

10. PACKAGE INFORMATION

*Packing list*

*Detection and activation USP-101-*

*(version)*

*Quantity \_\_\_\_\_ pcs.*

*Packing date \_\_\_\_\_*

*Packed by \_\_\_\_\_*

*(Signature)*

11. MANUFACTURER'S WARRANTY

*11.1. Device warranty life is 1 year after commissioning.*

*11.2. Device storage life in manufacturer's package is 10 years after manufacturing, if it is kept according to storage conditions of 2 GOST 15150.*

*11.3. After finding any manufacturer's failure during warranty life the manufacturer is engaged to repair or replace it free of charge.*

*Note: Manufacturer's address – 1A, of. 202, Sportivnyy per., Tver, Russia 170002 OOO NPO "USP".*

*Phone/fax: +7 (4822) 32-08-94*

*www.usp101-tver.ru*

12. RECLAMATION DATA

*12.1. After finding any manufacturer's failure and faults the manufacturer's representative must be called. In case of his/her failure to appear during one month an unilateral statement should be made and the device with passport and this statement is returned back to manufacturer.*

*12.2. The manufacturer is engaged to ship an operational device to the client during 1 month after statement receipt.*



*OOO NPO "USP"*

*DETECTION AND ACTIVATION DEVICE USP-101*

*Passport*

*4371-005-47011152-2002-PS*

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8.2. After delivering to the mounting site the case and electrical circuits' integrity must be checked, safety pin (9) must be removed, to make sure that the thermo sensitive element (1) is reliably fastened, to connect the link wire terminals to the corresponding screw contacts (6), spring washers must be obligatory installed, to torque and only after this the wires can be connected to the activation system.

8.3. Operation in explosion hazardous areas of V-Ia, V-Ib, B-Ig, V-II and V-IIa classes (acc. to p. 7 of PUE 1985) or Zone 1 and Zone 2 due to TR TS 012/2011 "Safety of equipment for work in explosive environments" is admissible if the corresponding level of explosion protection is respected and necessary operational measures are provided.

8.3.1. Connections of wire terminals with screw contacts as well as wire exit points must to be coated with sealants VGO-4, VTU 29-1-69 to provide the sealing. Foamed sealants VPG-1, VPG -2, VPG -2Л, VPG -3 OCT 1 90049-72 can be used too. Sealant on the label seal is not admissible.

8.4. The risk of thermo sensitive element's (1) Figure 1) damage must be excluded during operation. The element should not be painted or be dirty.

9. ACCEPTANCE CERTIFICATE

Detection and activation device USP-101-

(version)

In number of \_\_pcs. According to technical conditions TU 4371-005-47011152-2002, TU 4371-005-47011152-2004 and acknowledged as ready for operation

Shipment № \_\_ Date of issue \_\_\_\_\_

Signature of responsible \_\_\_\_\_

5.3. Devices of version USP-101-45E, USP-101-72E, USP-101-93E, USP-101-110E, USP-101-R can be loop mounted up to 10 pcs. Devices must be parallel loop mounted. Same name contacts should be connected ("+" to "+", "-" to "-").

5.4. Surface protected by one device is up to 25 m<sup>2</sup>.

5.5. Devices' placing, installation and mounting should be executed according to the project documentation developed considering all the regulations.

## 6. LABELLING

6.1. Device labeling comprises:

- marking and version;
- date (manufacture month and year);
- manufacturer's trademark;
- explosion protection marking.

6.2. Transport package labeling comprises handling marks:

- "Fragile";
- "Risk of damage by damp";
- "Top, do not turn over".

## 7. PACKAGE

7.1. Devices (10 pieces) are placed into internal package.

7.2. Devices in the internal package are ranged in the box of 11-1 GOST 5959 type. Box walls and space between ranges is filled with GOST 7933 carton. A packing list and passports are placed on top (1 for each 10 items).

## 8. SAFETY MEASURES

8.1. Device is fire safe according to GOST 12.2.007.0 if its mounting and operation are corrects.

## 1. INTRODUCTION

This document, integrating passport with technical specification and operation manual (further referred to as "passport") is meant for the stud of a detection and activation device YCT-101/USP-101 (further referred to as "device") and for obtaining data necessary for its operation.

## 2. DESIGNATION

2.1. The device is designed for an actuating the activation system of an automatic fire suppression unit in the autonomous mode of a continuous control over fire dangerous environment state in case of exceeding set environment temperature value and in the mode of a manual starting by personnel's decision.

2.2. As for protection from the environment influence, the device is meant for operating:

USP-101-45E	- from -60 to 35 °C;
USP-101-72E	- from -60 to 55 °C;
USP-101-93E	- from -60 to 85 °C;
USP-101-110E and USP-101-R	- from -60 to 105 °C;

At relative humidity 98 % at temperature up to 40 °C.

## 3. TECHNICAL PARAMETERS

3.1. Device is being manufactured in 5 versions, depending on operation method and nominal activation temperature:

USP-101-45E	- automat. activation temperature 45±5 °C;
USP-101-72E	- automat. activation temperature 72±5 °C;
USP-101-93E	- automat. activation temperature 93±5 °C;
USP-101-110E	- automat. activation temperature 110±5 °C;
USP-101-R	- manual starting device.

3.2. Device dimensions, mm, no more than:

length	- 100.
diameter	- 70

3.3. Device weight, kg, no more than 0.2

3.4. Operation response rate corresponds to GOST R 53325 p. 4.5 «Point-type heat detectors».

3.5. Device generates an electric impulse with amplitude no less than 3.5 V at a load of 1 Ω. At the level of 3 V (I=3A) impulse duration is no less than 1 ms.

3.6. Device is resistant to the influence of single shocks with duration from 2 to 50 ms with peak acceleration up to 3 g.

3.7. Device is resistant to vibration influence with the frequency from 0.5 to 100 Hz with acceleration up to 1 g.

3.8. Number of the device control operations is no less than 10.

3.9. The device conforms with the severity grade 4 to induced electromagnetic interference and electromagnetic emission as per GOST R 53325.

3.10. The device is an unserviceable product. For the device restoration after activation it is necessary to lift a pin through the hole in the basing and attach a temperature the thermo sensitive element. For USP-101-R it is necessary to lift the pin and fix it with a safety locking pin. This operation should be performed by specialized organizations.

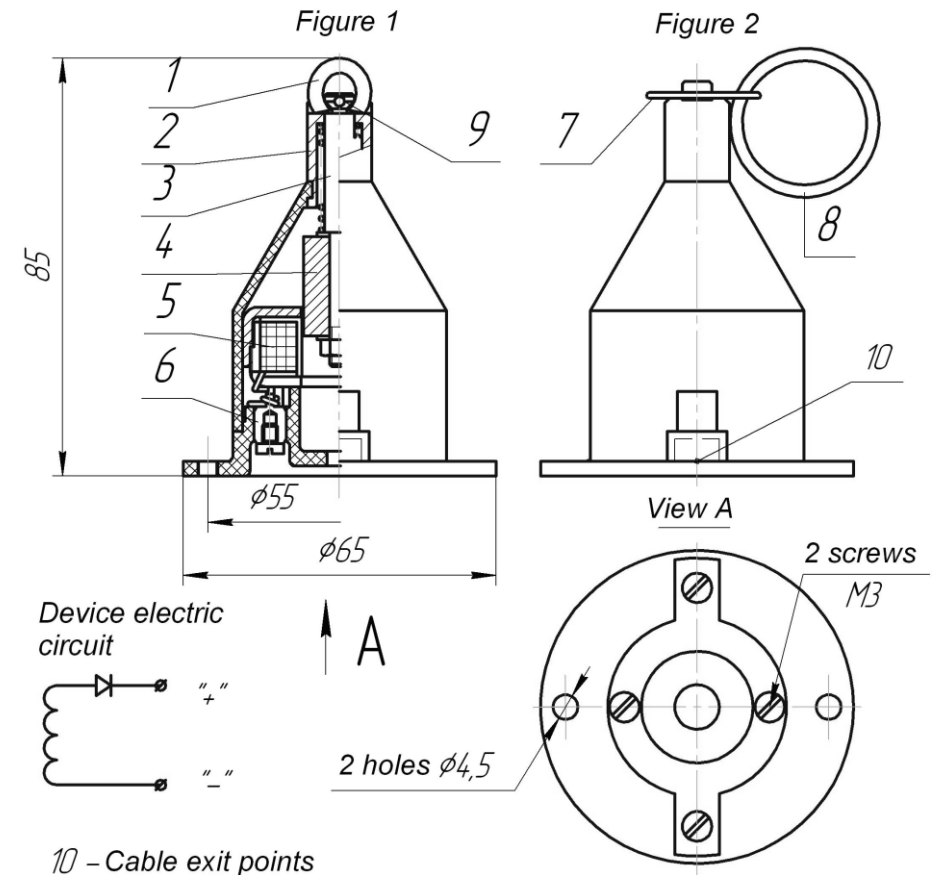
3.11. Average operating lifetime is 10 years.

#### 4. DELIVERY SET

Device delivery set comprises: device, passport with technical description and operation manual 4371-005-47011152-2002-PS (1 for 10 items).

#### 5. DEVICE PRINCIPLE AND OPERATION

5.1. Principle of versions USP-101-45(72,93,110)E is shown on Fig. 1, principle of the version USP-101-R– on Fig. 2.



5.2. Thermo sensitive element (1) is activated at excessive environmental temperature, which releases in the case (2) a spring assisted pin (3). A magnet (4) fixed on the pin passes through an inductor coil (5) and generates impulse in it which passes through contacts (6) by link wires to the activation system of an automatic fire suppression unit and/or alarm devices.

In the device of version USP-101-R the pin is held in a spring assisted position by a safety locking pin (7). During fire the locking pin is released with the ring (8). Then the device is operating in a similar way.