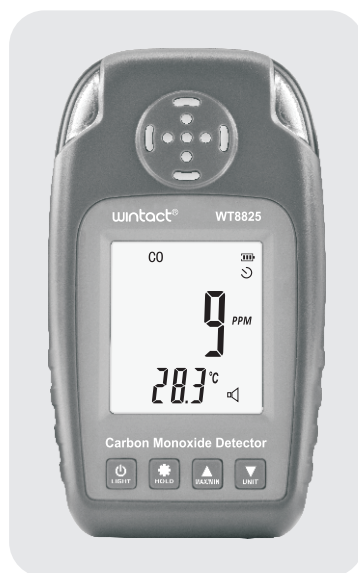


Carbon Monoxide Detector

Instruction manual



Standard: Q/HTY 007-2018
Version: WT8825-EN-00

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A. Introduction

Pure carbon monoxide (CO) is colorless, odorless, and non-irritant gas: molecular weight: 28.01; density: 1.250g/l; freezing point: -207°C; boiling point: -190°C. Its solubility in water is quite low, but it dissolves instantly in ammonia water. Air mixed explosion limit is between 12.5% and 74%. After entering human body, carbon monoxide will combine with hemoglobin in blood, making the hemoglobin not able to combine with oxygen, which causes oxygen deficit to organism organization, leading to death from suffocation. Therefore, carbon monoxide is toxic, and is colorless, odorless, and tasteless, which is easy to be ignored and thus causing poisoning. Gas perniciousness: carbon monoxide can harm human health, and serious carbon monoxide would cause death. Therefore, people should pay attention to safe gas using, and people working in factory should pay attention to carbon monoxide concentration.

Carbon monoxide detector can detect carbon monoxide concentration, observing concentration value all the time. It has quite clear large LCD screen and voice and light alarm indication, making sure that it can detect dangerous gas and inform operators of precautions under adverse situation. It is widely used in petroleum, chemistry, coal mine, metallurgy, papermaking, fire-fighting, municipal administration, telecommunication, food, textile and other industries.

B. Functions

- ▶ HOLD data holding
- ▶ MAX maximum value / MIN minimum value
- ▶ UNIT switch units among %VOL, %LEL, PPM, (mg/M³)
- ▶ Alarm setting
- ▶ Calibration
- ▶ On/Off (Timed Shutdown)

C. Safety instruction

1. Understand and know toxicity of carbon monoxide.

0-1PPM	Normal
9PPM	ASHRAE 62-1989 regulated standard living area
50PPM	Average for staying for eight hours in OSHA closed space
100PPM	OSHA exposure limit
200PPM	Light headache, tired, sick and dizzy
800PPM	Dizzy, sick and hyperspasmia, and die in two or three hours

US Department of Labor regulates in Article 24 of the 1917 OSHA that: carbon monoxide concentration in any closed space should be not higher than 50PPM (0.005%). If carbon monoxide concentration exceeds 100PPM (0.01%), it is necessary for workers to transfer their sites.

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Please do not use this table only in personal safety inspection.

2. Carbon monoxide and tools fault:

Typical problems of highly-concentrated carbon monoxide that may be generated is indicated in the following table.

Tool	Fuel	Typical Problem
Gas stove indoor heater	Petrol Natural gas Liquefied gas	1. Damaged heat exchanger 2. The air is not sufficient to support normal burning of fuel 3. Pipe damage or blocking 4. Fire stove imbalance 5. House is improperly pressed
Central furnace	Coal Kerosene	1. Damaged heat exchanger 2. The air is not sufficient to support normal burning of fuel 3. Fireplace damage
Indoor heater Central heater	Kerosene	1. Adjustment error 2. Wrong fuel (not K-1) 3. Wrong lamp wick or lamp wick0 height 4. The air is not sufficient to support normal burning of fuel 5. Abnormal system exhausting
Water heater	Natural gas Liquefied gas	1. The air is not sufficient to support normal burning of fuel 2. Pipe damage or blocking 3. Heating stove imbalance 4. House is improperly pressed
Wave oven	Natural gas Liquefied gas	1. The air is not sufficient to support normal burning of fuel 2. Heating stove imbalance 3. Wrongly used as indoor warm heater 4. Abnormal system exhausting
Stove Fireplace	Gas Wood Coal	1. The air is not sufficient to support normal burning of fuel 2. Pipe damage or blocking 3. Green or processed rice material 4. Damaged heat exchanger 5. Damaged heating room

3. Normal source of potentially dangerous carbon monoxide:

- ▶ Stove, gas stove or fireplace lack of maintenance.
- ▶ Blocked exhaust pipe for chimney.
- ▶ Gas, petrol or kerosene tools lack of maintenance.
- ▶ Combustion motor (such as auto, grass mower and blower).

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D. LCD Display (Figure 1)

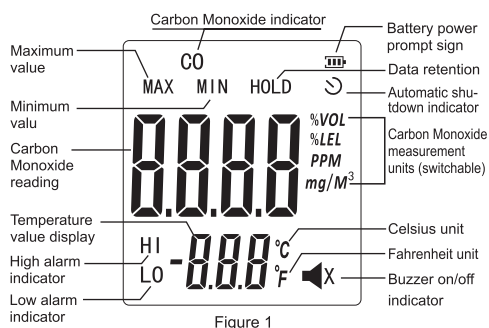


Figure 1

E. Name of Each Component (Figure 2)

1. Power and backlight on/off button.
2. Measurement data holding and setting button.
3. Maximum/minimum value mode locking/ Up button.
4. Down button.
5. LCD display.
6. Sensor hole.
7. LED alarm light.
8. Sticker spot for nameplate.
9. Battery door.

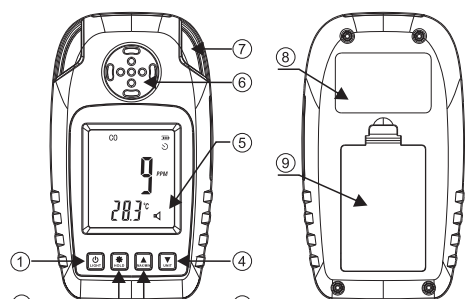


Figure 2

F. Operating Instructions

- (1) Power on/off: Short press to start up, perform normal measurement after 10 seconds, long press to shut down.

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- (2) Data holding: Short press ; short press it again to exit.
- (3) Maximum/minimum value mode: Short press for maximum value, short press it again for minimum value, short press it again to exit.
- (4) Unit switch: Short press to switch units among %VOL, %LEL, PPM, and (mg/M³).
- (5) Setting: long press to enter setting mode, short press to switch setting items, short press and to switch on/off, long press to exit.
 - a. "ELE" temperature unit switch
 - b. "OFF" timed shutdown switch
 - c. "bu2" buzzer switch
 - d. "HI/LO" alarm value setting
 - e. "CAL" calibration

Note:

1. Temperature refers to temperature of carbon monoxide sensor.
2. Timed shutdown is set as 10 minutes.
3. Buzzer switch refers to button pressing sound and alarm sound.
4. Alarm value setting: Short press and to switch between high and low alarm point, long press to set alarm point value, short press to switch setting digit, short press and to set alarm value, long press to save and exit.
5. Short press and to switch calibration point. User can calibrate 0 point under airy environment (in normal temperature) by long pressing to start calibration. When calibration is finished, "PASS" will be displayed automatically; if not, "Err" will be displayed. If not, "Err" will be displayed. "40" calibration point is calibrated by factory and needs to be operated in a closed environment filled with CO concentration. Long press to start calibration. After a while, "PASS" will be displayed automatically for successful calibration; and "ERR" for failed calibration. After successful calibration, long press to fine tune calibration value (by short pressing and) and long press again to save calibration value.
6. Lock: long press to lock the operation.
- (6) Unlock: Under power off state, short press , and at the same time to enter unlock interface. Short press to switch setting digit. Short press and to set value. User needs to ask original factory for password, and long press to unlock and restart.

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G. Specifications

Measurement range	0~1000ppm; 0~0.1%VOL; 0~0.8%LEL; 0~1250mg/M ³ ;
Maximum overload	2000PPM
Response time	< 30 s
Using environment temperature range	0~50°C (32~122°F)
Using environment humidity range	15~90%RH
Power supply	3*1.5V AAA batteries
Dimensions	67.98*28.47*119.98mm
Weight	111.9g(Without battery)

Warning: prohibit charging or disassembling batteries in an explosive environment.

Special Statement:

Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence. this company reserves the right of changing the product design and contents of instruction if changed the separate notice isn't given.



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