

ADDRESSABLE RATE-OF-RISE AND FIXED TEMPERATURE DETECTOR S2000-IP-PA-03

HCO 9001

INSTRUCTION MANUAL



1 TECHNICAL DATA

1.1 General

S2000-IP-PA-03 Addressable Rate-of-Rise and Fixed Temperature Heat Detector (hereinafter referred to as the detector) of Response Class A1R is designed to be used in fire alarm systems to protect premises against fire by monitoring ambient temperature. When the temperature reaches a response value or the temperature rises too rapidly, the detector generates an alarm.

The detector operates under control of a Signal-10 control unit in one of its Fire Threshold Addressable Alarm Loops (Type 14). An alarm loop can involve up to 10 detectors (with individual addresses from 1 to 10) each being capable of sending the following messages to the control unit: Fire Alarm, Trouble, Norm, Test. The version of the detector's firmware is v.1.10. For more information about detector operation please refer to Signal-10 User's Manual.

The detector can be tested by means of a laser-based tester (for example, manufactured by System Sensor).

1.2 Specifications

- 1) Fixed Temperature (factory setting) - $+54^{\circ}\text{C}$
- 2) Ingress Protection Rating - IP41
- 3) Input Loop Voltage - 9 to 30V
- 4) Current Consumption in Quiescent Mode - 400 μA max
- 5) Pre-operation Time - 60 s max
- 6) Detectors per a Signal-10 Addressable Loop - Up to 10 detectors
- 7) Transportation and Storage Temperature - Minus 50°C to $+50^{\circ}\text{C}$
- 8) Weight - 0.2 kg max
- 9) Overall Dimensions (diameter, height): - (100, 47) mm max
- 10) The detector doesn't contain precious metals (Clause 1.2 of GOST 2.608-78).
- 11) As to mechanical resistance, the detector falls into the 03 placement category in accordance with Russian Standard OCT 25 1099-83 withstanding vibration loads with a maximum acceleration of 0.5 g in the frequency range 1-35 Hz.
- 12) As to resistance to temperature and humidity effects the detector is manufactured in the implementation 3 in accordance with Russian Standard OCT 25 1099-83 but for operating at temperatures minus 30°C to $+50^{\circ}\text{C}$ and relative humidity up to 93 % at 40°C .

1.3 Standard Delivery

Single-piece delivery:

- | | |
|---------------------------|----------|
| - S2000-IP-PA-03 Detector | - 1 pc.; |
| - Instruction Manual | - 1 pc.; |
| - Address Label | - 1 pc.; |
| - Individual Packing | - 1 pc. |

Group delivery:

- | | |
|---------------------------|------------|
| - S2000-IP-PA-03 Detector | - 10 pcs.; |
| - Instruction Manual | - 1 pc.; |
| - Address Label | - 10 pcs.; |
| - Group Packing | - 1 pc. |

2 OPERATION INSTRUCTIONS

2.1 Connection Diagram

Figure 1 shows a standard diagram for wiring S2000-IP-PA-03 detectors into an alarm loop. A first terminal of the detector base can be used to connect a shield of the connecting wire.

2.2 Mounting

Detectors should be located in line with Russian construction regulations CTI 5.13130.2009.

The detector can be attached in accordance with one of the two variants below (Figure 2). To attach the detector to a solid surface (*Variant A*) the detector base plate provided is used. Optionally, MK-2 Suspended Ceiling Mounting Kit (*Variant B*) can be purchased additionally to install the detector into a suspended ceiling.

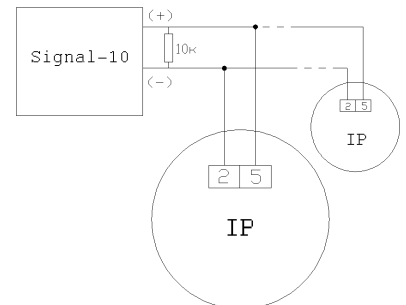


Figure 1

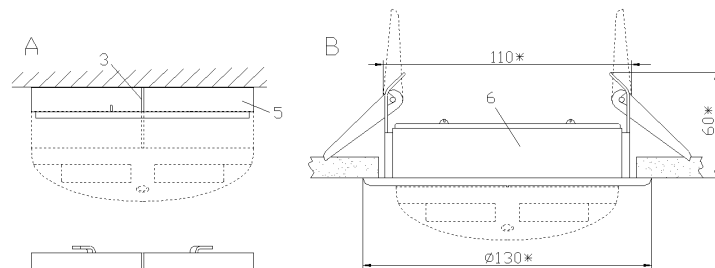


Figure 2

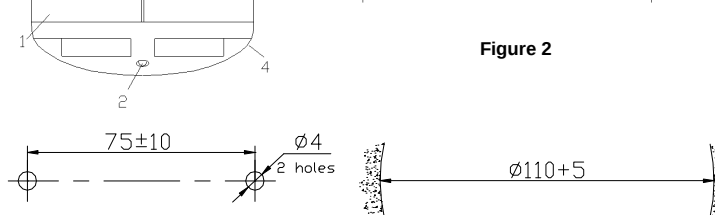


Figure 3

- 1: S2000-IP-PA-03 Detector
- 2: Light Emitter
- 3: Alignment Guide
- 4: Mark and Bar, **OPEN HERE**
- 5: Base Plate
- 6: MK-2 Suspended Ceiling Mounting Kit (ordered separately).

Figure 3 shows the drilling pattern to install the detector for Variant A as well as the diameter of a mounting hole in a suspended ceiling for Variant B.

ATTENTION

To install the detector on the base plate, align the guide on the detector with the short guide of the base plate. Then turn the detector clockwise until the detector guide will be aligned with guide 3 as shown in Figure 2 (A).

2.3 Indication

Pulses once per 8 seconds	OK
Two pulses once per 8 seconds	Fire, Test
Three flashes once per 8 seconds	Trouble
Three flickers once per 2 seconds	Indication of undefined (factory set) address in an addressable alarm loop
Four flashes once per second	Being connected to a non-addressable alarm loop or dc power. Waiting for assigning an address

2.4 Address Setting

For operation the detector must be assigned with an address in the range of 1 to 10.

The detector is supplied with no address. Absence of an address of the detector brought into an addressable alarm loop is indicated by light emitter flickering once per two seconds.

Assigning an address: Connect the detector into a disarmed alarm loop of the Type 1 of the Signal-10 control unit or to a 10 V to 12 V power supply. In 6 s four-time flashing of the light emitter once per second shows that the detector is ready to receive an address. Press the light emitter down and hold until it illuminates, then release the light emitter. Press the light emitter again so many times as the relevant address is (one to ten times). In 5 seconds the light emitter shall pulse the number of times equal to the assigned address and light for a half of a second.

Auto assigning to a first vacant address in the loop. Connect the detector into the alarm loop with the detector's light emitter pressed down. In about 3 seconds the light emitter shall illuminate within one second and then fade. The address is assigned.

Requesting for the address: Connect the detector into a disarmed alarm loop of the Type 1 of the Signal-10 control unit or to a 10 V to 12 V power supply. In 6 s four-time flashing of the light emitter once per second shows that the detector is ready to receive an address. Press the light emitter down and hold until it illuminates, then release the light emitter. In 5 seconds the light emitter shall pulse the number of times equal to the assigned address and light for a half of a second.

2.5 Testing the Detector

Prior to testing disconnect all outputs of control devices and executive modules that can run voice notification and automated fire-fighting systems.

Arm the alarm loop with the connected detector which indicates its normal state by light emitter's pulsing once per 8 seconds.

Blow the sensor of the detector with a hot air of 70 C to 100°C temperature (by a hair dryer). A more simplified functional test can be performed by pressing the light emitter down for at least 2 seconds or by lighting it with the laser beam of a laser test tool.

Control and indicating equipment shall indicate Fire Alarm (or Test in case of simplified testing) for the relevant address while light emitter shall flash doubly once per 8 seconds.

If no alarm is indicated it means that the detectors appears to be inoperable and must be replaced.

When testing is finished make sure the detector is ready for normal operation. Restore all links between control and indicating equipment and actuators with automated fire-fighting equipment and notify the proper authorities that the system is back in operation.

Special laser test tools for the detectors are ordered separately.

3 WARRANTY

3.1 The average lifetime of the detector is at least 10 years.

3.2 The manufacturer warrants its product to be free from defects in materials and workmanship under normal use and service for 18 months since putting it into operation, but no more than 24 months since the acceptance date.

3.3 In case of difficulties in programming or operating the product, please contact Technical Support by calling +7 495 775-71-55 (multichannel) or by emailing support@bolid.ru.

3.4 In the event of in-warranty failure forward your claims to the address:

ZAO NVP Bolid

4 Pionerskaya Str., Korolev 141070, Moscow Region, Russia

Tel./Fax: (495) 775-71-55 (PBX), 777-40-20, 516-93-72

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

4 CONFORMITY CERTIFICATES

4.1 S2000-IP-PA-03 Addressable Rate-of-Rise and Fixed Temperature Heat Detector is approved by Conformity Certificate № C-RU.ЧC13.B.00149.

4.2 Production of S2000-IP-PA-03 Addressable Rate-of-Rise and Fixed Temperature Heat Detector is certified in line with Russian Standard ГОСТ ISO 9001 – 2011 by a Conformity Certificate № РОСС RU.ИКС2.К00153.

4.3 Conformity Certificate TC № RU Д-RU.ME61.B.00315 certifies that S2000-IP-PA-03 Addressable Rate-of-Rise and Fixed Temperature Heat Detector meets the requirements of Technical Regulations of Custom Union TR CU 020/2011.

5 ACCEPTANCE CERTIFICATE

The S2000-IP-PA-03 addressable rate-of-rise and fixed temperature heat detectors (the serial numbers are specified on the cases of the detectors) are qualified as proper for operation and packaged by CJSC NVP "Bolid".

Responsible for acceptance and packaging



QCD

Full Name

Date, Month, Year