

**POLON 4000**  
**INTERACTIVE FIRE DETECTION AND ALARM SYSTEM**

**ROP-4001M & ROP-4001MH**  
**FIRE MANUAL CALL POINTS**

Installation and Maintenance Manual

IK-E325-001GB

IIC Edition




The ROP-4001M and ROP-4001MH manual call points, covered by the present manual, complies with the requirements of the following European Union directives:

**CPD** 89/106/EWG on electric construction materials;  
**EMC** 2004/108/WE on electromagnetic compatibility.

The ROP-4001M and ROP-4001MH manual call points have been attested with the EC-Certificate of Conformity No. 1438/CPD/0090 issued by the Scientific and Research Centre for Fire Protection (CNBOP) Józefów, Poland, a EU notified authority No. 1438, confirming its compliance with the requirements of the PN-EN 54-11:2004 standard.


The certificate may be downloaded from [www.polon-alfa.pl](http://www.polon-alfa.pl) web site.

The ROP-4001M and ROP-4001MH call points have been approved by the CNBOP with the Allowance Certificate No. 0345/2008.


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<p>EN 54-11  <b>ROP-4001M &amp; ROP-4001MH manual call points</b> (addressable, B type)          Application – fire safety</p>
<p>Technical data - IK- E325-001GB manual</p>

Read the manual carefully before assembling and operation. Any nonconformity with the instructions contained in the manual may be harmful or may cause a violation of the law in force.

POLON-ALFA bears no responsibility for any damage resulting from any usage inconsistent with the manual.

<p>The waste product, unsuitable for further use, shall be passed to a waste electric and electronic equipment collection point.</p>	
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**NOTE:** The manufacturer reserves a right to change specifications of the products at any time without a prior notice.

## 1 PURPOSE

The ROP-4001M and ROP-4001MH manual call points are designated for operation in addressable loops of the POLON 4000 system detecting lines. They are addressable devices installed in order to transfer information about a noticed fire by their manual actuation.

The ROP-4001M manual call point in the standard execution is intended for indoor installation.

The ROP-4001MH manual call point (with a higher ingress protection level) is intended for outdoor installation.

Both versions are suitable for semi-flush (in wall plaster) and surface (on wall plaster) mounting installation – the basic version is the first one, the semi-flush type. A special auxiliary RM-60-R masking frame is applied for surface mounting; it is not a part of the standard equipment and should be ordered separately.

## 2 TECHNICAL SPECIFICATIONS

Call point type	B, acc. to PN-EN 54-11:2004
Operation voltage (from detection line)	16.5 V ... 24.6 V
Max. current draw in quiescent mode	< 140 $\mu$ A
Allowable cable wire diameter	0.8...1.2 mm
Address coding range	1 ÷ 127
Ingress protection:	
ROP-4001M	IP 30
ROP-4001MH	IP 55
Operating temperature range:	
ROP-4001M	from -25 °C to +55 °C
ROP-4001MH	from -40 °C to +70 °C
Allowable relative humidity:	up to 95 % at 40 °C
Dimensions	102.5 x 98 x 45.5 mm
Mass:	
ROP-4001	< 220 g
ROP-4001H	< 260 g
Case colour	red

## 3 SAFETY CONDITIONS

### 3.1 Repairs and maintenance

Any maintenance works or periodic inspections shall be executed by a skilled personnel employed by companies authorised and trained by POLON-ALFA.

Any repairs must be carried out by the manufacturer. POLON-ALFA bears no responsibility for the operation of any apparatus being serviced and repaired by an unauthorised personnel.

### 3.2 Anti-dusting eye protection

It is obligatory to use protective anti-dusting glasses and masks during installation works that produce high amount of dust, such as hole drilling in walls.

Any electric tools shall be used strictly obeying the safety rules stated in the manufacturer instruction manuals.

## 4 DESIGN DESCRIPTIONS

The manual call point consists of a body and a base connected with a hinge.

The manual call point body contains its main parts: a printed circuit board with an electronic circuit, micro-switch and connector to install detecting line wires. A two-colour illuminating diode, indicating the alarm or fault mode, is located in the device upper part behind the glass.

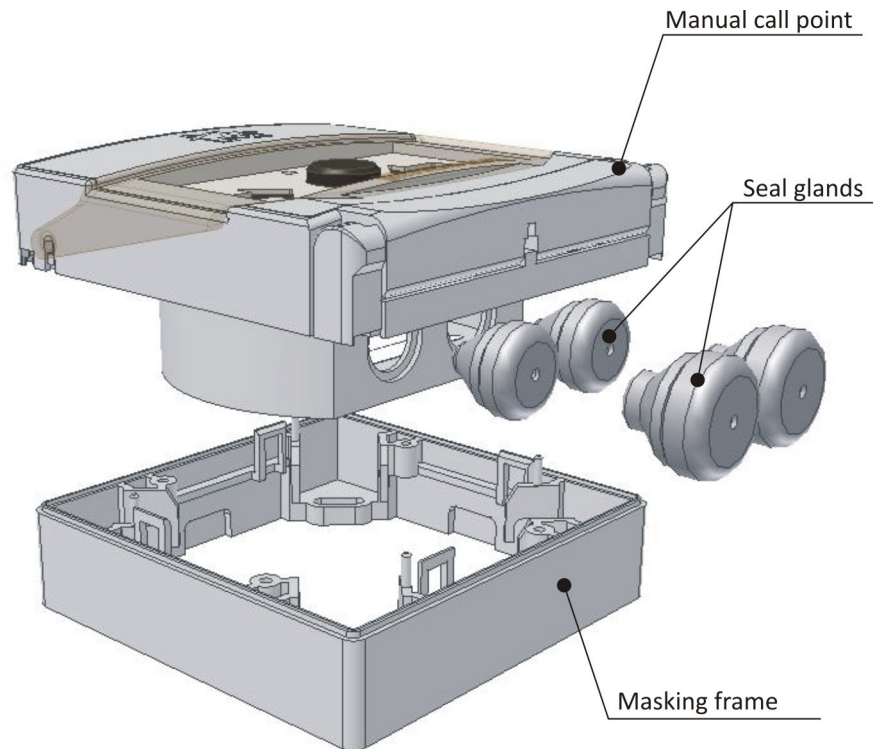


Fig. 1. Manual call point general view

The manual call point of ingress protection higher level is mounted on the wall plaster (surface mounting), utilising the RM-60-R masking frame. For wire sealing, the FET 3-5 sealing glands are attached, which are applicable for wires of the external diameter of 3 to 5 mm. In case bigger cables are used (of the diameter from 5 to 7 mm), the FET 5-7 seal glands should be ordered separately. In order to apply the FET 5-7 seal glands it is necessary to increase the diameter of the openings drilled in the body up to 16.5 mm.

## 5 PRINCIPLE OF OPERATION

The manual call point actuation – initiation of an alarm – is carried out by hitting a plastic cover (which bends aside) and pressing the push button then.

The colour of arrows changes from black to yellow and the call point transmits information about the button pressing to the control panel which send to the call point a signal actuating the LED indicator. Red flashes indicate the manual call point actuation.

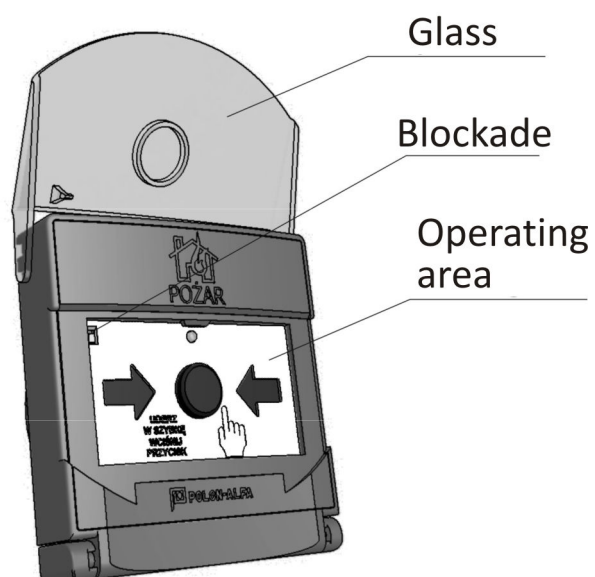


Fig. 2 Manual call point with cover bent aside

In order to reset the manual call point alarm state it is necessary to press the cover down towards the body as shown in Fig. 3 and insert the key (T end) from the bottom until the arrows in the operation area change their colour from yellow to black. After the key removal, the cover is blocked again in its normal position.

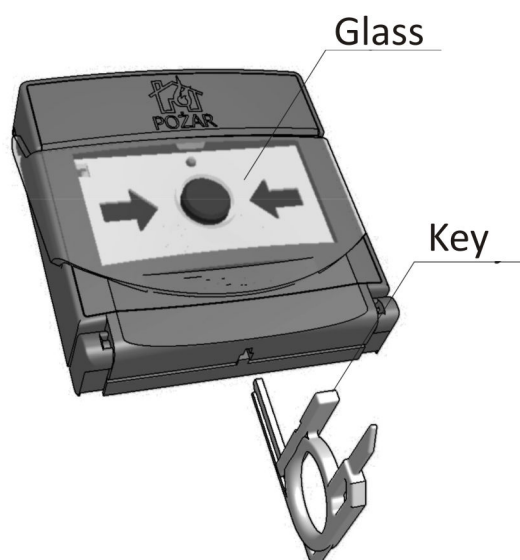


Fig. 3 Alarm mode reset

**Note:**

If the cover is not hit but pulled aside (inconsistently with the instruction placed on the call point) and the push button is not pressed (the call point alarm mode is not activated), it is necessary to press the cover down towards the operation area and block it in this position inserting the key from the bottom of the call point.

## 6 INSTALLATION

### 6.1. Installation and mounting

The call points, depending on their type, are designed to be installed either indoors or outdoors, in easily accessible visible places, preferably close to transport routes, 1200 -1600 mm above the floor in accordance with PKN-CEN/TS 54-14:2006 standard p. 6.5.4 .

It is advised to determine the installation hole spacing (diagonally – see Fig. 4 and Fig. 5) utilizing a pattern, not the device itself or its masking frame.

The call point is fastened to a flat surface using two  $\varnothing 6$  anchor expansion bolts and cylindrical head screws that are delivered together with the call point.

In case of semi-flush mounting, a hole of 80 mm diameter (typical for electric installation box) and 22 mm depth should be drilled in the wall.

For the call point on surface fastening, the RM-60R masking frame is applicable.

Since a considerable strength is needed to open the cover, it is advised to strengthen gypsum-carton boards on which the manual call point is mounted.

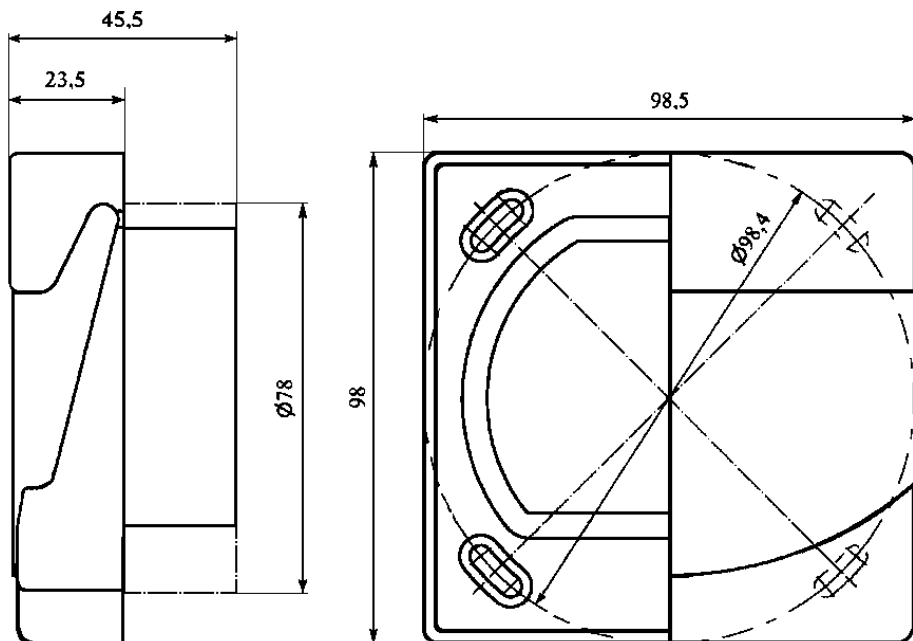


Fig. 4. Manual call point dimensions and fastening holes

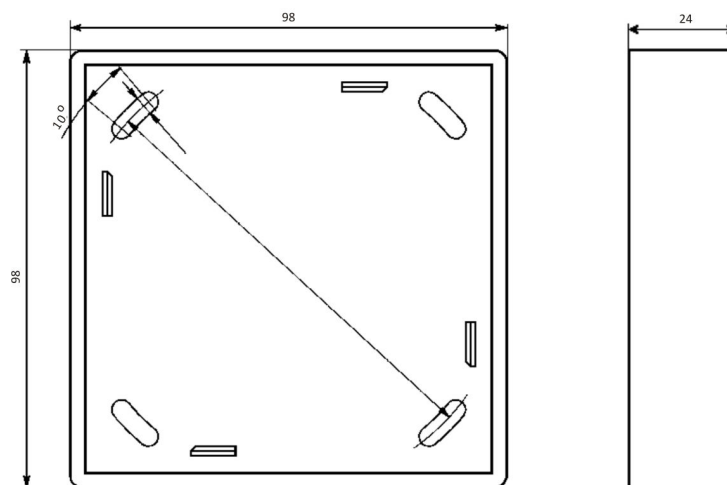


Fig. 5. RM-60-R masking frame dimensions and fastening holes

## 6.2 Wire arrangement

Alarm installation wires shall be led in accordance with the low-voltage (below 42 V) installation obligatory rules and connected to the contacts placed on the printed board of the call point.

In case of manual call points installed outdoor (hermetic), the wires must be led from the bottom of call point trough seal glands.

For the manual call point easy connection some wire reserve shall be left of the length as follows:

- ca. 40 cm in case of surface mounting installation,
- ca. 30 cm in case of semi-flush installation.

## 6.3 Wire connection

Loop-shaped detecting line wires are connected to “+” and “-” contacts, separately for an input and an output. In case of screened wires, the screens are joined together and connected to the contact on the board marked as “E”. The way of connection settling is shown in Fig. 6.

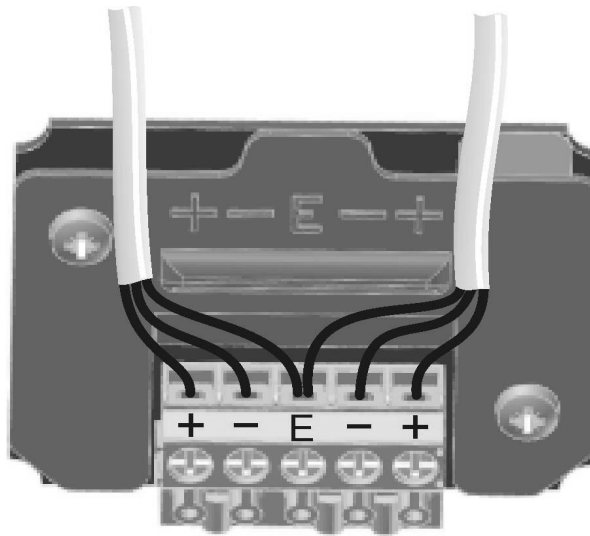


Fig. 6 Detecting line connection diagram

To access the printed circuit board where the connector is located, it is necessary to push two keys (with flat ends) from the side what will bend the manual call point casing aside.

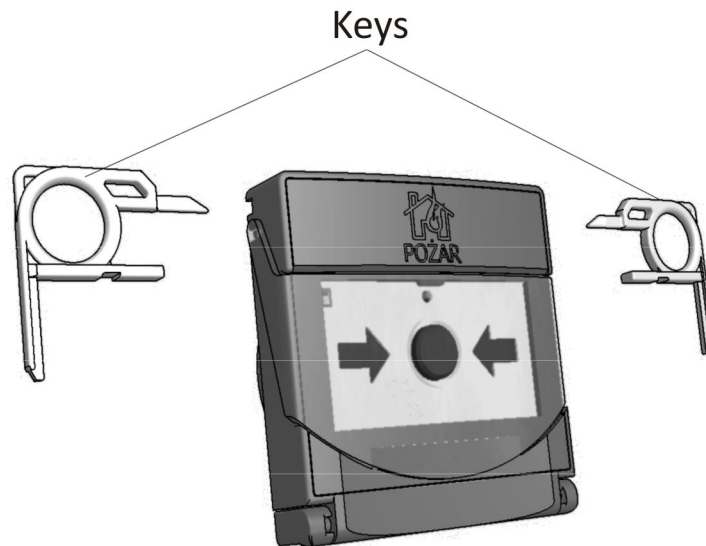


Fig. 7 Manual call point opening method

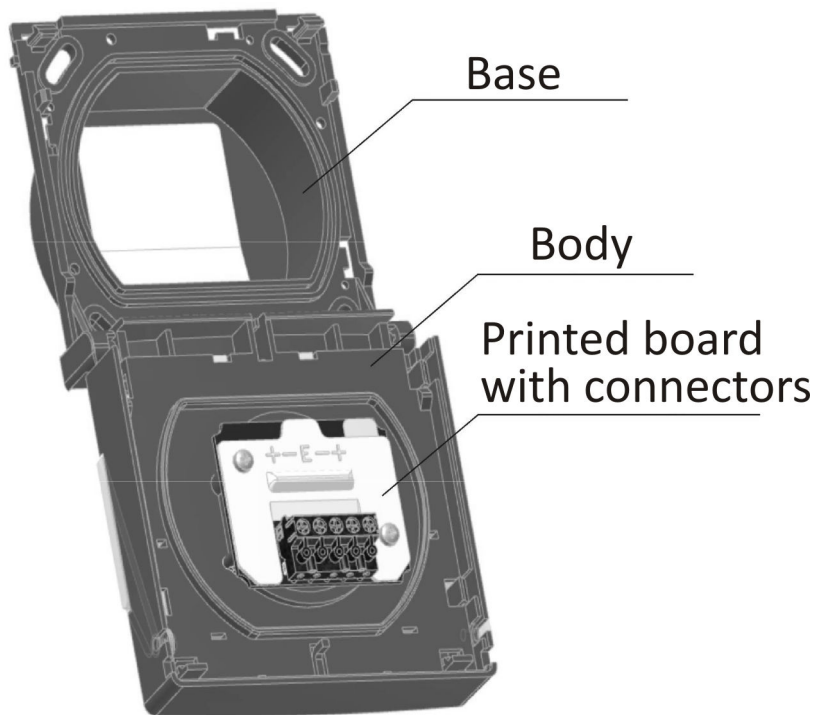


Fig. 8 Manual call point after opening

#### 6.4 Plastic cover replacement

In case the cover replacement is needed, it is necessary to bend the casing aside (see Fig. 7), pull the cover out and take the spring out. Then the spring should be placed on a hinge of a new cover as it is shown in Fig. 9.





Fig. 9 Cover spring assembly

Then it is needed to insert the cover into the casing rails and hook the spring on a ledge in the call point casing (see Fig. 10).

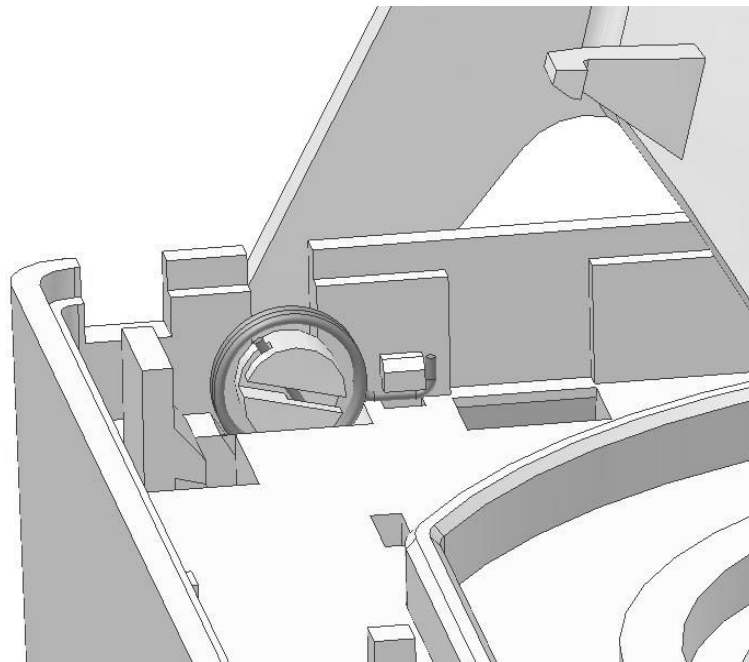


Fig. 10 Spring fastening to casing

A set of 3 spare plastic covers is described as SZ-60.

## **7 SERVICE AND MAINTENANCE**

The manual call point unfailing operation depends on ensuring proper operation conditions, appropriate assembly execution and systematic periodical inspections. From time to time the call point casing should be checked (mechanical condition) and cleaned.

The periodical inspections should be carried out at least once a year by a suitably trained maintenance technician or an authorized person. Such an inspection consists in the manual call point activation and checking whether an alarm signal is passed to the control panel.

Properly operating call points, periodically inspected and tested do not require any additional maintenance.

## **8 PACKING, STORAGE AND TRANSPORTATION**

The manual call points are packed in bulk containers. An installation and maintenance manual is attached to the device. The call points in a factory packaging can be carried in closed boxes in normal conditions with land or sea transport means. The devices should be protected against strong shakes and ambient temperature below  $-40^{\circ}\text{C}$  and above  $+70^{\circ}\text{C}$ . They should be stored in closed premises that are free of corrosive gases or vapours, at ambient temperature from  $+5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  and relative humidity between 40% and 80% away from heating devices. The storage period should not exceed 24 months.