

**ICO 9001**

MOUNTING KIT  
MK-4

User's Manual

**BOLID**®

## Table of Contents

1	Description and Operation.....	5
1.1	Purpose.....	5
1.2	Specifications .....	5
1.3	Standard Delivery.....	5
1.4	Arrangement and Operation.....	5
1.5	Measuring Instruments, Tools, and Accessories.....	6
1.6	Marking and Sealing.....	6
1.7	Packaging.....	6
2	Intended Use .....	6
2.1	Operating Restrictions .....	6
2.2	Preparing for Use.....	6
2.2.1	Safety Precautions while Preparing for Use.....	6
2.2.2	Design and Mounting .....	7
2.2.3	Wiring.....	7
2.3	Using the MK-4.....	7
2.3.1	Testing Operability.....	7
2.3.2	Extreme Situation Actions.....	8
2.3.3	Troubleshooting .....	8
3	Maintenance.....	8
3.1	General.....	8
3.2	Safety Precautions .....	8
3.3	Maintenance Procedures .....	8
3.4	Testing Operability.....	8
3.5	Technical Examination .....	8
3.6	Preservation (Depreservation, Represervation) .....	8
4	Repair .....	9
5	Storage.....	9
6	Transporting.....	9
7	Disposal .....	9
8	Manufacturer Warranty .....	9
9	Certification Information.....	9

This user's manual describes the functions of and explains principles of operating MK-4 Mounting Kit for improving enclosure protection degree.

Only the personnel who have studied this manual are allowed to operation activities. All activities on mounting, start-up, programming, and testing shall be performed in compliance with the requirements of the regulatory documentation in force at the place of operation.

Abbreviations:

MK: MK-4 mounting kit for suspended ceiling

Detector: DIP-34A-03, DIP-34A-04, DIP-34A-05, DIP-34PA-03, S2000-IP-03, S2000-IP-PA-03, S2000-IPG, COnet, or another fire detector with the similar enclosure manufactured by ZAO NVP Bolid

# 1 Description and Operation

## 1.1 Purpose

MK-4 Mounting Kit (hereinafter referred to as the MK-4) is designed to improve enclosure protection rating of fire detectors manufactured by ZAO NVP Bolid, namely DIP-34A-03, DIP-34A-04, DIP-34A-05, DIP-34PA-03, S2000-IP-03, S2000-IP-PA-03, S2000-IPG, COnet, or other detectors in similar enclosure.

The MK-4 is classed as a non-restorable, regularly maintainable item.

The design of the MK-4 doesn't provide its operation in aggressive environments as well as in explosion hazardous and flammable premises.

## 1.2 Specifications

Table 1.2.1

Parameter	Value
Enclosure protection rating when using the MK-4	IP43
Resistance to mechanical exposure as per OST 25 1099-83	Arrangement Category III
Vibration exposure: - Frequency range, Hz - Max acceleration, g	1-35 0.5
Environmental category as per OST 25 1099-83	O3
Operating temperatures, °C	Minus 30 through plus 50
Weight, kg, max	0.05
Overall dimensions, mm	15×Ø137
Expected lifetime, years	10

## 1.3 Standard Delivery

The MK-4 is supplied in a ten-unit packaging.

The scope of delivery is shown in Table 1.3.1.

Table 1.3.1

Item	Q-ty
MK-4 Mounting Kit	10 pcs.
Accessory kit:	
Rubber O-ring 003-006-19	20 pcs.
Documentation:	
MK-4 Mounting Kit Operations Manual	1 pcs.

## 1.4 Arrangement and Operation

The MK-4 is a plastic reversed plate-shaped water-proof escutcheon along with rubber O-rings.

The detector base shall be mounted horizontally on the ceiling by means of woodscrews passed through the MK-4 mounting holes and O-rings.

The surface of the escutcheon plate and rubber O-rings protect the detector base and the detector itself against entry of water from above.

The size of the escutcheon plate and the shape of its edges are arranged so that water drops falling from the edges at an angle of up to 60 degrees, for example due to the wind, do not fall on the detector.

Communication wires are connected to the fire detector base housed inside of the MK-4. The wires are to be erected with arranging a bend at the edge of the plate for water drops flowing along the wire insulation to fall down without entering into the detector.

Figure 1.4.1 show the appearance of a detector mounted along with the MK-4.

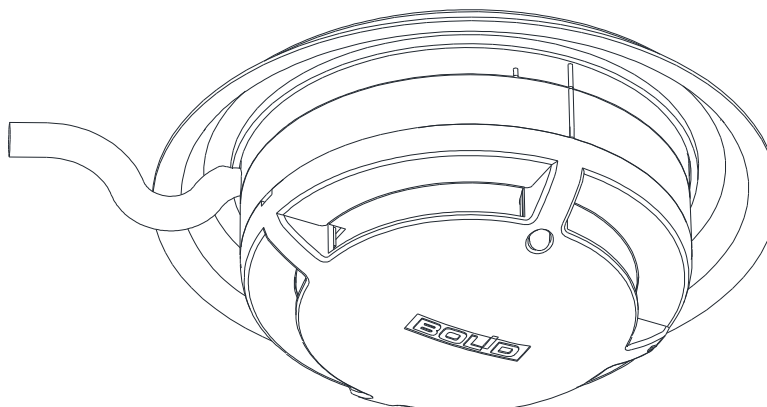


Figure 1.4.1

### 1.5 Measuring Instruments, Tools, and Accessories

While mounting, commissioning, and maintaining the equipment, please use the instruments, tools, and accessories specified in Table 1.5.1.

Table 1.5.1

Instrument	Specifications
Marking tools	A rule, a compass, a pencil
Utility knife	
Cross slot screwdriver	2×100 mm

### 1.6 Marking and Sealing

Every MK-4 has a marking applied to the back of its enclosure.

The marking contains the name of the product and the year and quarter of production.

### 1.7 Packaging

The units along with accessory kit and operation documentation are packaged in a group cardboard box.

## 2 Intended Use

### 2.1 Operating Restrictions

The design of the MK-4 doesn't provide its operation in aggressive environments as well as in explosion hazardous and flammable premises.

### 2.2 Preparing for Use

#### 2.2.1 Safety Precautions while Preparing for Use

- The MK-4 design meets the requirements of electric and fire safety including emergency operation in accordance with Russian standards GOST 12.2.007.0-75 and GOST 12.1.004-91;
- MK has no circuits under a hazardous voltage;
- Do SHUT OFF power from the unit before mounting, installing, and maintaining this one;

- The unit shall be mounted and maintained by persons qualified for Accident Prevention of Class II or higher.

### 2.2.2 Design and Mounting

Figure 2.2.2.1 shows how to mount the MK-4 on a ceiling.

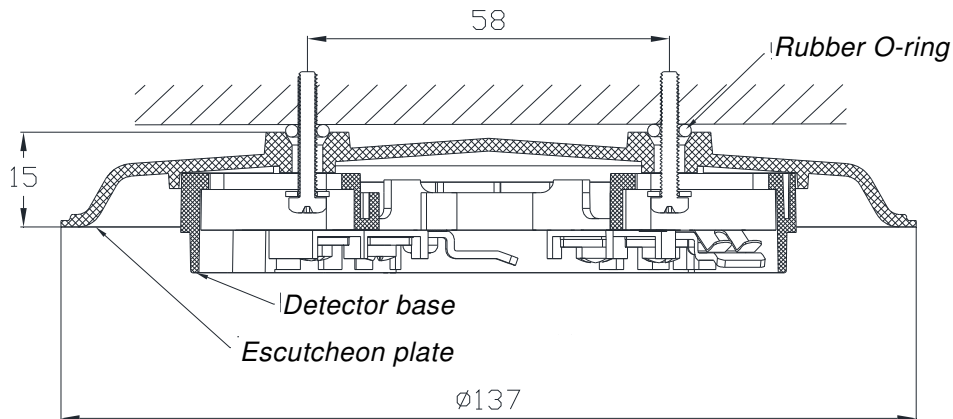


Figure 2.2.2.1

Align the MK-4 with the drilled mount holes in the ceiling as per the drilling template. Then attach the detector mount base to the MK-4 with the woodscrews.

### 2.2.3 Wiring

Communication wires are connected to the detector mount base installed into the MK-4.

Figure 2.2.3.1 shows how to erect wires to the detector base while using the MK-4.

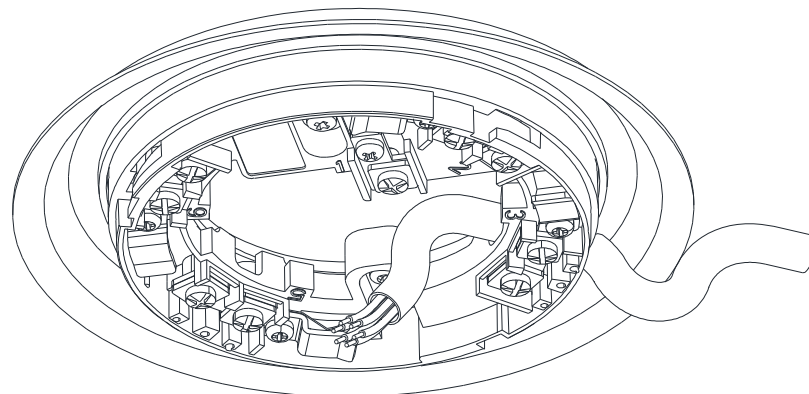


Figure 2.2.3.1

## 2.3 Using the MK-4

To be admitted to work with the MK-4, the personnel are obliged to have studied this manual and to have a certificate of verification of knowledge of safety regulations.

The MK is used for mounting fire detectors to and removing them from mounting bases installed into the MK.

### 2.3.1 Testing Operability

Test operability of the unit in line with para 3.4 of this manual.

### 2.3.2 Extreme Situation Actions



#### **Warning!**

If sparks, fire, smoke, or smell of burning is found at the installation site of the product, the product must be de-energized and sent for repair.

### 2.3.3 Troubleshooting

**Table 2.3.3.1**

Symptom	Possible Cause	Solutions
Water is accumulated on the detector	Gaps between the screws and the ceiling	Install new O-rings
Water enters into the smoke chamber	Water flows along the connecting cable	Increase the downward bend of the cable

## 3 Maintenance

### 3.1 General

The MK-4 shall be maintained under the following schedule:

**Table 3.1.1**

Task Description	Frequency
Visual checking	Monthly
Check for operability	Six-monthly

### 3.2 Safety Precautions

The MK shall be maintained by personnel qualified for Electrical Safety of Level II or higher.

### 3.3 Maintenance Procedures

Visual checking of the MK includes checks for no mechanical damages, fastening reliability, and proper condition of connecting wires and contact joints.

Checking for MK operability is performed as specified in para 3.4 of this manual.

### 3.4 Testing Operability

Operability of MK is tested when it is assembled with the connected detector.

### 3.5 Technical Examination

Technical examination is not applicable for this equipment.

### 3.6 Preservation (Depreservation, Represervation)

Preservation is not applicable for this equipment.

## 4 Repair

Repair of faulty equipment is to be conducted by the manufacturer or in authorized repair centers. The product shall be sent for repair in compliance with Company Standard QMS 8.5.3-2015, which can be found online at our website <https://bolid.ru/support/remont/>.



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### Warning!

The equipment shall be submitted for repair being assembled and clean and along with all the parts listed in the documentation.

Claims are accepted only if a reclamation report describing the failure is applied to the submitted equipment.

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An equipment fault resulted from consumer's not observing rules of mounting and operation is not a reason for claims and warranty repair.

Claims shall be submitted to the following address:

NVP BOLID, #4 Pionerskaya Str., Korolyov, Moscow Region, 141070, Russia

Phone: +7 (495) 775-71-55, E-mail: [info@bolid.ru](mailto:info@bolid.ru).

In case of any issue related to use of the product, please contact the technical support +7 (495) 775-71-55 or email [support@bolid.ru](mailto:support@bolid.ru).

## 5 Storage

Storage in a transport container is permitted at ambient temperatures minus 50°C through plus 50°C and relative humidity up to 95% at plus 35°C.

Storage in the consumer package is permitted only in heated premises at temperatures plus 5 through plus 40 °C and relative humidity up to 80 % at plus 20 °C.

## 6 Transporting

The product can be transported in a transport container at ambient temperatures minus 50°C through plus 50°C and relative humidity up to 95 % at plus 35°C.

## 7 Disposal

The product is to be disposed of considering that there are no toxic components in it.

The MK-4 does not contain precious materials and non-ferrous metals.

## 8 Manufacturer Warranty

The manufacturer guaranties the product meets with technical requirements stated in the manuals if the user follows the instructions for transportation, storage, installation, and usage.

The warranty period is 18 months since putting the product into operation but no more than 24 months from the manufacturer's date of production.

## 9 Certification Information

Production of MK-4 is awarded with the conformity certificate GOST R ISO 9001. The certificate can be found online at the website <https://bolid.ru> in the section ABOUT COMPANY.