POLON-ALFA LATEST TECHNOLOGY. HIGHEST QUALITY

G-40 DETECTOR BASE

PG-40 BASE INDUSTRIAL FOOTING

Installation and Maintenance Manual

IK-E287-001GB

IIIG Edition

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The G-40 Base and PG-40 Base Industrial Footing covered by the present operation manual comply with the requirements of the AT-0112-0298/2011 Technical Approval issued by the Scientific and Research Centre for Fire Protection (CNBOP).

The G-40 Base and PG-40 Base Industrial Footing have been approved with the Certificate of Conformity No. 2789/2011 confirming their compliance with the Technical Approval issued by CNBOP.

The Certificate may be downloaded from the manufacturer's www.polon-alfa.pl web site.

The national declaration of compliance No. 2PI/E287/2011 dated 15.12.2011 is available on request from the manufacturer.

Read the manual carefully before assembling and operation of the base and the base industrial footing.

Any nonconformity with the instructions contained in the manual may be harmful or may cause violation of the law in force

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

The product contains parts that can be dangerous for human health. Waste products shall be passed to the nearest waste electric and electronic equipment collection point.	

NOTE: The manufacturer reserves the right to change specifications of products at any time without prior notice.

1 PURPOSE

The G-40 detector base is designed for the connection of 40 model range detectors in the detecting lines of conventional control panels or 4043 and 4046 model range detectors in the detecting lines of the POLON 4000 series addressable control panels.

The bases are intended for connecting fire detection line wires routed on the wall plaster (surface mounting) or under it (semi-flushed mounting) – the wires are placed in a special duct of max height at 10 mm). The G-40 detector bases are dedicated for dry ceiling mounting.

In order to install the G-40 base on a ceiling where steam condensation occurs or when it is mounted on horizontal suspension strands, additional PG-40 base industrial footing should be used. The PG-40 base industrial footing is dedicated for connection to detection line wires (the wire is placed inside a duct of max external diameter at Ø18 mm) routed on the plaster (surface mounting).

It is possible to utilise the G-40 base as a suspended one using the interconnecting PG-40 base industrial footing equipped with the PG7 sealing gland and the PSGW ceiling suspended base. The suspended part of the base should be mounted on a 4-cord cable of 2 x 2 x 0.8 size. Both the PG7 sealing gland and the PSGW ceiling suspended base are not standard equipment of the base and should be ordered separately.

In the case of the G-40 base installation in places where risk it can be endangered by a mechanical damage (i.e. sports hall – ball strike, low rooms – hit with a ladder) it is recommended to use the special OZ-40 protection cover.

Additionally, it is possible to fix the P-40 special masking ring, ordered separately, in order to mask the base visible part.

Note:
If the G-40 base in mounted in the PG-40 industrial footing, the P-40 masking ring is not applicable.

2 TECHNICAL SPECIFICATIONS

G-40 DETECTOR BASE

Detectors interoperating with G-40 base	40, 4043 and 4046 model range detectors
Diameter of detection line wires	Ø 4.5 ÷ Ø 5.5 mm
Max diameter of cable wires	$\leq$ 1mm
Mass	$\leq$ 0.1 kg
Dimensions	Ø 107 mm; height = 28.5 mm
Fastening holes spacing	63 mm

PG-40 BASE INDUSTRIAL FOOTING

Interoperating base	G-40 base
Detection line wire diameter	Ø 4.5 ÷ Ø 5.5 mm
Mass	$\leq$ 0.1 kg
Dimensions	Ø 112 mm; height = 26 mm
Height (PG-40 with G-40)	43 mm
Fastening holes spacing	127 mm

3 DESIGN DESCRIPTION

The G-40 base is made of white plastic – on request it may be manufactured in different colours.

The base consists of a body embracing the main connector (with self-clamping latches to connect detection line wires) and an additional connector to fix the wire screens.

The base may be additionally equipped with the P-40 masking ring (optional).

The mechanical structure of the G-40 base is shown in Fig. 1 and Fig. 2.

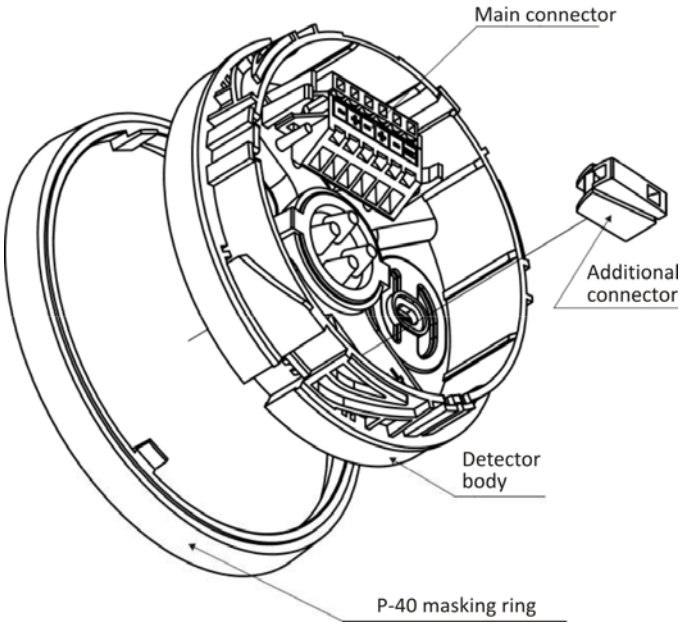

Fig. 1 G-40 base elements main view

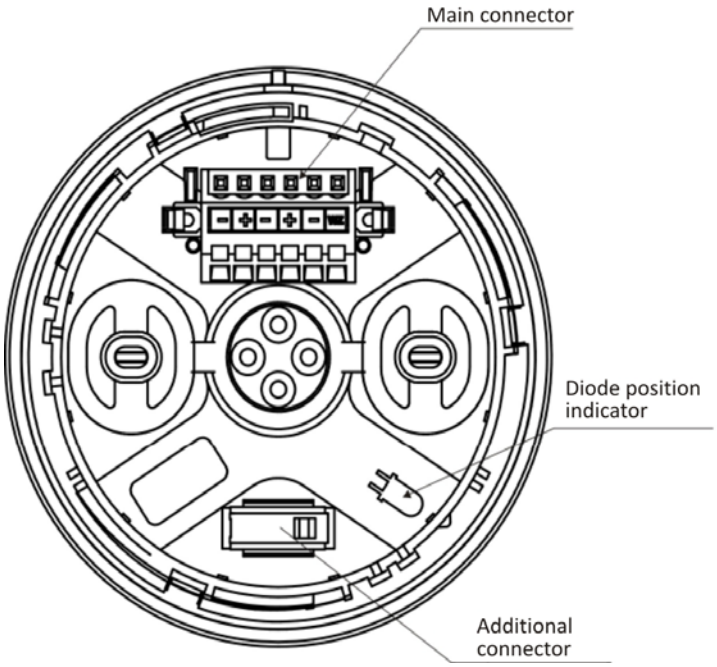

Fig. 2 G-40 detector base mechanical design

The PG-40 base industrial footing is made of a white plastic – on request it may be manufactured in different colours. The PG-40 base industrial footing is a homogenous moulding – optionally it is equipped with the PG7 sealing gland.

The mechanical structure of the PG-40 base industrial footing is shown in Fig. 3a and Fig. 3b; assembling instructions for the suspended base are presented in Fig. 4.

The mechanical structure of the OZ-40 protection cover is shown in Fig. 5.

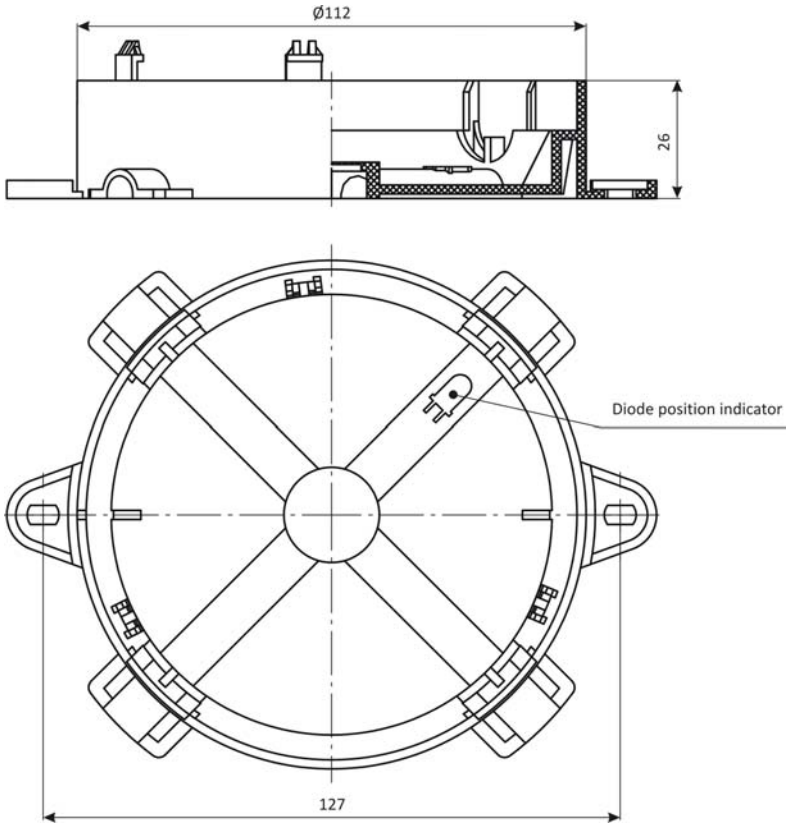

Fig. 3a PG-40 base industrial footing mechanical design

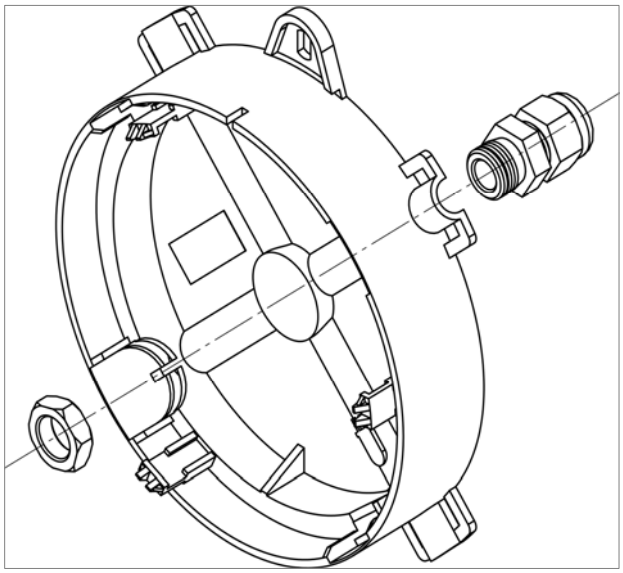

Fig. 3b PG-40 base industrial footing and PG7 sealing gland main view

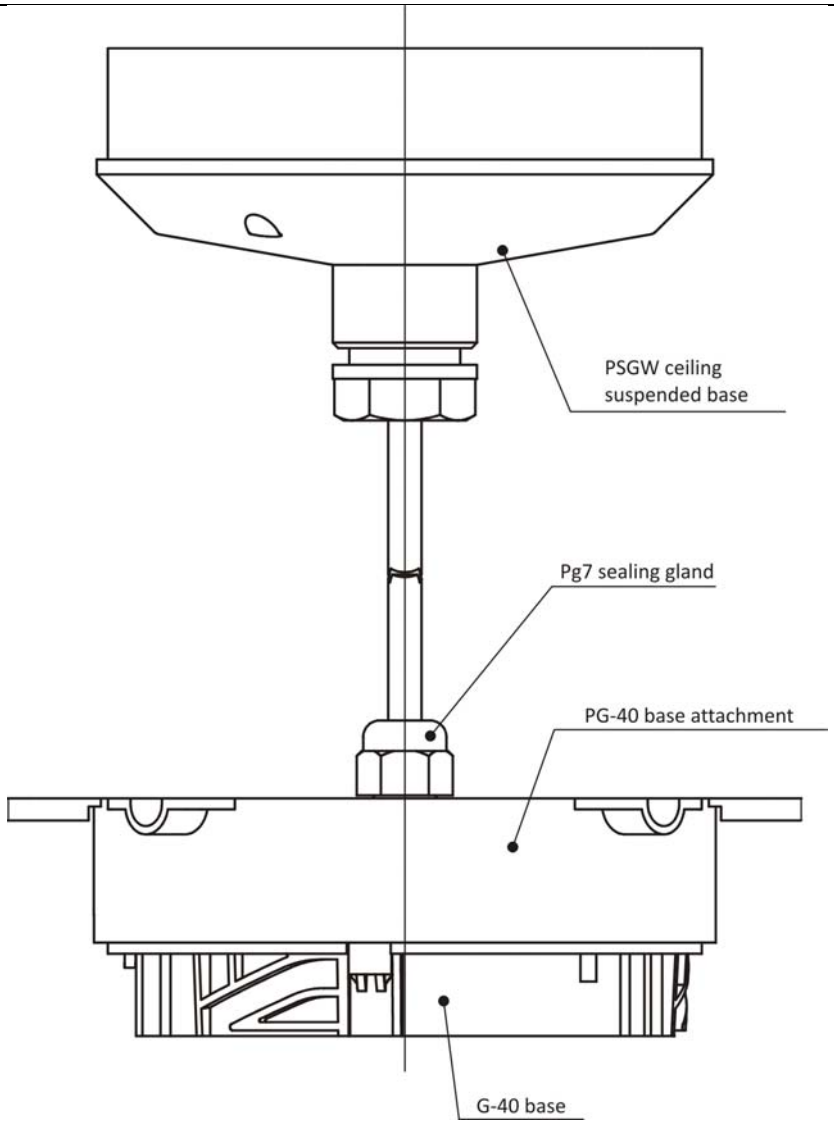

Fig. 4 G-40 suspended base assembling

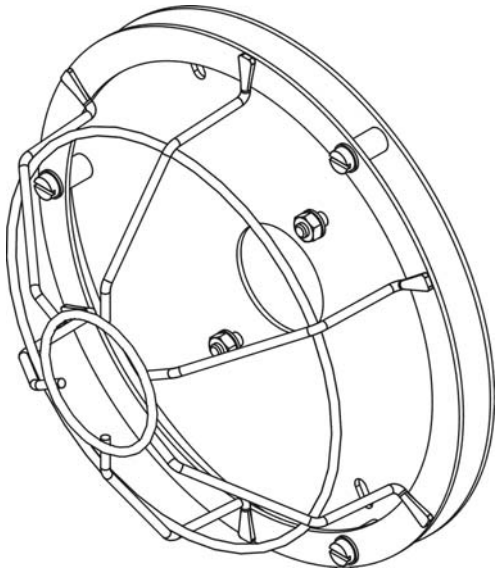

Fig. 5 OZ-40 protection cover

4 G-40 BASE INTEROPERATION WITH DETECTION LINE

The G-40 bases ate intended for interoperation with the model range 40 detectors in conventional detection lines and with the 4046/6000 range detectors in the POLON 4000 system control panels detection lines. The fig. 7 depicts the way of connection of the base into the POLON 4000 system detection line. The fig. 8 shows how the bases should be installed in conventional control panel detection lines.

Continuity of a detection line is obtained only in the event all detectors are placed in their bases. The line continuity may be achieved when the E287-04.00 jumper (Fig. 6) is placed into the detector connector. The jumper is optional and should be ordered separately.

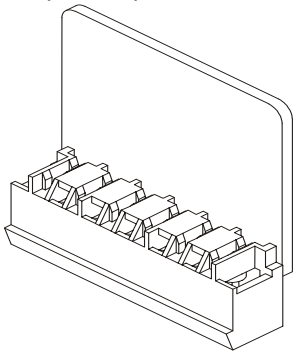

Fig. 6 Jumper

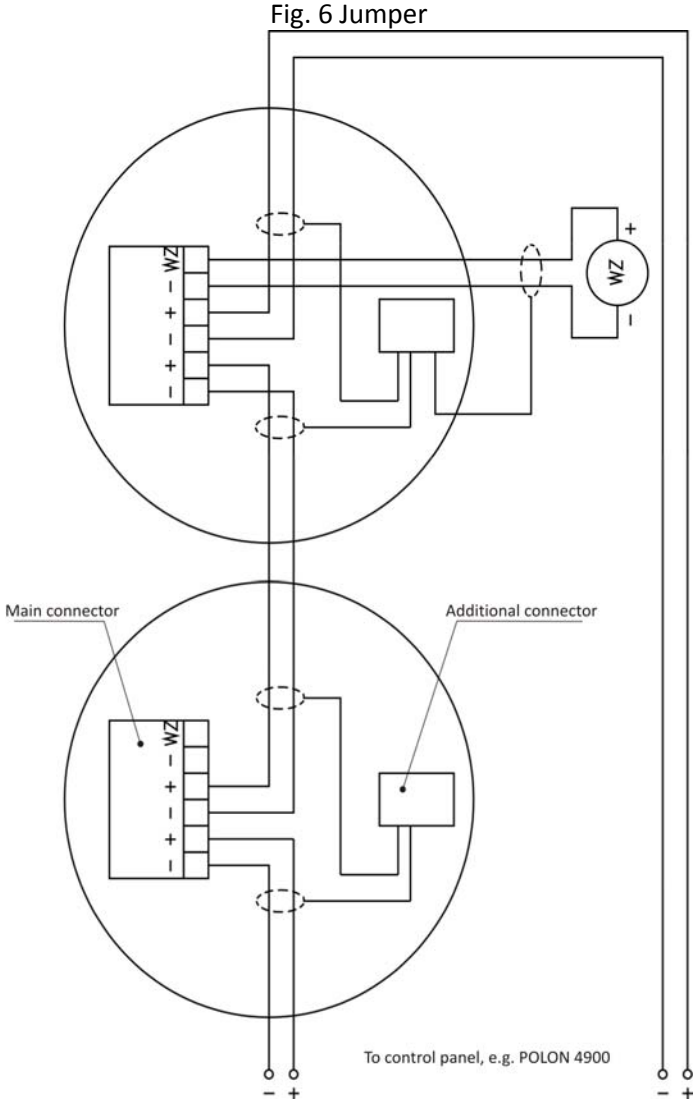

Fig. 7 G-40 base installation in detection lines of POLON 4000 fire alarm control panels

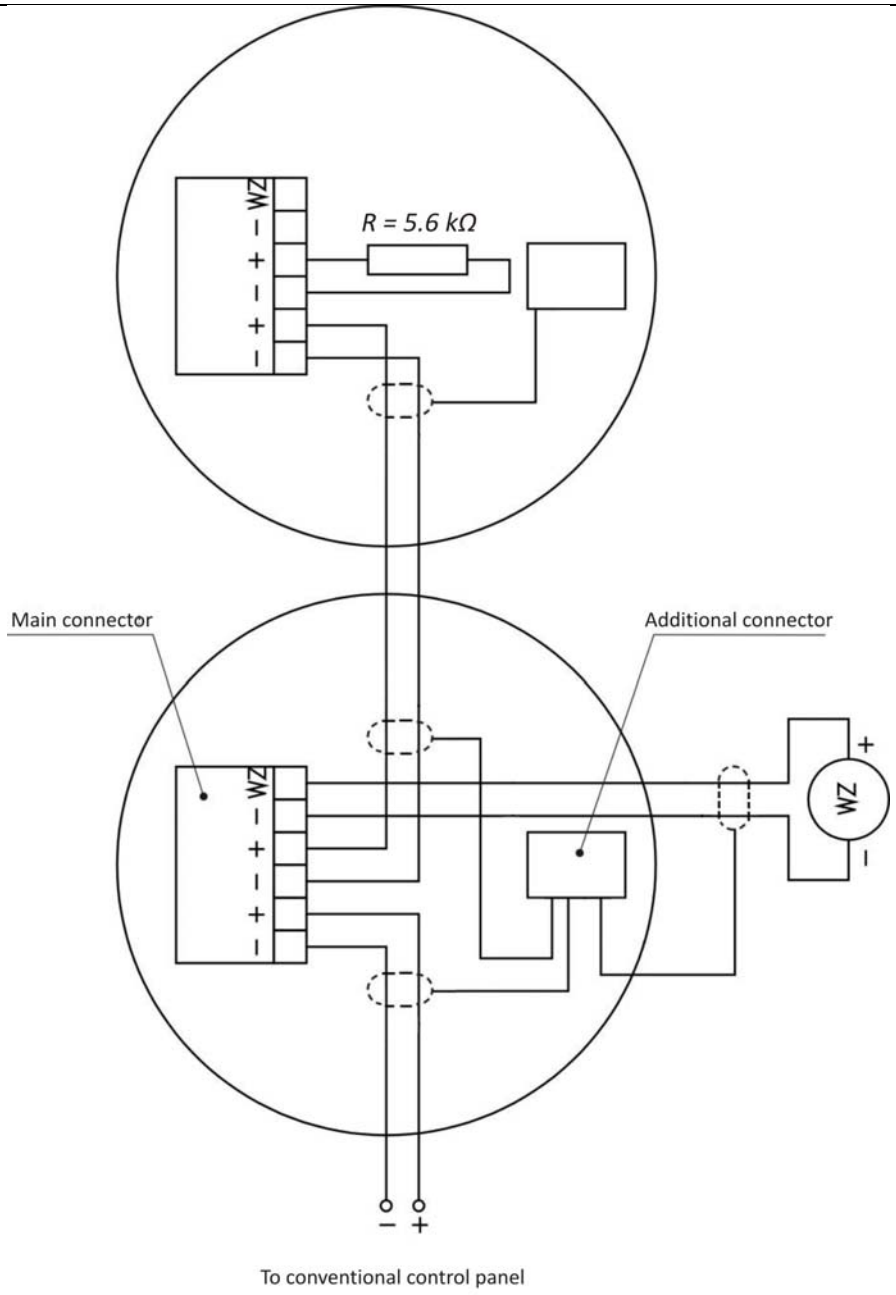

Fig. 8 G-40 base installation in conventional control panel detecting lines

5 INSTALLATION

5.1 Initial installation

The PG-40 base industrial footing should be mounted on the ceiling with two screws placed in extension anchor bolts (Ø6 mm bolts are recommended). It is advised to drill the anchor bolt holes using a pattern with 127 mm hole spacing. Improper hole spacing may result in the base industrial footing deformation when the screws are strongly tightened.

The PG-40 base industrial footing can be installed on a horizontal steel string (Ø8 mm diameter recommended) using clamping bands.

The PG-40 suspended version is installed with a help of the PG7 sealing gland - Ø13mm diameter hole should be drilled in the detector body where a cable of max Ø7 diameter is placed to. The PSGW ceiling suspended base is to be used for ceiling mounting.

5.2 Base installation

The G-40 base installation method must comply with the type of the basis where the detector is to be mounted:

- in the case of brick or concrete ceilings it is enough to attach the base with two screws and expansion anchor bolts (Ø6 mm bolts are recommended
- in the case of plasterboard it is forbidden to fasten the base directly to the plasterboard with screws; it is recommended to use special bolts intended for plasterboard
- in the case of suspended ceiling it can be necessary to use additional washers of appropriate diameter
- the base is to be joined with the PG-40 base industrial footing using latches.

It is advised to drill the expansion anchor bolt holes using a pattern of 63 mm hole spacing. Improper hole spacing may result in the base industrial footing deformation when the screws are strongly tightened.

For wire connection a flat screw driver (max edge width at 3.5 mm) use is recommended, it should be pushed (see Fig. 9) into the proper connector hole. Then the wire closer to the ceiling should be placed into the hole and the screw driver should be taken off. It is advised to use a short, bended WAGO type screw driver (3.5 x 0.5 mm, cat. No. 210-258) that is available for purchase at POLON-ALFA). The wire fixing places are marked on the connector body. Wires screens should be inserted into the additional connector (the joint to be clamped with fingers); then the connector should be placed between the rails inside the rectangular hollow of the base.

5.3. The OZ-40 protection cover installation

The OZ-40 protection cover is mounted on the ceiling with two screws and expansion anchor bolt (Ø8 mm bolts recommended). The bolt hole spacing should be at 124 ± 4 mm. The base should be fixed to the cover with two M4 nuts. When the detector is installed in the base, the grating should be fastened with three M4 x 10 nuts.

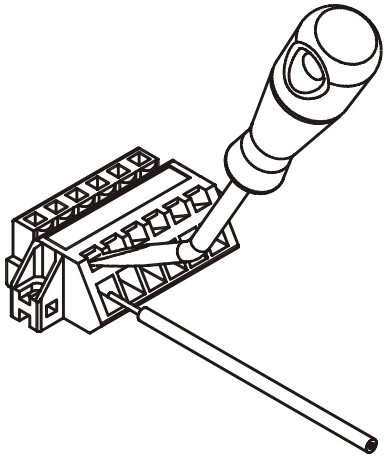

Fig. 9 Wire introducing to G-40 connector

6 MAINTENANCE

The base and its industrial footing require no servicing after installation since they both are monitored by the fire alarm control panel. Periodical inspections of bases and industrial footings are carried out simultaneously with periodical detectors' maintenance.

7 STORAGE

The G-40 detector bases and PG-40 base industrial footings should be stored in closed rooms at ambient temperature between 0^{o}C to + 40^{o}C and relative humidity between 40 % and 80 %, (free of caustic gases and vapours). Detector bases and base industrial footings should not be exposed to direct sun and heating elements influence.

The storage period of the detector bases and base industrial footings in transport packages should not exceed 24 months.

8 TRANSPORTATION

The G-40 bases and PG-40 base industrial footings should be carried in closed spaces of transport means at the temperatures from - 25^{o}C to + 70^{o}C and relative humidity not exceeding 95% in proper packages that meet appropriate transport regulations.