EN Solight 1D36 Carbon Monoxide Detector Operating Manual

Dear Valued Customer, allow us to thank you for purchasing our product. Please read the following instructions carefully and follow them to ensure that your product serves you safely and to your full satisfaction. By doing so you will avoid improper use or damage to the product. Avoid incompetent manipulation with the device and always follow general principles of using electric appliances. Carefully keep the present operating manual. Intended for household or indoor use. The product should only be used by a adult persons. Never expose to environments with high humidity (such as bathroom), avoid contact with fluids.

WARNING: This alarm device indicates the presence of carbon monoxide only in the vicinity of the sensor. However, carbon monoxide may occur also in other areas.
The product is intended for indoor use in usual households. It is not intended for measurement according to the commercial and industrial standards of the Occupational Safety and Health Administration (OSHA).

CAUTION*:* **This device is intended to protect persons from acute impacts of carbon monoxide. It may not provide full protection to individuals with a specific disease. In case of any doubt consult physician.**
Persons suffering from health problems involving an increased sensitivity to carbon monoxide should consider the use of another alarm device, reacting to carbon monoxide concentrations lower than 30 ppm. This alarm is intended to detect carbon monoxide concentrations above 30 ppm.

Useful information on carbon monoxide

Carbon monoxide (chemical formula CO) is considered a very dangerous, poisonous gas that is colourless, has no smell and no taste and is highly toxic. From biochemical perspective it can be generally said that the presence of carbon monoxide blocks (inhibits) the ability of blood to transfer oxygen within the body, which may ultimately result in brain damage.

<u>The following conditions may cause temporary accumulation of CO:</u>

a) Excessive flue gas leakage from combustion plants or reverse streaming of flue gases due to outdoor conditions such as wind direction and/or velocity, including strong wind blasts; compressed air in exhaust ducts (cold/humid air with longer periods between cycles).
b) Negative differential pressure due to the use of exhaust fans.
c) Contemporary operation of several combustion plants sharing limited interior air capacity.
d) Exhaust tube of clothes dryer, boiler or water heater, released by vibrations.
e) Obstacles in exhaust tube or extraordinary shape of exhaust tube, worsening the situations described above.
f) Prolonged operation of combustion plants with no flue gas exhaust (kitchen stove, oven, fireplace etc.).
g) Temperature inversion causing flue gases to stay close to ground.
h) Idling car engine in an open or closed adjacent garage or close to a house.

<u>Symptoms of carbon monoxide poisoning:</u>

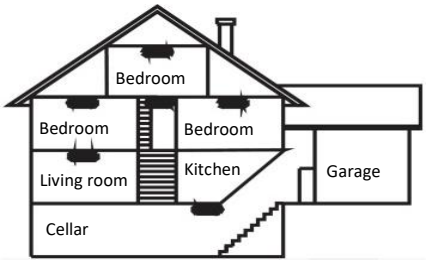
The following symptoms are related to carbon monoxide poisoning and it is important that all household members be informed about them:

a) Slight exposure: slight headache, nausea, vomiting, tiredness (frequently reported as influenza symptoms).
b) Medium exposure: severe pulsating headache, sleepiness, confusion, vomiting, accelerated heart rate.
c) Extreme exposure: unconsciousness, spasms, cardiac and respiratory failure, death.

Numerous reported cases of carbon monoxide poisoning indicate that victims realize their sickness but are so disoriented that they are unable to rescue themselves, i.e. to leave the building or call for help. Small children and pets are usually the first affected ones. Exposure during sleep is particularly dangerous because the victim usually does not wake up.

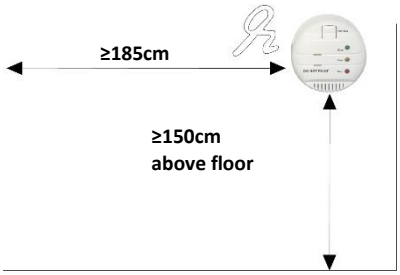
Detector location

Since carbon monoxide moves freely in air, the detector should be placed in areas where people sleep or in their direct vicinity. The human body is most sensitive to the effects of CO while asleep. For maximum protection, the detector should be placed close to the area intended for sleeping or on every floor of your house. The diagram below indicates some recommended places inside the house. The electronic sensor detects carbon monoxide, measures its concentration and triggers a loud audible alarm before a potentially harmful concentration is achieved.

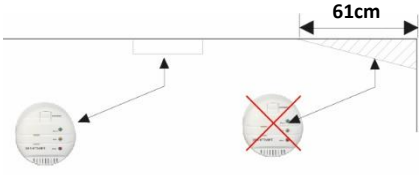


We recommend you to mount the detector onto the wall and to the ceiling, see pictures below.

Wall mounting



Ceiling mounting



<u>Do not install the detector:</u>

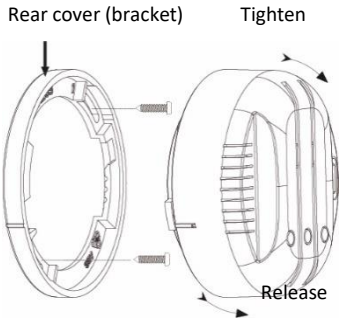
a) to places where temperature may drop below -10ºC (14ºF) or exceed 40ºC (104ºF)
b) to places with possible occurrence of solvent vapours and with high humidity
c) within 1.5 metres away from sources of open flame such as ovens, stoves or fireplaces
d) into gas engine exhaust pipes, into air ducts, smoke ducts or chimneys
e) close to car exhaust pipe; this would destroy the detector.

Product specification

Power supply:	2x AAA 1.5V alkaline batteries (LR6)
Sensor type:	Electro-chemical
Alarm activation (sensitivity):	30 – 49ppm (120 minutes)
	50 – 99ppm (60 – 90 minutes)
	100 – 299ppm (10 – 40 minutes)
	above 300ppm (0 – 180 seconds)
Operating temperature:	-10°C to +40°C
Operating humidity:	15 – 90%
Max. sound level:	85dB within 1m range
Dimensions:	Ø 68mm x 35mm; weight: approx. 60g (without batteries)

Detector mounting

1. Release rear cover by turning it anti-clockwise.



2. Drill holes in points where you wish to install the alarm. Use rear cover as template.
3. Use screws and dowels attached to the product package; do not apply excessive force while tightening the screws. Use more suitable fastening material when necessary.
4. Insert two AAA alkaline batteries. Mind the indicated polarity.
5. Attach the detector to the rear cover and rotate it clockwise to fix it.

Functional test

The detector is equipped with a diagnostic circuit, testing the sensor's and siren's function every ten seconds. However, we recommend you to test the device for function every month. You can do it as follows.

Push the TEST/HUSH button shortly. Afterwards, you will hear the alarm signal and the LED diode (alarm) will flash 4 times in four series in a row. This indicates correct function.

Alarm mode

If harmful CO concentration is detected, the detector will switch to constant alarm mode. In such case, immediately proceed as follows:

1. Provide ventilation in the room affected and leave the room. If no ventilation is possible, immediately leave to fresh air or to another ventilated room with lower or no CO concentration at all.
2. If there is anybody inside the affected room experiencing carbon monoxide poisoning symptoms described above, immediately call the ambulance and the fire brigade. All persons and animals must be immediately evacuated. Count all the present persons and animals to make sure nobody is forgotten.
3. Do not re-enter the affected rooms until the problem has been resolved and until carbon monoxide has diffused. Its concentration must sink to a safe level. The alarm will automatically stop signalling dangerous CO concentration when it drops to a safe level.

Alarm activation values:

CO level	Reaction time	Type of audible alarm
30 – 49PPM	After 120 minutes	2x sound signal at a frequency of 1s
50 – 99PPM	After 60 – 90 minutes	3x sound signal at a frequency of 1s
100 – 299PPM	After 10 – 40 minutes	4x sound signal at a frequency of 1s
300PPM or more	Up to three minutes	4x sound signal at a frequency of 0.5s

Silent alarm mode

Solight 1D36 detector also has a silent alarm function If the detector triggers the alarm, it can be put on silent mode by pushing the TEST/HUST button. In this mode, the red (Alarm) diode will flash once simultaneously with the green (Power) diode every ten seconds for two minutes. If the concentration of carbon monoxide exceeds 300PPM within three minutes, the loud alarm will be trigged again. If the concentration drops below 5PPM (included), the alarm signal will stop.

If you wish to exit the silent alarm mode, push the TEST/HUSH button repeatedly.

Backward warning function

The alarm may be triggered when no persons are at home. In such case, the red (ALARM) LED will flash, accompanied by a double sound signal every 15 seconds.

To delete the backward warning and to return to stand-by mode, push the TEST/HUST button.

Stand-By

In stand-by mode, the green diode will flash 1x every 50 seconds provided that the alarm is functioning and no carbon monoxide is detected.

Low battery signal

When the battery voltage drops below a pre-defined level, the detector will start to indicate that the batteries need to be replaced. The red (Alarm) LED will flash once, accompanied by a short sound signal, every 40 seconds. This low battery signal will continue for approx. one month. Afterwards, the batteries will discharge completely and the detector will cease to work. Replace the battery in time.

The battery will work in the detector for approximately five years. When low battery signal is active, the detector is still able to trigger alarm.

Device defect signal

If the device identifies a defect of the siren or sensor, the yellow (Fault) LED will flash once along with a short audible signal every 30 seconds.

End of life signal

When the device reaches the end of its service life, the yellow (Fault) LED will flash along with triple audible signal every 60 seconds.

Calibration

Calibration may only be carried out by authorized service workshop. Calibration was carried out in the manufacturing plant. However, if you wish to have your device calibrated, contact the manufacturer/importer.

Maintenance

Regularly remove dust using vacuum cleaner and dry cloth. Never use detergents.

Amendment

The product complies with the requirements for introduction to the EU market and with EN 50291:2010 standard. Recommended replacement time range: within 5 years from the date of manufacture. Date of manufacture is printed on product label or pressed in the plastic cover inside the product.
Name and number of notified person providing EU certification: ECM Savignano, IT. No. 1282.
Certificate number: IT111935JB160325S

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Importer: Solight Holding, s.r.o., Štěrboholská 1434/102a, 102 00 PRAGUE, www.solight.cz