



# Smoke alarm

## «CV212-12», «CV212-12-01 »

425232.003-01 PЭ

Instruction Manual

### INTRODUCTION

The Instruction Manual is designed to study the structure, functioning and operating procedures of the Smoke Alarm CV212-12 and CV212-12-01 (hereinafter referred to as Alarm).

The Alarm meets the requirements of EN-14604.

#### 1 INTENDED USE

1.1 The Alarm is designed to detect the fire, accompanied by smoke generation, as well as issue audible and light signals of fire alert.

1.2 The Alarm can be operated:

- as stand alone;
- in stand alone fire alarm network when Alarms are combined into a group with two-wire lines.

1.3 The Alarm is designed for continuous 24×7 operation indoors inside terrestrial stationary objects.

1.4 Operating conditions:

- Ambient air temperature: between -10 and 50°C;
- Relative humidity: up to 95% at a temperature 35°C;
- Atmospheric pressure: between 84 and 107 kPa.

### 2 SPECIFICATIONS

2.1 Main technical data:

- Sensitivity: not less than 0.05 dB/m;
- Technical availability time: not more than 15 seconds;
- Power supply voltage: 3V;
- Current consumption: not more than 2  $\mu$ A;
- Sound volume level at a distance of 3 m: not less than 85 dB;
- Maximum number of Alarms in a group: not more than 32;
- Overall dimensions:  
diameter – not more than 105 mm,  
height – not more than 59 mm.

2.2 Alarm triggering is confirmed by an audible signal and built-in LED flashing.

2.3 The output signal of triggered Alarm is not saved after the moment when the effects of the combustion products complete.

2.4 Alarm weight including a socket, kg: not more than 0.15.

### 3 PRODUCT STRUCTURE AND FUNCTIONING

3.1 The Alarm is an automatic optoelectronic device for audible and optical signaling when the smoke density in its location exceeds the threshold value.

3.2 The Alarm appears as a structure consisted of the Alarm itself and a base. The Alarm is connected to the base with a lock.

3.3 CV212-12 model contains built-in non-removable battery inside its housing, in the housing of CV212-12-01 model the batteries are removable.

General view of the Alarm is shown in Fig. 1.

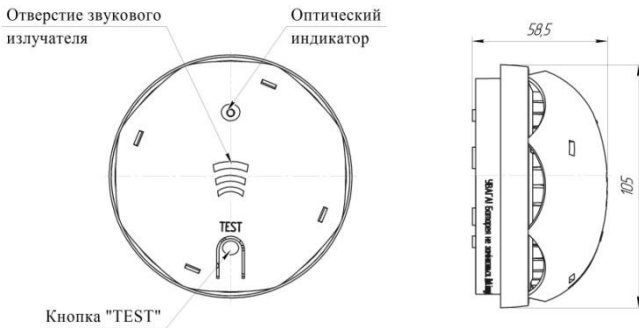


Fig. 1. General view of the Alarm

Отверстие звукового излучателя	Opening of the sound source
Оптический индикатор	Optical indicator
Кнопка "TEST"	TEST button

3.4 The optical indicator of the mode of operation (red color LED) is located in the Alarm housing. The "Test" (Test) button is also located on the housing

3.5 When the Alarm is in "Standby" mode, the optical indicator flashes at a frequency of once in every 6 minutes, when the Alarm switches to the "Fire" mode the optical indicator starts flashing with a frequency of once every 1 second, then intermittent audible signal of variable frequency become active.

#### 4 SAFETY PRECAUTIONS

4.1 The structure of the Alarm provides its fire safety during operation.

4.2 Installation of the Alarm shall be carried out by power tool with an operating voltage up to 42 V and a power up to 40 W, having proper insulation of live circuits from the housing of the power tool.

4.3 Installation, replacement and de-installation of the Alarm shall be carried out observing the work at height regulation.

#### 5 PRODUCT SETUP AND INSTALLATION

5.1 The Alarm shall be installed on the monitored object in accordance with the project documents, standards, construction standards and

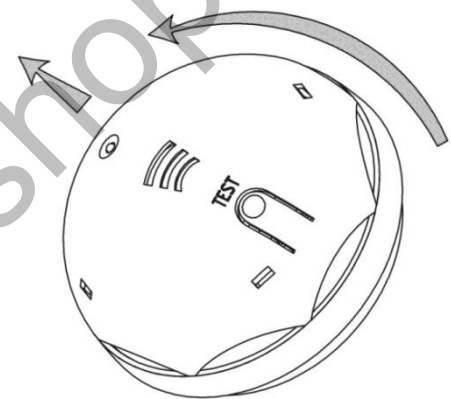
regulations, as well as operational documents of the Alarm.

5.2 We do not recommend install the Alarm in places where the release of gases, vapors and aerosols is possible that can cause corrosion.

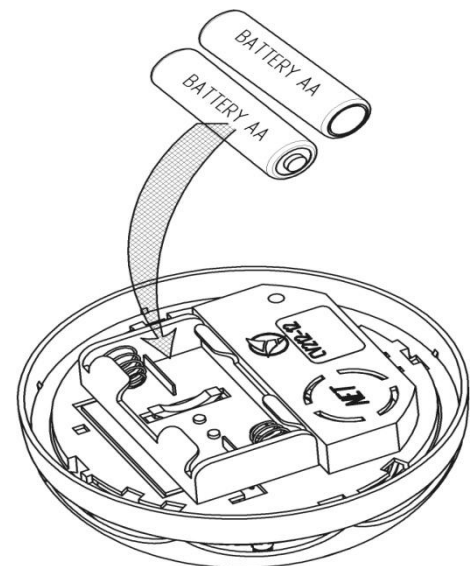
5.3 If repair works are carried out in the premises where the Alarms are installed, they shall be protected from the influence of building materials (whitewash, paint, cement dust, etc.).

5.4 Alarm setup shall be performed in the following sequence:

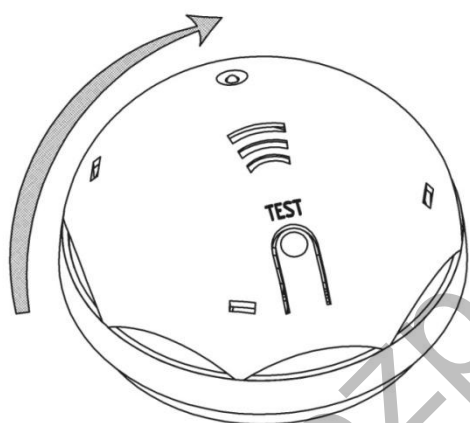
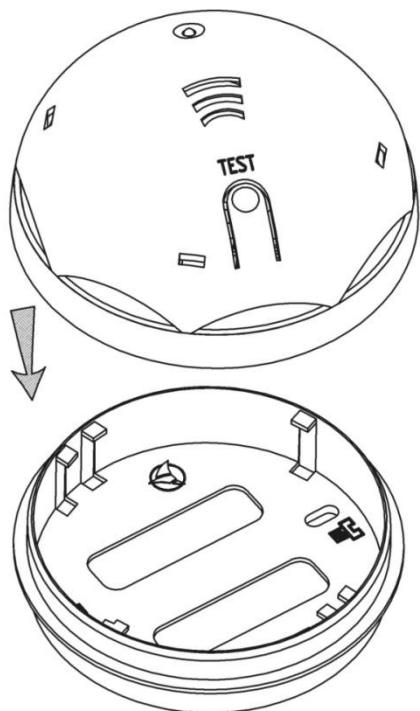
5.4.1 Disconnect the Alarm from the base by turning it counterclockwise (only for CV212-12-01 option).



5.4.2 Observing the polarity, place power supply batteries into the housing (only for CV212-12-01 option).

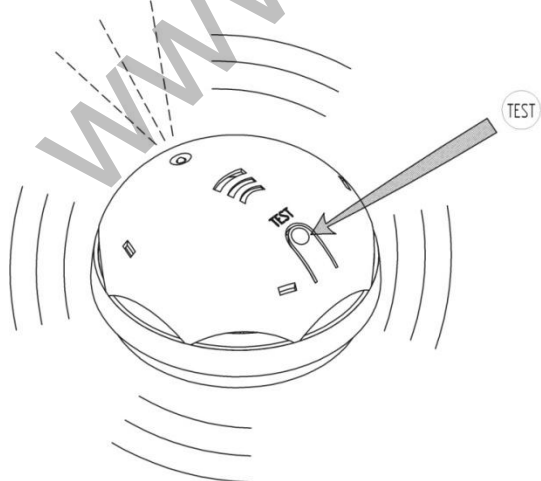


### 5.4.3 Install the Alarm into the

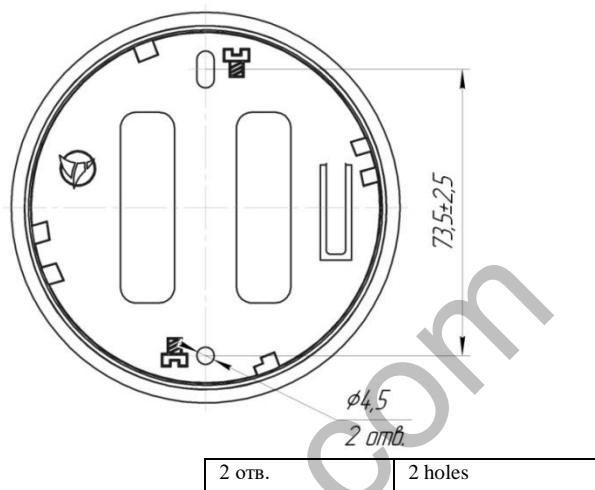


base.

5.4.4 Press and hold the TECT (Test) button for 3–5 s. Optical indicator must start frequently flashing, and an intermittent audible signal sounds. After the button is released the audible and light signals are terminated.



5.4.4 Disconnect the Alarm from the base, see 5.4.1, and secure the base at the place of installation using the mounting holes.



5.4.5 Install the Alarm into the base. The Alarm is ready for use.

## 6 ALARM MODES OF OPERATION AND DISPLAY

### 6.1 “Standby” mode

The Alarm for no more than 15 s after its installation in the base switches to standby mode, the indicator is flashing once every 6 minutes.

### 6.2 “Test” mode

Press and hold the “Tect” (Test) button until the audible signal sounds and LED indication flashes, then release the button. After a short time the audible signal terminates.

### 6.3 “Fire” mode

After the smoke level exceeds the acceptable value, the Alarm is switched to a “Pre-alarm” mode (LED indicator flashes frequently), next the Alarm is switched to a “Fire” mode.

A “Fire” mode is indicated by audible signal and flashing of built-in LED indicator.

“Fire” mode is not retained after exposure to combustion products, and the Alarm is switched to “Standby” mode (see item 6.1).

### 6.4 “Mute” mode

When the Alarm is switched to a “Fire” mode (see item 6.3), a “Mute” mode can be activated by pressing and holding the “Tect” (Test) button, then the audible signal and “Fire” mode indication are terminated.

When the Alarm is in "Standby" mode (see item 6.1), to activate this mode press and hold the "Тест" (Test) button for at least 3 s.

The fact that the Alarm is in the "Mute" mode is confirmed by LED indicator flashing 1 time per 10 s.

The Alarm autonomously switches to a "Standby" mode for no more than 10 minutes.

In order to switch the Alarm from a "Mute" mode to a "Standby" mode, you should press the "Тест" (Test) button again.

## 7 GROUPING OF ALARMS

7.1 Alarms may be combined in a group if you are required that triggering of one alarm caused triggering of others.

7.2 To combine Alarms in a group, they are to be connected with the two-wire loop as shown in the figure:

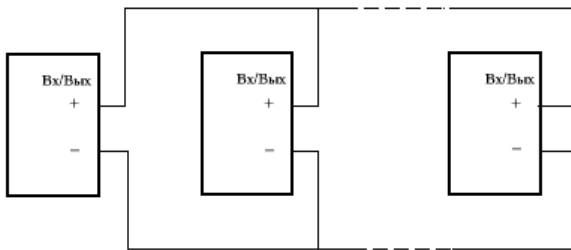
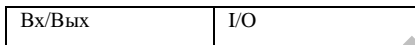
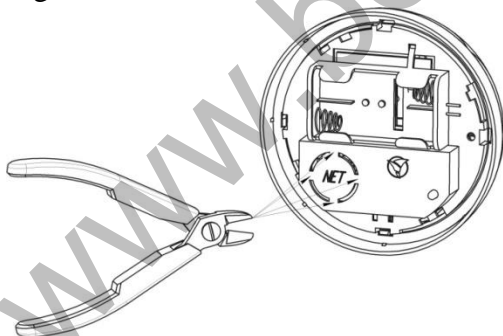


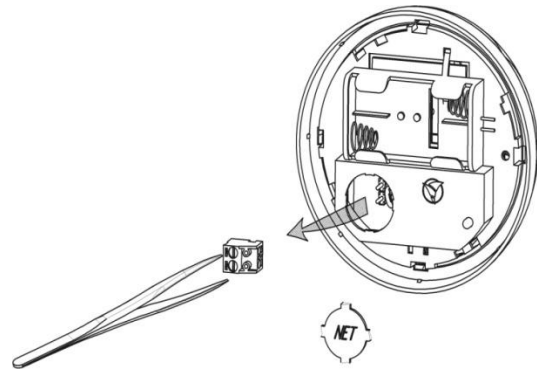
Fig. 2 Wiring of Alarm by two-wire loop



7.3 In order to combine Alarms in a group you need to remove the flap on the Alarm housing:



Observing the polarity, connect the two-wire loop to the connector of the Alarm:



To check the operation of Alarm group cause triggering of any one Alarm. In triggered Alarm an intermittent audible signal activates, as well as frequent flashing of the optical indicator. All other Alarms must issue only audible signals.

## 8 MAINTENANCE

8.1 At least once every 6 months purge the Alarm by air during 1 minute from all directions, using for this purpose a vacuum cleaner or a compressor with a pressure of (0.5–2) kg/cm<sup>2</sup>, and after that test the Alarm.

8.2 You should weekly check the operability of the Alarm by pressing the "Тест" (Test) button.

## 9 POWER SUPPLY BATTERY

Only for CV212-12-01 option.

9.1 When battery low, the Alarm issues simultaneous short audible and light signals.

To replace the battery, contact your service provider.

9.2 After the battery replacement, the Alarm should be tested for compliance to the item 5.4.3.

## 10 DISPOSAL

10.1 The Alarm models CV212-12, CV212-12-01 pose no danger to human life and health, as well as to the environment after the end of life.

10.2 After the end of life of the battery it must be removed and disposed separately in accordance with legislation in forth.