

# INSTALLATION AND OPERATING INSTRUCTIONS

## *Gas Alarm S/2 - P*

With sensor for liquefied gas (propane, butane)  
and city gas / natural gas (methane)

**Model 230 Volts for alternating current (AC)**

**Model 12 Volts for direct current (DC)**

This gas alarm is designed for the use in private apartments, caravans, and holiday homes. It is not to be used in hazardous locations and is not suitable as a measure of primary explosion proofness within the meaning of the guidelines of the employers' liability insurance association.

### **TECHNICAL DATA**

#### **Alarm set point/sensitivity:**

Butane (liquefied gas)	0.4 % in the indoor air
Propane (liquefied gas)	0.5 % in the indoor air
Methane (city gas/natural gas)	0.8 % in the indoor air

**Green LED:** readiness

**Red LED:** alarm state

#### **Acoustical alarm signalling device:**

approx. 85 dB (A)/3 m

**Relay output:** alternating current free of potential, 5 A/230 V AC, 5 A/30 V DC

**12-V-DC output:** switched in case of alarm, 12 V DC, max. 170 mA

**Reset:** automatic if gas concentration drops below alarm threshold

**Operating temperature:** -15 °C to +40 °C

**System of protection:** IP 20

#### **Model 230 V**

**Line voltage:** 230 V AC

**Power consumption:** approx. 6 Watts

#### **Model 12V**

**Line voltage:** 12 V DC ( $\pm 20$  %)

**Electrical consumption:** approx. 190 mA (rest), approx. 280 mA (alarm)

### **PLACEMENT**

#### **For liquefied gas (propane/butane)**

For these gasses, the Gas Alarm should be mounted near (approx. 20 cm) above the floor and also near the gas appliances, if possible. Escaping liquefied gas is heavier than air, therefore it descends to the floor and spreads there.

#### **For city gas/natural gas (methane)**

These gasses are lighter than air and therefore rise upwards. Mounting of the device on the wall, at 15 - 30 cm below the highest point of the ceiling.

The following places are not suitable:

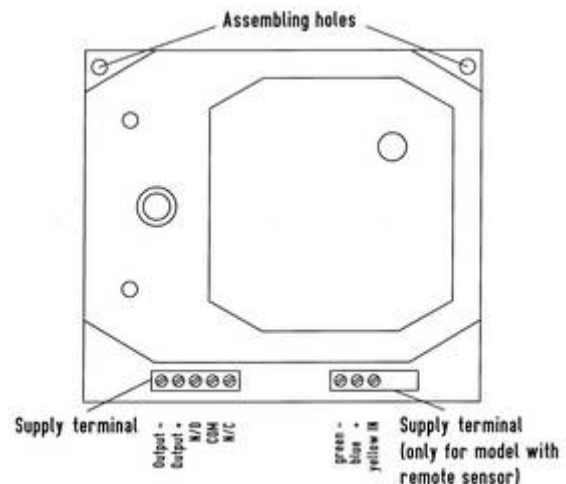
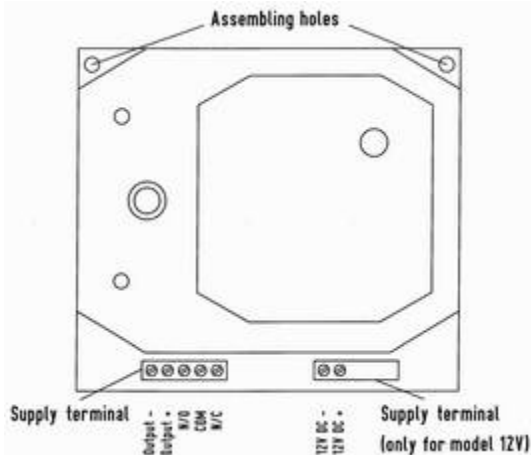
- Directly at an appliance operated by gas

- In closed compartments and cupboards or in a place where a door, wall or divider impedes the gas flow to the Gas Alarm
- Places where the gas flow cannot reach the Gas Alarm on the grounds of draught and wind
- Rooms in which aerosols (hair sprays, deodorants, etc.) or ammoniac are used (e. g. bathrooms)

**The appliance must not be operated outdoors!**

## INSTALLATION

The appliance is fixed to the wall by means of two screws (see ill.) Please heed the mounting height absolutely according to the chapter “Placement”. In case of the model 230 V, take into account the cable length to the socket.



## ELECTRICAL CONNECTION

**230-V device:** This appliance is delivered with a service cable and Euro plug. For this device, a Euro socket with 230V AC (alternating current) has to be used.

**12-V device:** Only use a 12-V-DC power supply. As a rule, this will be a power pack, a car or an on-board battery respectively or an alarm main frame, for example.

For security reasons, the Gas Alarm is equipped with an electronic voltage regulator. This regulator will equalize voltage fluctuations due to the standard tolerance of on-board battery or a power consumption's fluctuating violently. The tolerance zone is 12 Volts DC  $\pm 20\%$ . Please take into account the fact that in case of many cheap transformers, there are big tolerance variations, especially fluctuating upwards. If they exceed the admissible tolerance zone, there is the danger of both the voltage regulator and the electronics of the device being destroyed.

For the connection, a service cable with wire marking should be used. The cover of the right terminal strip is removed by means of a small screwdriver, and the service cables are guided through the marked openings at the lower side of the appliance. Connect the wires of the service cable to the correct terminals +12 V DC and -12 V DC. Refit the cover of the terminal strip.

## OUTPUT WIRING

In addition to the built-in siren, the Gas Alarm offers you several output signals for the drive of other signal proving devices or other appliances.

**The device must always be connected with the power supply interrupted!**

The terminals are under the left cover (see ill.). By means of a small screwdriver, the cover can be detached. The connecting lines are guided through the marked openings at the lower side of the housing and screwed on to the terminal. Thereupon, the cover of the terminal strip is fitted on again.

There are two possibilities for signal transmission. In both cases, the signal is activated during the duration of the alarm:

1. Switched 12-V DC signal to drive an external electrical horn or indicator light, for example. Maximal

- load: 170 mA. The connection is made via the terminals +/- output. **Pay attention to the polarity!**
2. Make-before-break contact free of potential. These contacts are used for the connection to e. g. an alarm system, telephone dialling device, pilot light, or the like. The relay contacts can be loaded with max. 5 A (in case of 230 V AC or 30 V DC).
- A make contact (normally open  $\Rightarrow$  closes in case of alarm) is connected to the terminals N/O und COM.
- A break contact (normally closed  $\Rightarrow$  opens in case of alarm) is connected to the terminals N/C und COM.

## EQUIPMENT-ON INDICATOR LAMP

The Gas Alarm is equipped with a green equipment-on indicator lamp (LED). As soon as the device is connected electrically, the equipment-on indicator lamp "Operation" lights up.

## HEATING-UP TIME

After the connection, the sensor of the alarm needs a short heating-up time until it attains its operability. During the heating-up time, the lamp "Alarm" shows red. At the same time, the acoustical signal (siren) whines.

When the operability is reached (approx. 1 – 4 minutes), the red lamp "Alarm" goes out and the whining sound dies away. With that, the appliance is operable.

## TEST

The electrical working order is indicated by means of the green light emitting diode. For the operation checkout of the Gas Alarm S/2-P, use a gas lighter. Open it near the sensor opening **without** the flame burning. The device will immediately signal alarm by lighting up the red light emitting diode and the whining of the siren. The whining will die away and the alarm lamp will go out as soon as the concentration of gas has volatilized.

## ALARM

If the gas concentration at the device exceeds the sensitivity threshold adjusted by the factory, the device will immediately signal alarm through the red alarm lamp and the siren – loudness level approx. 85 dB (A)/3 m. A signal will be passed on to other connected indicators or appliances, if necessary.

**In case of alarm, do not switch off or unplug the Gas Alarm!**

In this case, open all windows and doors without delay, avoid sparking (do not activate any electrical switches), switch off all devices operated by gas and put out all open lighting points, make children and sleeping persons leave the building or caravan immediately.

Try immediately to find out the cause of the alarm and remedy or neutralize the mistake.

Have your gas system checked and repaired by a specialist!

## FALSE ALARM

Correspondingly to its purpose, the Gas Alarm is adjusted to be very sensitive. Therefore, the sensor of the system also responds to other gaseous media. The use of aerosolen (propellant in spray cans, etc.) but also thick tobacco smoke can lead to a false alarm.

## MAINTENANCE

The housing of the Gas Alarm can be cleaned with a duster or a slightly damp cloth. Please blow out the opening of the sensor slightly from time to time – depending on the environmental conditions. The Gas Alerter must never be sprayed with water. The warning system containing sensitive electronic components.

If you open the housing, the warranty claim will expire.

## **IMPORTANT NOTE**

The operation checkout must be repeated from time to time, especially in case of frequent and also longer off-duty periods. By executing it, the functioning of the electric horn and the sensor as well as the alarm lamp is checked.

Please heed the mounting height absolutely, depending on the kind of gas!

In order to always be able to offer you state-of-the-art alarm devices, we shall reserve the right to improve the construction and the design.

## **WARRANTY**

Careful manufacturing, critically tested material, and a strict final inspection determine the quality of our products.

We furnish a 12-month guarantee on this (starting from the date of invoice).

The guarantee shall only be valid for faulty material and workmanship and be limited to the replacement or the reparation of faulty appliances.

The guarantee shall only apply if the operation and maintenance instructions were complied with. Damages due to misuse, inappropriate handling, external impacts, water or generally to abnormal environmental conditions as well as damages caused by an unsuitable power supply shall be excluded from the guarantee.

Further or other claims, especially those for indemnification for personal injury and damage to property occurring outside the device, shall be excluded. There is no claim for indemnity in case of a fire or an explosion.

The guarantee shall be valid in connection with the purchase receipt, which has to be sent in together with the appliance.

In case of interventions in the appliance, the warranty claim shall lapse.

Manufacturer's address:      AMS – Automatische Mess- und Steuerungstechnik GmbH  
   Enge Gasse 1,    D-91275 Auerbach  
   Phone: +49(0)9643 / 9205-0,    Fax +49(0)9643 / 9205-90

## **Supplement For Gas Alarm S/2-FS (With Remote Sensor):**

### **REMOTE SENSOR FS**

Separate the base and the upper part from each other, i. e., lift the middle faceplate at the narrow cant slightly by means of a small screwdriver, disengage and remove it. Release the screw having become visible and take off the upper part from the base.

Fix the base with appropriate screws at the place intended for it.

Wire (wiring 3 x 0.75 mm<sup>2</sup>) the master controller (clamped connection) and the sensor. Please use the right angle plugs which are part of the scope of delivery on the side of the sensor (crimp them in a workman-like manner!).

Pay attention to the colour markings of the terminals at the master controller and the sensor, to wit:

Blue (+)

Green (-)

Yellow (impulse)

Maximum distance admissible: 50 m.

Heed the **mounting height** depending on the kind of gas for the sensor!

After the sensor and the master controller having been wired, fix the upper part of sensor to the base by means of the screw and snap on the grey faceplate.