0.12
Operating temperature range at relative humidity up to 75% without condensation	from -10 °C to +40 °C
Average service life, years	10

## 3 PREPARATIONS FOR OPERATION

### Caution:

- All connections must be carried out by qualified personnel in accordance with the electrotechnical regulations and fire safety regulations.
- Installation and connections must be carried out with the power supply disconnected.
- The stranded wires must be crimped by tips.
- Printed circuit board of the module contains static-sensitive components. To avoid damage to sensitive components before handling any boards you should discharge static electricity in your body by touching the ground.

Before mounting the module, open its case to access the mounting holes. To open the case, unscrew the two screws at the bottom of the case (not completely) and remove the cover. The module is designed for wall mounting. At the base of the case, there are two holes for screwing to the wall. The case-based element G3 serves to detect the separation of the case from the wall. It should be fixed with a screw to the wall. When the base of the case is detached from the wall, element G3 remains on the wall, leading to the tamper break. The surface for the module mounting should be smooth and ensure a tight fit of the case base after mounting.

Figure 3.1 shows the installation dimensions of the module.

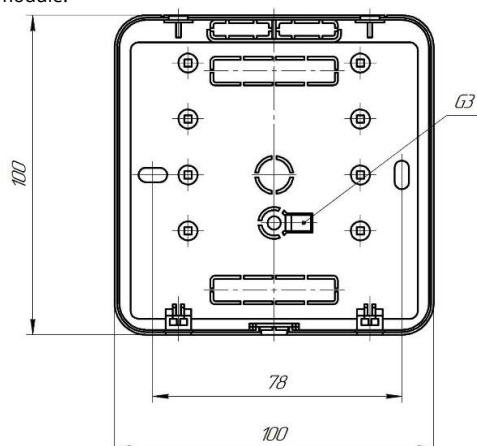


Figure 3.1 - Installation dimensions of the M-Z box module

The appearance of the module board is shown in Figure 3.2. The description of the elements of the module board is given in Table 3.1.

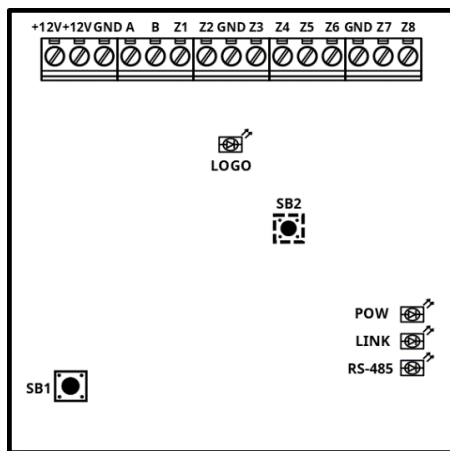


Figure 3.2 - Appearance of the module board

The purpose of the module connection terminals is given in Table 3.1.

Enter the wires via the appropriate holes of the module case and make all connections in accordance with the SCP user manual. Make sure that the wires are securely fixed in the module terminals. After installation and connection are complete, close the module case.

Table 3.1 – Purpose of the module connection terminals

Element	Purpose
12V	Terminal for connecting the power supply of the module
GND	Terminal for connection of circuit ground
A, B	Terminals for connecting the RS-485 interface (twisted pair cable)
Z1...Z8	Terminals for connection of zones (end-of-line resistors of 3 kOhm)
SB1	Tamper detection of intrusion into the case
SB2	Tamper detects separation from the wall
XP2	Jumper lock tamper detects intrusion into the housing
POW, LINK, RS-485, LOGO	Technological indicators

## 4 PACKAGE CONTENTS

After unpacking, visually inspect the module to make sure it does not have mechanical damage, check the completeness according to Table 4.1.

Table 4.1 – Package contents of the module

Name	Quantity, (pcs.)
M-Z box module	1
User manual	1
Resistor 3 kOhm (± 1%), 0.125 W	8

**ATTENTION!** The characteristics and package contents of the module may be changed by the manufacturer without additional notification.

## 5 REGULATORY COMPLIANCE

Hereby, "Tiras-12" LTD declares that the model M-Z box complies with EMC Directive 2014/30/EU, RoHS Directive 2011/65/EU.

The full text of the EU declaration of conformity is available at the following internet address: [tiras.technology](http://tiras.technology).



In accordance with the EU Directive 2012/19/EU on waste electrical and electronic equipment, the module should be disposed of separately from household waste. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

## 6 WARRANTY OBLIGATIONS AND REPAIR INFORMATION

The manufacturer guarantees compliance of the module with the declared characteristics during the warranty period of operation and under the conditions of transportation, operation, and storage.

The warranty period is 36 months and is valid from the date of sale specified below or in other accompanying documents (contract, invoice, etc.). If you do not provide a document confirming the date of sale of the module - the warranty period is calculated from the date of manufacture of the module.

(date of sale) (seller's signature) seller's stamp

The module is repaired by the manufacturer or its authorized representative. The module is repaired for free, in case the warranty period has not expired, and it was operated in accordance with the accompanying documentation. For repairs, the module is sent together with the document, which indicates the date of sale, and with a letter stating: the nature of the fault, the place of operation, contact person for repair.

If the module is not working properly, please contact technical support first, perhaps this problem can be resolved remotely.

The date of manufacture of the module and/or its serial number are indicated on the module label and packaging.

Information about limitation of liability is available in the "Warranty" section on the website: [tiras.technology](http://tiras.technology).



## 7 CONTACTS OF THE MANUFACTURER

"Tiras-12" LTD, Ukraine, Vinnytsia, Khmelnytskoho Shose lane 2, b. 8

Sales department: [market@tiras.ua](mailto:market@tiras.ua)

Technical support: [support@tiras.ua](mailto:support@tiras.ua)

Warranty and post-warranty service: [otk@tiras.ua](mailto:otk@tiras.ua)