

DIP-34PA-03

Addressable Photoelectric Smoke Detector

ИСО 9001



INSTRUCTION MANUAL



GENERAL

DIP-34PA-03 Addressable Photoelectric Smoke Detector (hereinafter referred to as the DIP-34PA-03 or the detector) is designed to be used in a fire alarm system in order to detect smoke inside enclosed premises by sensing light reflected by smoke particles. The detector meets the requirements of Appendix "P" of Russian Rules СП5.13130.2009.

The DIP-34PA-03 operates under control of a Signal-10 Intrusion and Fire Alarm Control Unit in an alarm loop of Type 14, Fire Threshold Addressable. Up to ten detectors each having its own address from 1 to 10 can be brought into a single Signal-10 alarm loop of Type 14. Each detector responds with its state to the Signal-10. These states can be Fire Alarm, Trouble, Dusty, Norm, and Test. Electromagnetic compatibility of the detector meets the requirements for the third resistance level.

The version of DIP-34PA-03 firmware is 1.00. Please read the Signal-10 User's Manual to get more information about DIP-34PA-03 operation.

The detector's operability can be tested by means of a laser tester (such as the tester produced by System Sensor).

SPECIFICATIONS

Sensitivity	0.05 - 0.2 dB/m
Response Time	10 s max
Ingress Protection Rating	IP 41
Input Voltage (via a Signal-10 alarm loop in threshold mode)	9 ÷ 30 VDC
Current Consumption (via an alarm loop of a Signal-10)	0.4 mA max in quiescent mode
Pre-operation Time	60 s max
The number of detectors per alarm loop	Up to 10
Operating Temperatures	-30 to +55°C
Storage Temperatures	-50 to +50°C
Humidity	93% at 40°C, non-condensing
Overall Dimensions (diameter x height)	100 mm × 47 mm max
Weight	0.2 kg max
The detector doesn't contain precious metals (Clause 1.2 of ГОСТ 2.608-78)	

STANDARD DELIVERY

For *single-piece* delivery:

- DIP-34PA-03 Detector - 1 pc.
- Instruction Manual - 1 pc.
- Address Sticker - 1 pc.
- Protective Cover - 1 pc.
- Unit Package - 1 pc.

For *group* delivery:

- DIP-34PA-03 Detector - 10 pcs.
- Instruction Manual - 1 pc.
- Address Sticker - 10 pcs.
- Protective Cover - 10 pcs.
- Group Package - 1 pc.

WIRING

Figure 1 shows the standard wiring diagram to connect DIP-34PA-03 detectors into an alarm loop of the Type 14 of a Signal-10 control unit. The first terminal of a detector base can be used to connect a shield of the connecting wire.

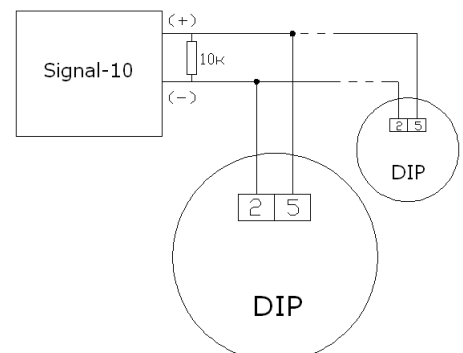


Figure 1. Wiring Diagram

MOUNTING

When the detector is mounted on a ceiling, it is necessary to follow the requirements of Rules СП5.13130.2009, in particular Table 13.3:

Height	Average Area Monitored by a Single Detector	Distance	
		Between Detectors	Between Detector and Wall
Below 3.5 m	Up to 85 sq.meters	9.0 meters	4.5 meters
3.5 ÷ 6 m	Up to 70 sq.meters	8.5 meters	4.0 meters
6 ÷ 10 m	Up to 65 sq.meters	8.0 meters	4.0 meters
10 ÷ 12 m	Up to 55 sq.meters	7.5 meters	3.5 meters

If cannot be installed on a ceiling, the DIP-34PA-03 can be mounted on wire ropes as well as on a wall, a column, or any other structural. Installing point-type detectors on walls please follow the instructions of Appendix "П" of Rules СП5.13130.2009.

Figure 2 shows two possible ways of attaching the detector. To attach the detector to a solid surface (variant **A**) use the mounting base provided (see also the drilling pattern in Figure 3, at the left). Otherwise, a separately purchased mounting kit MK-2 can be used to build the detector into a suspended ceiling (variant **B**). The size of the mounting hole is shown in Figure 3, at the right.

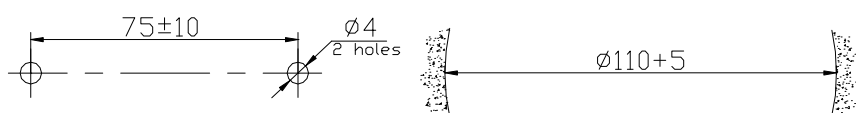
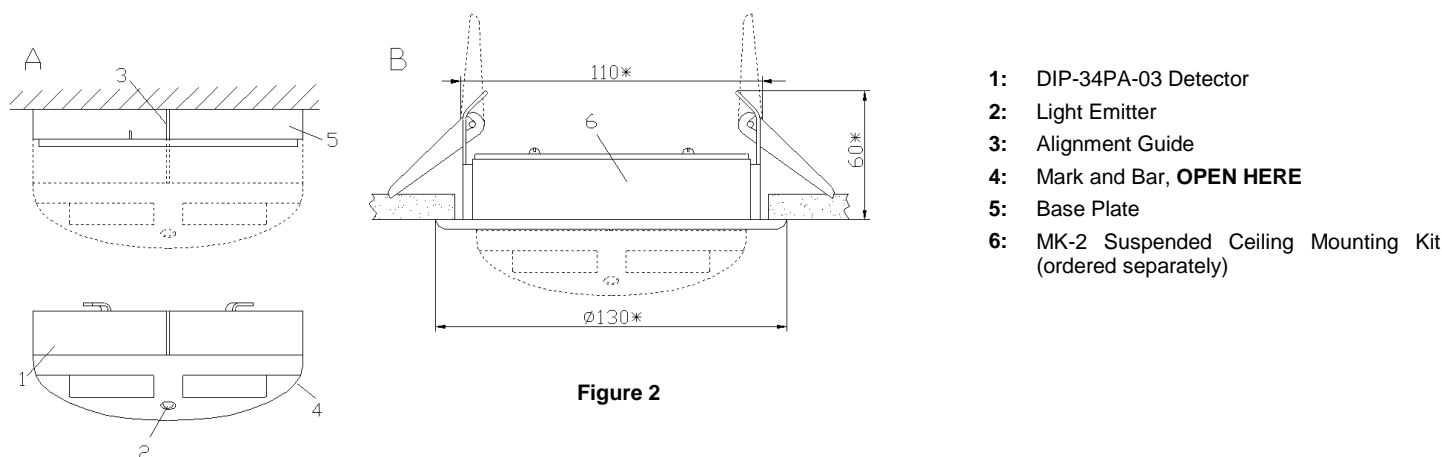


Figure 3. Drilling Pattern

Figure 3 shows the drilling pattern to install the detector for the variant A and the diameter of the mounting hole in the suspended ceiling for the 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 is aligned with guide 3 as shown in Figure 2 (A).

INDICATION

Light Emitter Behavior	Detector Status/Condition
Flashes once per 8 seconds	Norm
Two flashes once per 8 seconds	Fire Alarm or Test
Three flashes once per 8 seconds	Service Required or Trouble
Three flashes (flickering) 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 supply; or the DIP-34PA-03 is waiting for assigning an address

PROGRAMMING

In order the DIP-34PA-03 to operate properly within a Fire Threshold Addressable Alarm Loop of a Signal-10, the detector must be assigned to a unique number from 1 to 10 within the alarm loop – the address which is stored in the DIP-34PA-03 non-volatile memory. The detector is delivered without an address. Not assigning a detector connected to a Fire Threshold Addressable Alarm Loop of a Signal-10 to an address is indicated by flickering of its light emitter once per two seconds.

Assigning the DIP-34PA-03 to an Address

Bring the detector into a disarmed alarm loop of the Type 1 of a Signal-10 or to a 10V÷12V power supply. In 6 seconds the detector's light emitter will flash four times once per second indicating the detector's being ready for assigning an address. Push the light emitter and release after it lights up. Then press the light emitter again the number of times which is equal to the required address (1 to 10). In 5 seconds the light emitter shall flash the number of times which is equal to the current address, and then the detector lights up for a half of second.

Auto Assigning the DIP-34PA-03 to a First Vacant Address in a Loop

Bring the DIP-34PA-03 with pressed light emitter into an addressable alarm loop of Type 14 of the Signal-10. In three seconds the light emitter illuminates for 1 second and shuts down indicating address's being assigned. For example, if the loop has already contained detectors with addresses 1, 2, 3, and 5 then the current detector will be assigned to the address of 4.

How to Find Out the Address of the DIP-34PA-03

Bring the detector into a disarmed alarm loop of the Type 1 of a Signal-10 or to a 10V÷12V power supply. In 6 seconds the detector's light emitter will flash four times once per second indicating the detector's being ready for assigning an address. Push the light emitter and release when it lights up. In 5 seconds the light emitter shall flash the number of times which is equal to the current address, and then the detector lights up for a half of second.

DIP-34PA-03 ROUTINE TESTING



Before testing DIP-34PA-03, please disconnect executive outputs of all system devices and modules that can release an extinguishing agent or activate light and sound alarms. Notify the fire department and persons where the audible signals can be heard.

After testing verify that all the detectors are ready to operate properly. Then restore operability of all the system components disconnected before testing and inform the relevant departments about completing the test.

To test the DIP-34PA-03 detector, arm the alarm loop with the connected detector. Before arming the alarm loop should be in the Norm state indicating this state by light emitter's flashing once per 8 seconds.

Take a spray can of smoke detector test aerosol and spray some of the test material into the detector. (Or perform a simplified test just by pressing on the detector's light emitter for 2 to 5 seconds or by lighting the emitter with the laser beam of a remote laser tester.)

The network controller shall display *Fire Alarm* message (or *Test* message in case of a simplified test) for the device with the address of the DIP-34PA-03. The detector's light emitter shall flash doubly every 8 seconds.

If no messages mentioned above are indicated then the detector is non-functioning and must be replaced.

Test tools are not provided with the detector and should be purchased aside.

MAINTENANCE

Please test the detector operability annually as said above.

When a *Service Required* message is received from the detector, remove pollution from the detector smoke chamber.

WARNINGS



To avoid contamination of the detector please DO NOT remove protective cover until the environment is cleaned up from dust and debris.

DO NOT remove the detector PCB because this automatically cancels the warranty.

DO NOT mount the detector within the premises where air velocity values exceed 15 m/s.

WARRANTY

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

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.

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.

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>.

CONFORMITY CERTIFICATES

The detector is approved by Conformity Certificate No. C-RU.4C13.B.00149.

Conformity Declaration TC № RU Д-RU.ME61.B.00312 certifies that the detector meets the requirements of Technical Regulations of Custom Union TR CU 020/2011.

Production of the detector is certified in line with Russian Standard ГОСТ ISO 9001 – 2011 by Conformity Certificate № ПОСС RU.ИК32.K00153.

ACCEPTANCE CERTIFICATE

The DIP-34PA-03 Addressable Photoelectric Smoke Detectors (the serial numbers are specified on the cases of the detectors and written to the microprocessor memory) are qualified as proper for operation and packaged by CJSC NVP "Bolid".

Responsible for acceptance and packaging



QCD

Full Name

Date, Month, Year