

Schützen

Klein-H1600
Carbon Dioxide
personal gas
monitor



Schützen Carbon Dioxide Gas Monitor

Carbon Dioxide Gas Detection.



The Schützen Klein-H1600 CO₂ Gas Monitor is the ideal solution for personal carbon dioxide detection.

The device is light weight and compact with an ergonomic design, making it an ideal personal detection device. The Schützen Klein-H1600 CO₂ portable gas detector is a disposable device with low cost, reducing monitor downtime and environmentally friendly. Thus delivering an unlimited operational lifetime.

Live Gas Readings and Easy Interface.

With two-buttons operation, adjustable alarm settings and an easy-to-read display the Schützen Klein-H1600 CO₂ is simple to use. Just turn it on for the first time, and the monitor does the rest. Users can also toggle between modes and different readings with one button. Using the default settings from the factory there is no need to set up or program the monitor.

The Risks of Carbon Dioxide

Carbon dioxide is a natural occurring gas that usually takes up 0.04% of the Earth's atmosphere. This gas is colorless, odorless and tasteless, making it indistinguishable by humans.

Although Carbon Dioxide is not toxic or flammable by nature, it can expand up to 535 times its volume when changing from liquid or solid form to gas. This means that in enclosed areas, even a small leak in CO₂ tanks or cylinders can quickly increase the CO₂ levels to 3-5% of air, which is dangerous.

CO₂ poisoning happens when we breathe in air with 5% or more CO₂ by volume. Common symptoms include headache, dizziness, weakness, chest pain, and confusion. It can even cause the heart rate to increase to 300% of its normal rate.

Even if volume of CO₂ leaked is not enough to cause bodily harm, we exhale 3% CO₂, which can displace the oxygen present in the air in enclosed spaces, leading to oxygen deficiency.

Under the NIOSH, recommended Exposure Limit (REL) for carbon dioxide is 5,000 ppm over 8-hour TWA and 30,000 ppm over 15-minute ceiling.

Carbon dioxide (CO₂)
[ppm] [%]

250-400	0.025 - 0.04
400 - 1,000	0.04 - 0.1
1,000-2000	0.1 - 0.2
2,000-5,000	0.2 - 0.5
5,000	0.5
30,000	3
40,000	4
50,000	5
80,000	8

Danger levels

Normal background concentrations in outdoor ambient air
Concentrations typical of occupied indoor spaces with good air exchange
Complaints of drowsiness and poor air quality
Headaches, sleepiness and stagnant stuffy air, Poor concentration, loss of attention, increased heart
Workplace exposure limit (as 8 hours TWA ⁹) in most countries
Ceiling exposure limit (not to be exceeded) for a 10 minutes period
Exposure may lead to serious oxygen deprivation resulting in permanent brain damage, coma or
Strong respiratory stimulation, dizziness, confusion, headache, shortness of breath
Dimmed sight, sweating, tremor, unconsciousness and possible death

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Display Option
0 - 5% Vol Range

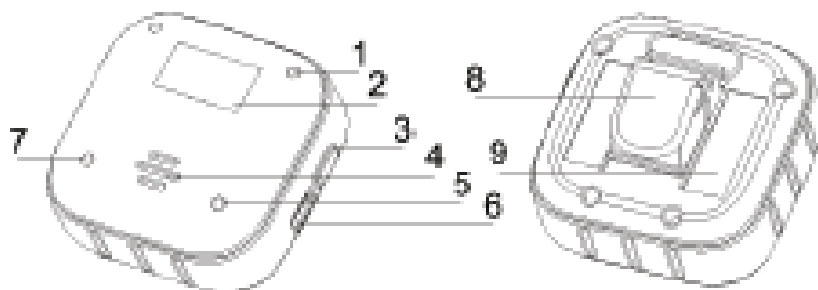
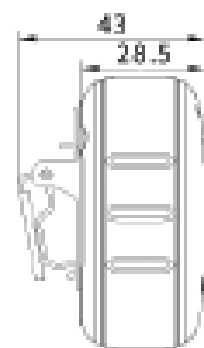
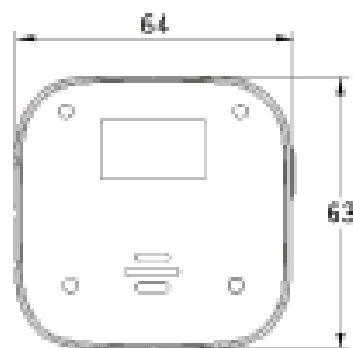
One full charge last 14 days

Budget Option



Applications

- Manufacturing
- Pharmaceutical
- Chemical Laboratories
- Agriculture
- Food & Beverages
- Power Plants
- Aviation
- Marine & Shipping



1. Alarm Light

2. Display

3. Button

4. Sensor Port

5. Buzzer Port

6. Charging Port

7. Charging Indicator

8. Back Clip

9. Product Plate

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Specifications

Physical characteristics	
Size	Size: 63(W) x 64(H) x 43(D)mm
Weight	110g
Operation	One-button
Environmental Protection	IP66
Carrying attachments	Stainless steel alligator clip
Display	Digital LCD display, LED Indicator
Display info	Live Reading, remaining battery life
Monitoring	
Sensor ranges	0-5.0%vol
Resolution	0.1%vol
Power	
Power source	Rechargeable Li-ion(polymer) power supply unit (750mAh)
Battery life indication	Yes
Battery life	14 days (Charging time: 3 to 5 Hours)
Alarms	
Visual alarm	Yes - red led
Audible alarm	Yes - 90db
Vibrating alarm	Yes
Alarm set points	Low: 0.5% Vol, High: 1%
Data storage	
Data retention	Yes - Direct USB Link to PC
Data transmission	Type-C
Certifications/Approvals	
Electromagnetic compatibility	Ex ia II CT4 Ga
Approved temperature ranges	-20°C ~ +60°C
Environment	10%-95%RH(non-condensing)



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