

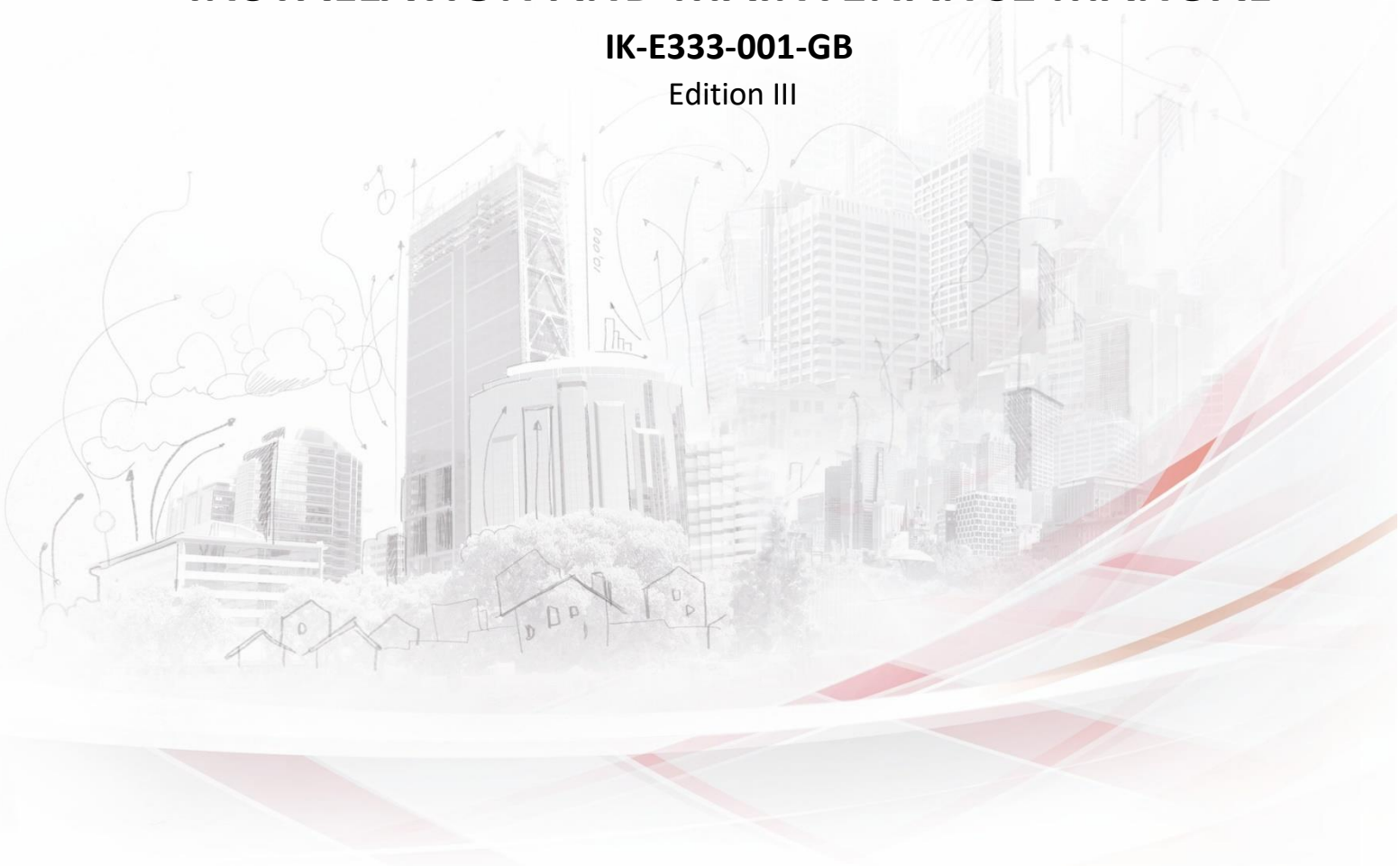
ALARMING DEVICES

SG-1, SG-2

INSTALLATION AND MAINTENANCE MANUAL

IK-E333-001-GB

Edition III




The SG-1 and SG-2 alarm devices, that are the subject of this IK meet the essential requirements of the directive:

EMC The electromagnetic compatibility (EMC) Directive 2011/65/EU

Read the manual carefully before assembling and commissioning.

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.

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

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1. Design

The SG-1 and SG-2 alarming devices are designed for optical and acoustic signalling of alarm states in cooperation with fire extinguishing or gas detection systems.

The signalling device is available in single- and double-sided versions - the illuminated inscription is placed on one or both sides of the device. The signalling device is activated after power is supplied to the appropriate terminals. There are 2 main signalling modes possible:

- continuous mode,
- pulse mode (1.5 s on and 0.75 s off).

The signalling mode is determined by the position of the jumper on the signalling device board.

SG-1 signalling devices are equipped with a white cover with black inscription.

SG-2 signalling devices are equipped with a red cover with black inscription.

2. Marking

Available types of signalling devices:

Variant	Marking	Type	Housing Colour
1	SG-1-1-XXX	One-sided	White
2	SG-1-2-XXX	Two-sided	
3	SG-2-1-XXX	One-sided	Red
4	SG-2-2-XXX	Two-sided	
XXX - description marking – see table below			

Inscriptions available:

Variant number	Type of inscription
1	CAUTION! GAS DO NOT ENTRY
2	CAUTION! AUTOMATIC EXTINGUISHING LEAVE THE PREMISES
3	CAUTION! EXHAUST FUSE EXCESS
4	DO NOT ENTRY! EXHAUST FUSE EXCESS
5	LEAVE THE GARAGE EXHAUST FUSE EXCESS
6	DO NOT ENTER! EXHAUST FUSE EXCESS
7	CAUTION! AUTOGAS LEAKAGE
K	Inscription on request

3. Technical data

Operating voltage	12 V do 30 V
Max. current consumption	As given in fig. 5
Max. wire cross section	1,5 mm ²
Operation temperature range	(-10 up to +55) °C
Dimensions	(260 x 191 x 52) mm
Weight	0,38 kg
Ingress protection	IP30
Sound intensity	> 65 dB
Readability of inscriptions	> 6 m

4. Installation

Signaling devices must be installed indoors, on walls or suspended, in easily visible places.

Device should not be mounted on strongly lit surfaces.

Two keys must be used to open frame. The keys must be inserted as far as they will go into the dedicated holes as shown in Fig. 4.1. The device must be opened from the top by pulling the key in the direction of the arrows.

When opening the frame of the alarm device attention must be paid to an unattached plate as it is held in the guides located on both parts of the housing.

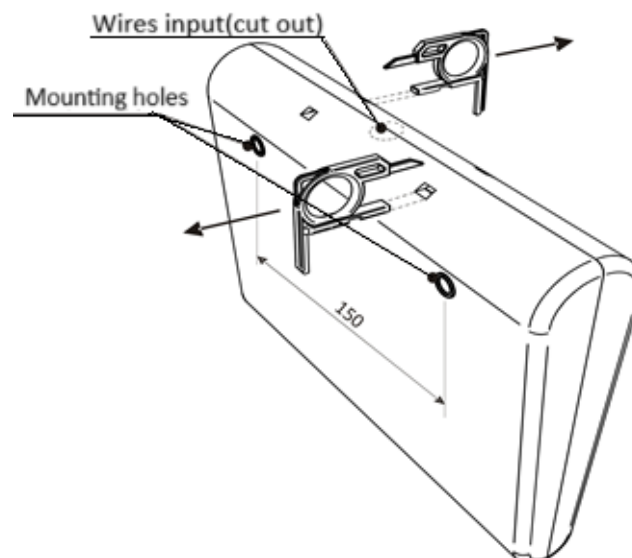


Figure . 4.1 Opening procedure.

Two screws $\Phi 3.5 \times 40$ mm with expansion plugs are provided to attach the siren to the wall. In the part that will be attached to the wall $\Phi 4$ mm holes must be drilled and cut a hole from the top to insert the cables.

Spacing of mounting holes 150 mm.

If the siren is mounted to the wall keys must be inserted as far as the stop as shown in Fig. 4.2 and only the right key must be pulled in order to open the device.

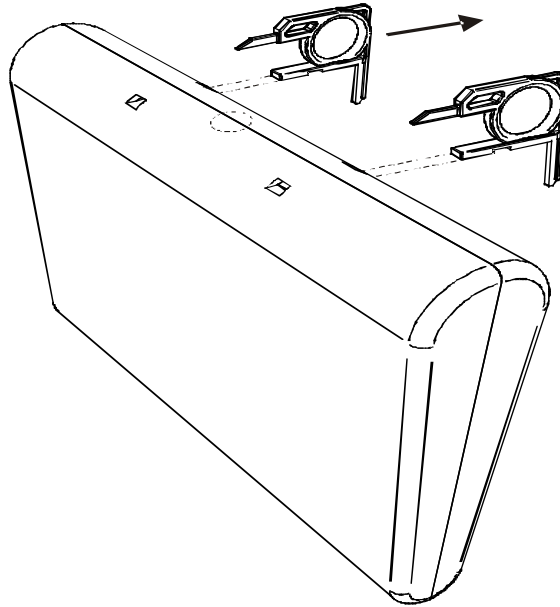


Figure. 4.2 Wall mounted device opening procedure

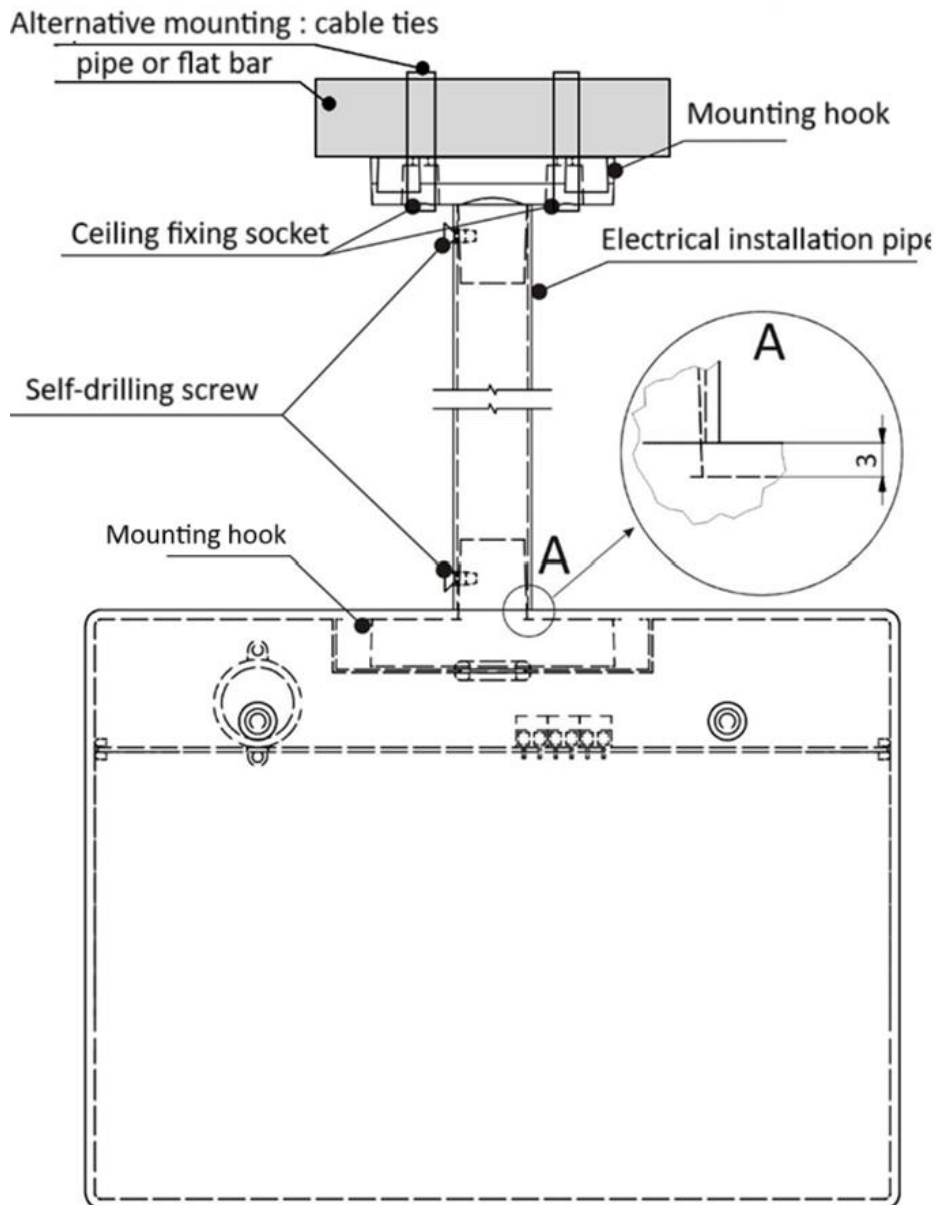


Figure. 4.3 Signalling device mounting (suspended)

Hanging device on to the wall requires the following : two hooks (ordered separately), an electrical installation pipe $\Phi 25$ mm of appropriate length and two self-drilling screws $\Phi 3.5 \times 25$ mm.

Preparing the signaling device for hanging: cut the electrical installation pipe to the required length, insert hooks into both ends of it, lock the hooks with self-drilling screws (when locking the lower hook, leave a 3 mm distance to the signaling device housing), insert the cables through the hooks and the pipe, attach the upper hook to the ceiling . The upper hook is adapted for an alternative installation method, using covering bands.

Cut a $\Phi 20$ mm hole in the device - marked by a thinner wall. Cut the cables at a minimum distance of 60 mm from the lower hook, clip them and screw them to the appropriate connectors. Place the plate in the guides of one of the parts of the siren, arrange the wires so that they do not interfere with the assembly of the siren, close the siren by snapping both halves of the housing.

The number of alarm devices that can be connected to one control output should be determined based on the maximum load of these outputs. Terminating resistor with a value consistent with the control panel manual should be installed in the device.

The control lines should be routed using a shielded cable with a CNBOP certificate, e.g. YnTKSYekw 1 x 2 x 0.8.

POLON 4500 Control Panel

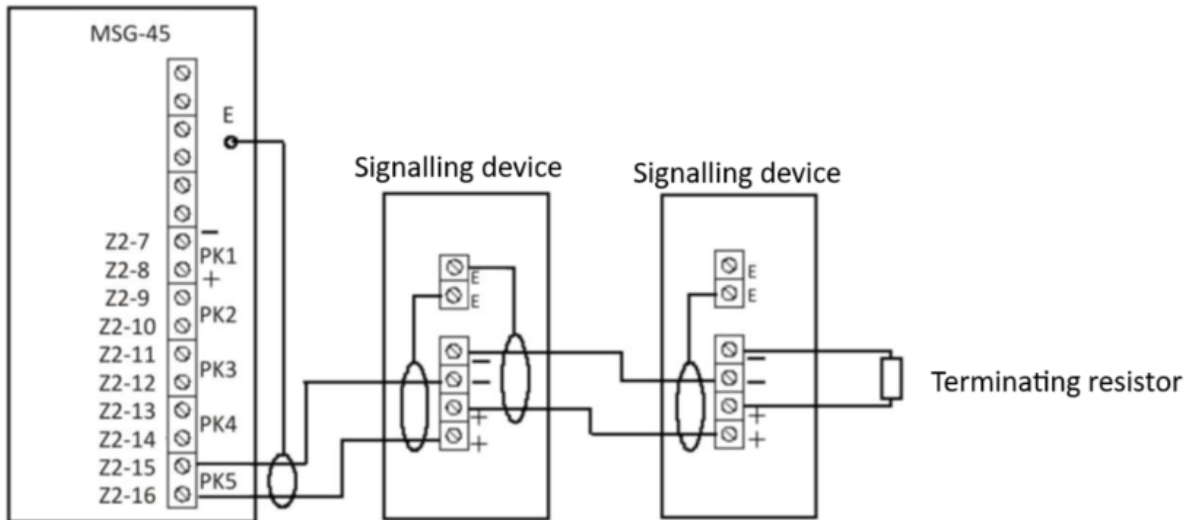


Figure. 4.4 Sample device connection with POLON4500

Connection of the alarms to the gas detection center, autonomous detector or other control device should be performed in accordance with the appropriate Operation and Maintenance Documentation.

An example connection of the SG-1 signaling device to the CDG 6000 gas detection center is shown in Fig. 4.4; the PK1 relay output is used. In the control panel configuration, set the selected source (e.g. control panel alarm status) and the control mode (e.g. pulse) of the appropriate relay output.

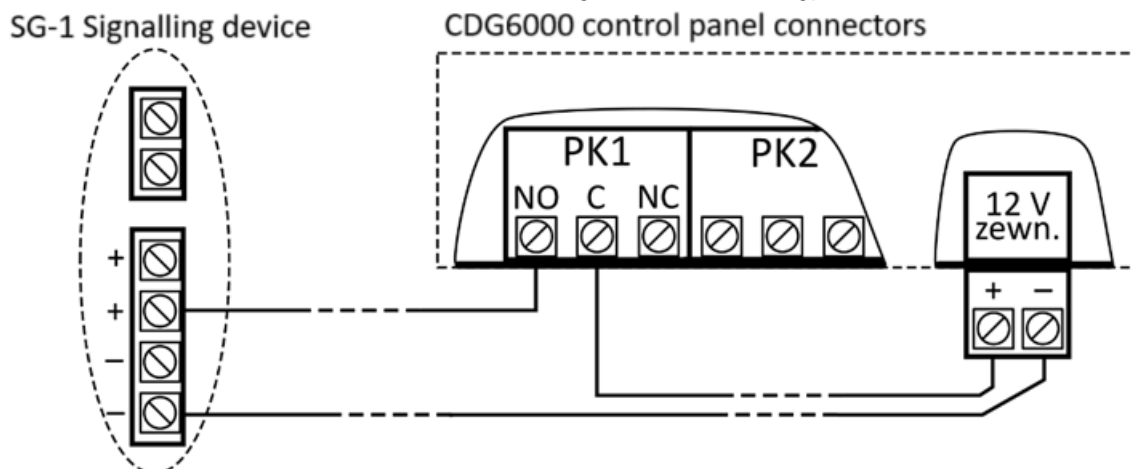


Figure. 4.5 Sample of the SG-1 or SG-2 with CDG 6000 panel connection

The SG-1, SG-2 signalling devices are additionally equipped with a jumper that allows to configure the signalling mode (continuous or pulse) without changing device's power supply control characteristics.

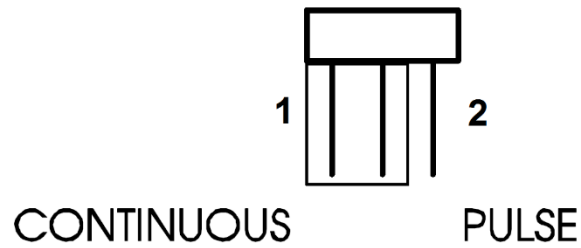


Figure. 4.6 Lighting mode configuration

The jumper in position 1 configures the continuous signalling mode (factory setting).

The jumper in position 2 configures the pulse signaling mode (1.5 s of activation and 0.75 s of device shutdown per period).

The absence of a jumper configures the continuous signalling mode.

Additionally, a description of the above configurations can be found on the siren board.

5. Device characteristics

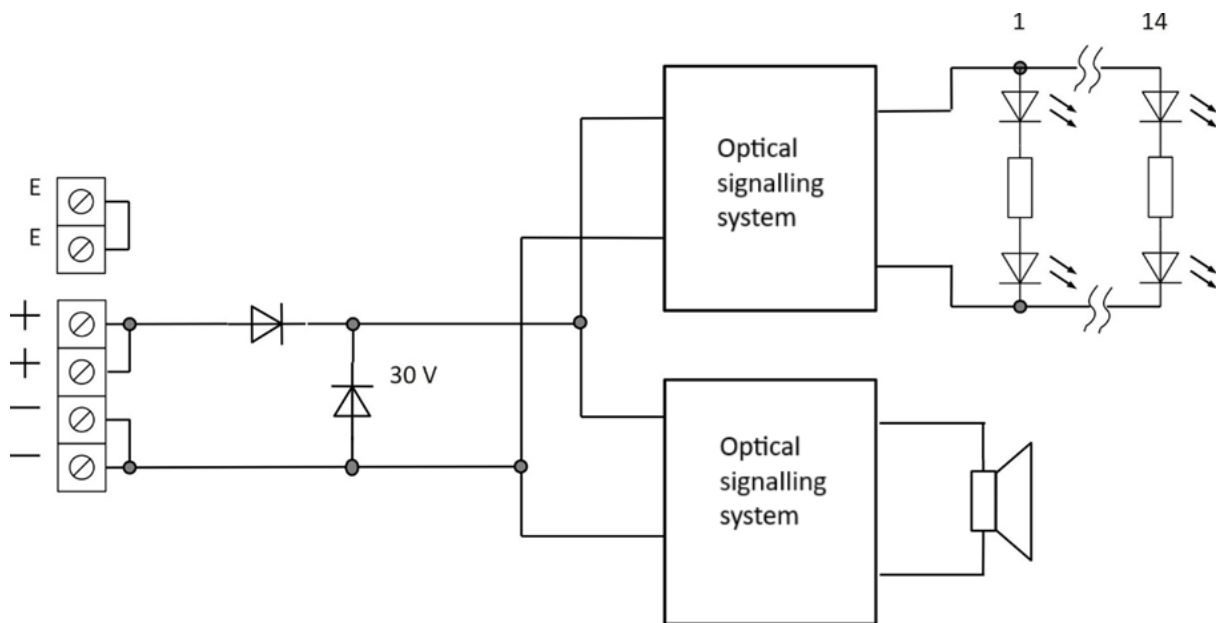


Figure. 5.1 Signalling device diagram

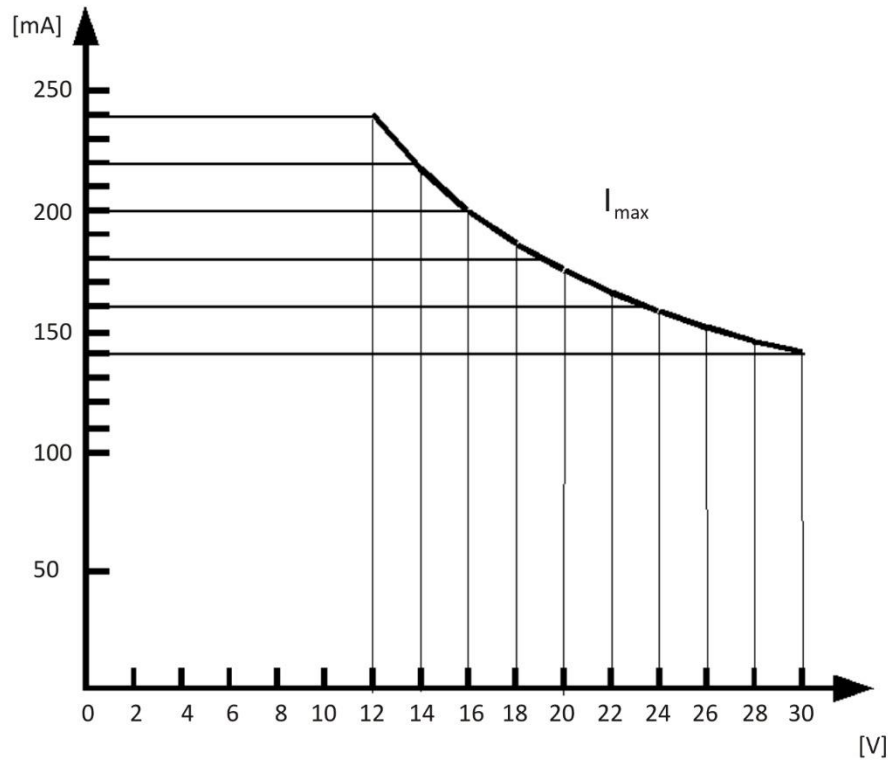


Figure. 5.2 Dependence $I_{\max} = f(U)$

6. Safety Conditions

6.1. Repair and Maintenance

Maintenance and periodic inspections must be carried out by personnel that is authorised or trained by POLON-ALFA. All repairs must be carried out by the manufacturer. POLON-ALFA is not responsible for the operated equipment maintained and repaired by unauthorised personnel.

6.2. Work at height

Work at height related to the installation of SG-1, SG-1 alarm devices must be carried out with special care using equipment and tools in sound condition. Please pay particular attention to the stability of ladders, elevators, hoists, jacks etc. Power tools should be used in accordance with safe working conditions specified in relevant manufacturer's instructions.

6.3. Eye protection against dust

Protective goggles and dust masks should be worn during work that produces large amount of dust, especially when drilling holes in ceilings in order to fix enclosure bases of control elements.

6.4. Protection against electric shock

When installing control elements, observe relevant national regulations for low-voltage electrical installations. Any work may only be carried out by personnel authorized to do so. If used voltage is higher than the permissible low voltage, the voltage must be switched off before opening the enclosure cover.

Fix the detection line shields to the connectors in a snug manner, without excessive slack. The remaining cables should be insulated at the appropriate length so that only the insulated part is accessible after insertion into the connectors. This will reduce accidental short circuits between cables. Avoid crossing detection line and input (IN) cables with output and input (IN HV) cables.

7. Storage and Transport

7.1. Storage

SG-1, SG-2 devices should be stored in closed rooms, with no corrosive fumes or gases, at the temperature range from 0 °C to +40 °C, with relative humidity not exceeding 80 % at the temperature of +35 °C.

Elements should not be exposed to direct sunlight or heat from heating equipment during storage. Storage time of elements in the transport packaging should not exceed 12 months.

7.2. Transport

SG-1, SG-2 devices should be transported in closed spaces of transport vehicles, in a packaging corresponding to the requirements of the applicable transport regulations. Transport temperature should not fall below –40 °C or exceed +55 °C and the relative humidity should not exceed 95 % at +45 °C.



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