

# DIP-34PA

## Addressable Photoelectric Smoke Detector



### INSTRUCTION MANUAL

#### GENERAL

DIP-34PA Threshold Addressable Photoelectric Smoke Detector (hereinafter referred to as the DIP-34PA or the detector) is designed to be used in a fire alarm system in order to initiate fire alarms.

The DIP-34PA operates under control of the Signal-10 Intrusion and Fire Alarm Panel which the detector is connected to. Up to ten detectors, each having its own address between 1 and 10, can be brought into a single Signal-10 alarm loop which is configured with the Type 14, Fire Threshold Addressable Alarm Loop.

The DIP-34PA detects smoke inside its smoke chamber by sensing light reflected by smoke particles and responds with its states to the Signal-10. Depending on detected smoke amount these states can be Norm, Fire Alarm, Trouble, Dusty, and Test.

The version of DIP-34PA software is 1.02. Please read the Signal-10 User's Manual to get more information about DIP-34PA operation.

The detector's operability must be periodically tested either by using test aerosol (as described below) or by means of a remote laser tester (such as the tester produced by the System Sensor Company).

#### SPECIFICATIONS

Sensitivity	0.05 - 0.2 dB/m (1.2 %/m to 4.7 %/m)
Response Time	10 s max
Ingress Protection Rating	IP 41
Input Voltage (via an alarm loop of a Signal-10)	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 × 46 mm max
Weight	0.2 kg max
Average Lifetime	at least 10 years

#### STANDARD DELIVERY

Find the following unpacking the DIP-34PA:

- DIP-34PA Detector
- Mounting Base
- This Instruction Manual
- Address Sticker
- Protective Cover

#### MOUNTING

The DIP-34PA can be mounted on a ceiling, suspended ceiling, wall, wire rope, column, or any other structural. The detector is not designed to be mounted within the premises where air velocity values exceed 15 m/s.

Figure 1 shows three 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 2, at the left). For doing this match the detector mark with the short mark line on the mounting base, and then turn the detector clockwise until the detector mark will be aligned with the mark 3 as shown in Figure 1 (A).

To build the detector into a suspended ceiling use separately purchased mounting kits MK-1 (variant **B**) or MK-2 (variant **C**). The size of mounting hole is shown in Figure 2, at the right.

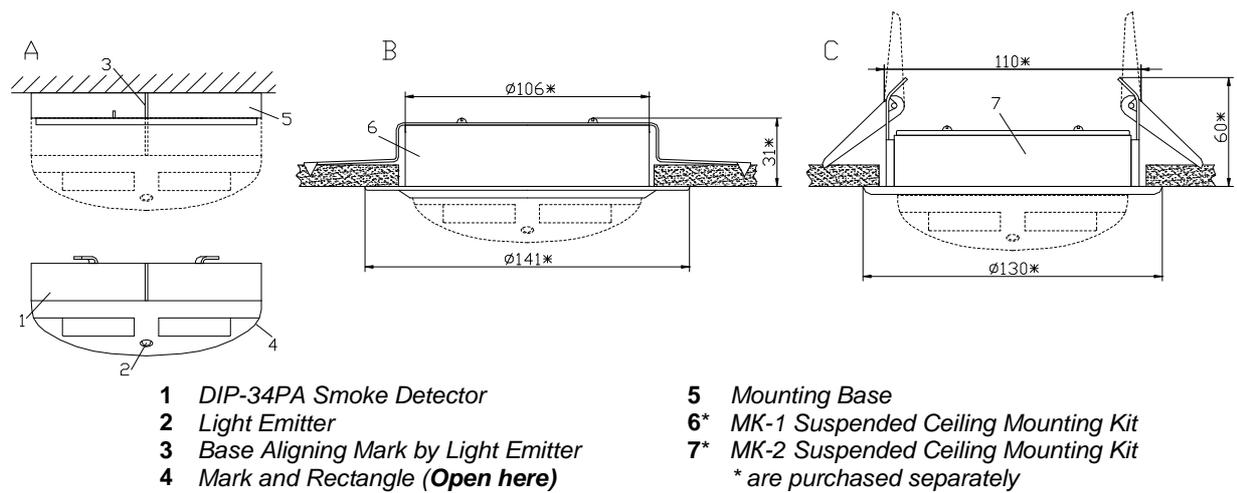


Figure 1 Three Ways to Mount the Detector

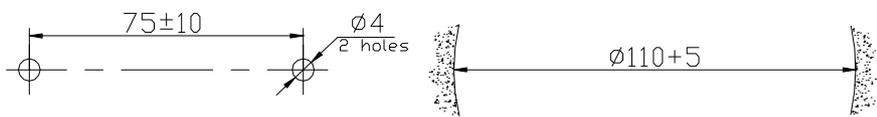


Figure 2 Drilling Pattern

**WIRING**

Figure 3 shows the wiring diagram to connect DIP-34PA detectors to an alarm loop of the Type 14 of a Signal-10 panel.

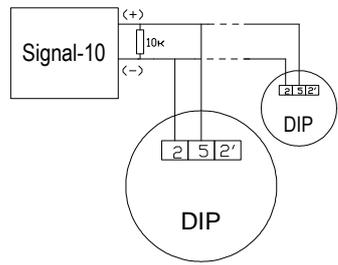


Figure 3 Wiring Diagram

**INDICATION**

Light Emitter Behavior	Detector Status/Condition
Flashes once per 8 seconds	Norm
Two flashes once per 8 seconds	Fire Alarm; Test
Three flashes once per 8 seconds	Dusty; Trouble
Three flashes (flickering) once per 2 seconds	DIP-34PA is connected to an alarm loop of the Type 14; the detector's address has not yet been assigned
Four flashes once per second	Being connected to a non-addressable alarm loop or dc power supply, DIP-34PA is waiting for assigning an address

**PROGRAMMING**

In order the DIP-34PA 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 loop – the address which is stored in the DIP-34PA non-volatile memory. The detector is delivered without any 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 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. Press the light emitter and hold until 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 will 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 to a First Vacant Address of a Loop**

Bring the DIP-34PA with pressed light emitter into an addressable alarm loop of Type 14 of the Signal-10. In three seconds the light emitter lights for 1 second and shuts down indicating the 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**

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. Press the light emitter and hold until it lights up. In 5 seconds the light emitter will 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 ROUTINE TESTING**



Before testing DIP-34PA, 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 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 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 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. The detector's light emitter shall flash doubly each 8 seconds.

If the network controller has displayed no messages mentioned above 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 dirt.

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.



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## **BOLID ONE YEAR LIMITED WARRANTY**

Bolid Company and its divisions and subsidiaries («Seller»), 4 Pionerskaya Str., Korolev 141070, Moscow Region, Russia warrants its security equipment (the «product») to be free from defects in materials and workmanship for one year from date of original purchase, under normal use and service. Seller's obligation is limited to repairing or replacing, at its option, free of charge for parts or labor, any product proven to be defective in materials or workmanship under normal use and service. Seller is not responsible for results where the product is used improperly, where it is used for any application it is not intended for, used under unacceptable environmental conditions and mishandled or stored under improperly. Seller shall have no obligation under this warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than the Seller. In case of defect, contact the security professional who installed and maintains your security equipment or the Seller for product repair.

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