

# INSTRUCTION MANUAL



## Flammable & Explosive Gas Leak Detector DEGA HBM Home



ISO 9001:2008  
Quality Management Systems  
Système de Qualité  
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DEGA CZ s.r.o. bears no liability for any damage resulting from the use of this device!

### FOR YOUR PROTECTION



#### Watch out for static electricity

Prior to installing or handling the product, ensure that you do not have an accumulated static charge. Touch a grounded metal object to trigger the discharge of any accumulated electric charge. Otherwise the product could suffer damage.



#### In the event of any failure of the equipment unplug it immediately

If you notice an unusual odour or smoke emanating from the product, unplug it from the mains and from all peripherals. Continued operation could result in injury or property damage. After disconnecting the product deliver it to an authorised service centre or the manufacturer for inspection.



#### Do not use the product in the vicinity of flammable gases or in areas where there is a potential occurrence of these gases.

Do not use electronic equipment in the vicinity of flammable gases; this could potentially cause a fire or an explosion. The product is not designed for use in industrial or commercial spaces nor in „Ex“ hazardous areas.



#### Do not disassemble the product and ensure against its contact with water

Contact with internal components of the product may cause an electric shock. In the case of any failure refer the servicing of the product exclusively to a certified service centre. Contact with water can create a short circuit in the product and consequent damage to property or personal injury.



#### Use the device only with the appropriate certified DEGA products

The device is certified and is technically and functionally suitable for authentic „DEGA“ accessories. In the event that the device is utilised with other products the manufacturer shall not be liable for any damages that this may cause.



#### Use cables of the appropriate types

To ensure compliance with the parameters of the product, to connect the product to other devices or to the power supply utilise exclusively the cables recommended and described in the Technical Data and Information section.



#### Install a detector for each gas appliance

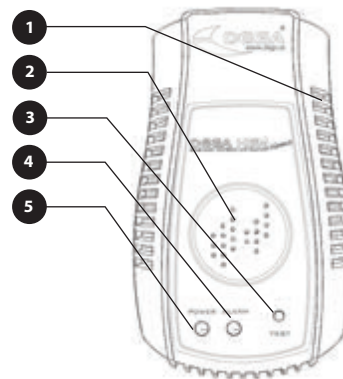
Install a detector for each gas appliance. The detector can only safely detect gas leaks that occur in the room in which it is located and where there is a direct contact with gas. For example, if the leak occurs in another part of the house or in a different room, the detector will not detect any gas leakage.

### TECHNICAL DATA AND INFORMATION

<b>Supply voltage:</b>	230V AC
<b>Input:</b>	5W
<b>Power-supply cable:</b>	double-core cable 230V AC 2 x 1mm <sup>2</sup>
<b>Cable for connecting the emergency valve:</b>	double-core cable 2 x 1mm <sup>2</sup>
<b>Type of sensor:</b>	semiconductor
<b>Expected operational life of the sensor in a clean environment:</b>	1-3 years (max. 6 years)
<b>Internal speaker acoustic performance:</b>	85 dB at 1m
<b>Operating temperature range:</b>	max. -10°C to +50°C
<b>Relative humidity of the ambient air:</b>	< 90 %
<b>Responsiveness:</b>	< 10% LEL (Lower Explosive Limit)
<b>Types of gas detected:</b>	Explosive and flammable gases (CH <sub>4</sub> -methane, natural gas, coal gas, propane, butane, CNG, LPG, etc.)

### DESCRIPTION OF THE PRODUCT

- 1 - Air holes for the access of gas to the sensor of the detector
- 2 - The speaker of the sounder
- 3 - The „TEST“ button
- 4 - The red indicator - „ALARM“ (LED, alarm)
- 5 - The green indicator - „OPERATE“ (LED, signalling the power status)



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### INSTALLATION, ASSEMBLY AND DISASSEMBLY

#### ASSEMBLY OF THE DETECTOR

- 1) Mount the detector on the wall with either a screw or a bolt anchor.
- 2) After mounting the screw or the bolt anchor on the wall simply hang the detector on it.

#### CONNECTING THE EMERGENCY VALVE

- 1) Using a connector, connect the cable from the detector to the valve cable.
- 2) Identification of the conductors: white cable +, black cable -

#### WHERE TO INSTALL A GAS DETECTOR

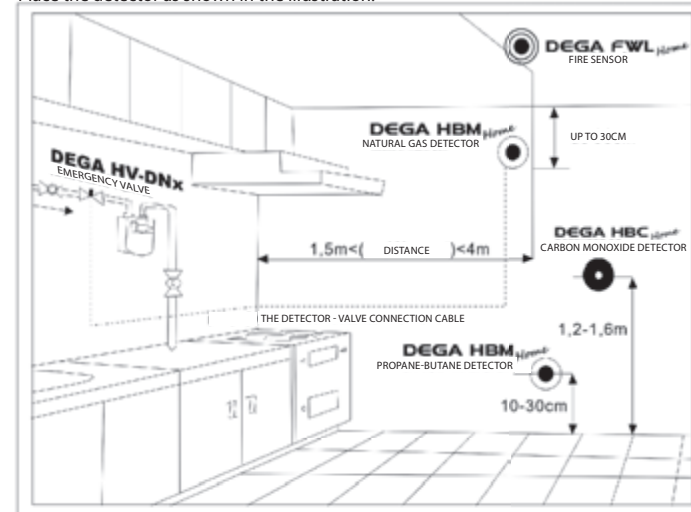
Place a detector in each room, on each floor, next to each gas appliance and any other potential source of a hazardous concentration of flammable and/or explosive gases, and specifically in:

- a) the kitchen / dining room / living room / hall / bedroom / escape corridors (sources: gas appliances - gas stove and oven, etc., gas convection heater - „heating element“, etc.)
- b) utility rooms (basements, bathrooms, etc.) in which gas boilers, water storage heaters, gas gauges or gas reservoirs are installed
- c) the garage (for the detection of LPG or CNG of vehicles)

#### Location of the detector:

- a) for the detection of natural gas / methane / CNG / coal gas and biogas at the highest point in the room (below the ceiling) at a distance of 1.5 to 4 m from any potential source of a leak (e.g. an appliance)
- b) for the detection of propane-butane / butane / LPG place the detector at a height of 10-30 cm above the floor and at a distance of 1.5 to 4 m from any potential source of a leak

Place the detector as shown in the illustration:



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**Recommendation:** In each area/room, for safety reasons, install a minimum of two detectors (if damage to one detector occurs at least one backup detector will remain functional). In each room install one detector for an area corresponding to that of a circle with a diameter of 5-8 m.

#### WHERE NOT TO INSTALL A GAS DETECTOR

1. Do not install the detector up to 0.9 meters by the door to the kitchen or bathroom, artificial inlets warm or cold air, ceiling fans, air conditioning ducts or other places with high air flow. Avoid dusty and dirty places and places with high grease. Dust, grease and cleaning agents contaminate the detector probe and can disrupt proper operation.

2. Do not place the detector in a location where it will be shielded by curtains or other objects. Gas must have free access to the detector, only then it will correctly detect explosive and flammable gases. Do not install the detector at the center of the vaulted ceiling or roof shields. Avoid damp and wet locations.

3. Do not place the detector in rooms in which the temperature could drop below 4.5 °C or, vice versa, where it could exceed 37.5 °C – this could provoke a false alarm.

4. Do not install the detector in any excessively dusty, dirty or insect-infested areas, where particles released into the air could impair the functioning of the detector.

### OPERATIONAL INSTRUCTIONS

#### ACTIVATION

After connecting the detector the green LED will be lit, indicating a supply of power and the red LED will start flashing. During the period in which the red LED is flashing, that lasts up to 2 minutes, the unit is becoming activated and is inoperable.

#### LED INDICATORS

##### The red „ALARM“ indicator

- Flashes intermittently with an audible alarm that is muted in the presence of elevated concentrations of flammable or explosive gases with level 1 of detection
- Flashes intermittently with an audible alarm in the event of dangerous concentrations of flammable or explosive gases with level 2 of detection (also a relay is switched that, in combination with the DEGA HV-Dx emergency solenoid valve, ensures the disconnecting of the gas supply).

##### The green “POWER” LED

Indicates the connection of the power supply to the detector. When it is receiving power properly the green LED is lit.

#### NOTE:

The detector has two levels of alarm. While in level 1 the optical signalisation is accompanied by a muted acoustic alarm, in level 2 optical and acoustic signalling are both at full intensity. During testing it is possible to hear sound level 2.

#### THE “TEST” BUTTON

The „TEST“ button reliably tests all the functions of the gas detector, i.e. through a simulation of level 2 of detection (the „ALARM“ flashes, the detector activates the acoustic alarm and the relay is switched on).

### MAINTENANCE

1. **at least once a day** – carry out a visual examination of the power supply of the detector (i.e. ensure that the green „POWER“ LED is flashing)
2. **once a week** - carry out a functional test of the gas detector by pressing the „TEST“ button for 5 seconds.
3. **at least once a month** - remove dust and dirt from the surface using a soft cloth or the brush attachment of the vacuum cleaner set at the lowest performance-level.
4. in the event of the occurrence of large-scale contamination disconnect the detector from the battery and clean the detector surface with a damp cloth. Do not use any liquid cleaners.

When using cleaning agents or other chemical agents sufficient ventilation of the area in question is requisite. Compounds that may affect or damage the sensor and cause erroneous measurements include: isobutane, isopropanol, ethyl acetate, alcohols, lacquers, paints, thinners, solvents, gasoline, diesel fuel, glues, hair spray, aftershave, perfume, and certain cleaning materials.

If it is necessary, it is possible to check the functioning of the detector using calibration gas, i.e. 2.5-3.0 vol. % CH<sub>4</sub> in synthetic air.

**Do not use the device for a longer period than that of the lifetime of the sensor in the detector!**

When installed in commercial buildings, or in the case of the use of the device as a fire-safety product, the device must be placed in operation by a trained employee and its calibration, including the functional check, must be conducted at least once a year. (Calibration and functional checking can only be carried out by a service-person certified by the manufacturer or by the manufacturer).

### WHAT TO DO IN THE EVENT OF THE ACTIVATION OF THE ALARM

1. Please be sure to act calmly and judiciously.
2. Close all gas valves and cylinders.
3. Open all windows and doors.
4. Do not use any electrical appliances.
5. Leave the space for the entire period that the acoustic alarm is active.
6. Check the gas system or contact the gas supplier with a request to examine the situation.
7. If the DEGA HV emergency solenoid valve is connected to the device the gas supply will automatically be closed. After rectifying any problems with the gas system, reset the valve by pulling the red handle that is located beneath the cover.

### AN ALARM REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION!

**This device only detects the presence of dangerous gases in the vicinity of the sensor. Flammable gases may also be present in other areas, not only in the vicinity of the sensor!**

### GENERAL WARRANTY TERMS AND CONDITIONS

**When the instructions for installation, operation and maintenance are followed the manufacturer guarantees a warranty period of 24 months from the date of receipt of the product.** When claiming a product defect it is necessary to submit a proof of purchase that contains the following information: name and surname of the purchaser, name and business name of the seller and his/her identification number; if the seller is a legal entity its name, identification number, registered office; if a natural person – the first name, surname, address and the warranty card, if the buyer received one from the seller. The validity of the warranty shall not be affected by non-compliance with the obligations related to the issuance of the warranty card.

1. Claims concerning the product (for a warranty repair only complete devices are accepted) may be filed during the warranty period only with the seller from which it was purchased; subsequently the seller is required to forward the product to an authorised service centre or to the manufacturer.
2. This warranty is not applicable to:
  - damage caused by fire, water, static electricity, power surges in the electric supply or in the public network, accident, improper use of the product, wear and tear
  - contamination of the product and its subsequent cleaning,
  - damage caused by any adjustment, modification or improper manner of use inconsistent with the instruction manual, the technical standards or the applicable safety regulations in the Czech Republic,
  - damage to the product during transportation caused by improper handling or handling of the product in a manner contrary to the advice provided in the instruction manual,
  - DEGA products **that have been used in association with other than original DEGA products, including consumables and accessories, the setting (calibration) of detectors**
  - wear and tear or damage to the sensors in detectors, including the need for their replacement
  - wearing parts and consumables (e.g. the wrench for removal of sensors, gaskets, etc.) that are detrimental to normal wear and tear during operation, together with wear and tear of the product and its components caused by their normal use.
3. Claims regarding a product defect that can be dealt with reasonably quickly and without additional consequences will be resolved by remedying the defect (repair) or by replacement of the product part, because in such a case it is a contradiction of the standard norms that the entire product shall be replaced (§ 616, paragraph 4 of the Commercial Code).  
A buyer who exercises the right of warranty repair is not entitled to the return of the parts that have been replaced.
5. For the complete version of the general business conditions and of the claims procedure go to [www.dega.cz](http://www.dega.cz)

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