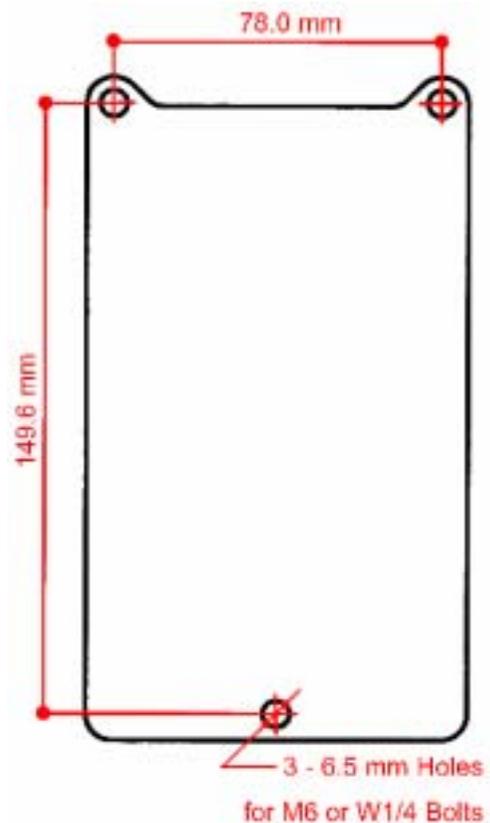


# Wall-mount type of Combustible gases Detector Model: GTF200-FL

## Installation and Wiring

1. Please read the Security Notifications in detail firstly.
2. The gas detector might install on wall or steel plate, please refer following drawing to make marking then drill the holes. Do not use the gas detector as a drilling template to avoid fault.



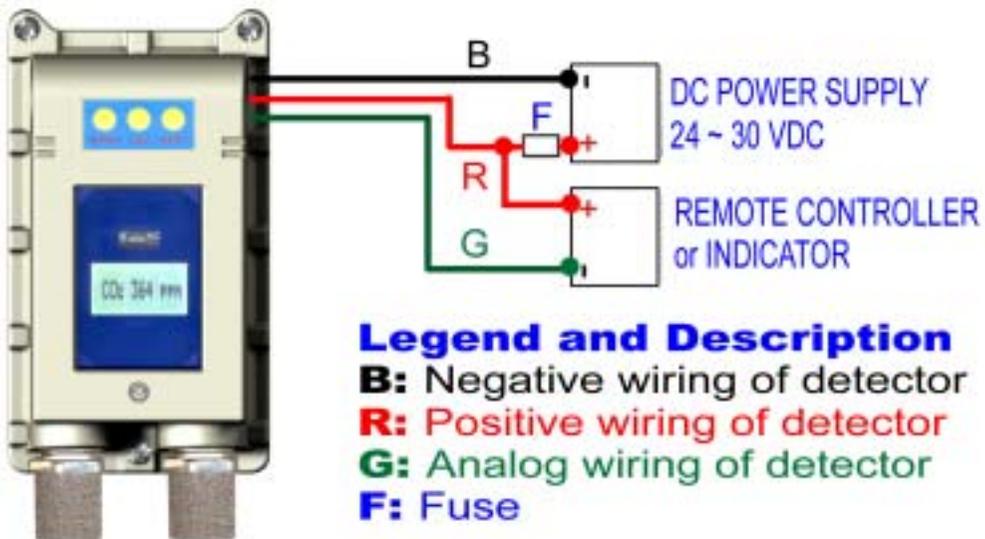
3. Due to the space is very small that is impossible to use wrench. Therefore, to use female expansion bolts on the wall or tap female screws on the steel plate and use external screw (male bolts) that can use the screw driver to install the gas detector and solve spacing problems. M6 sizes of bolts have a good tolerance than W1/4.

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# Wall-mount type of Combustible gases Detector Model: GTF200-FL

## 4. Analog output

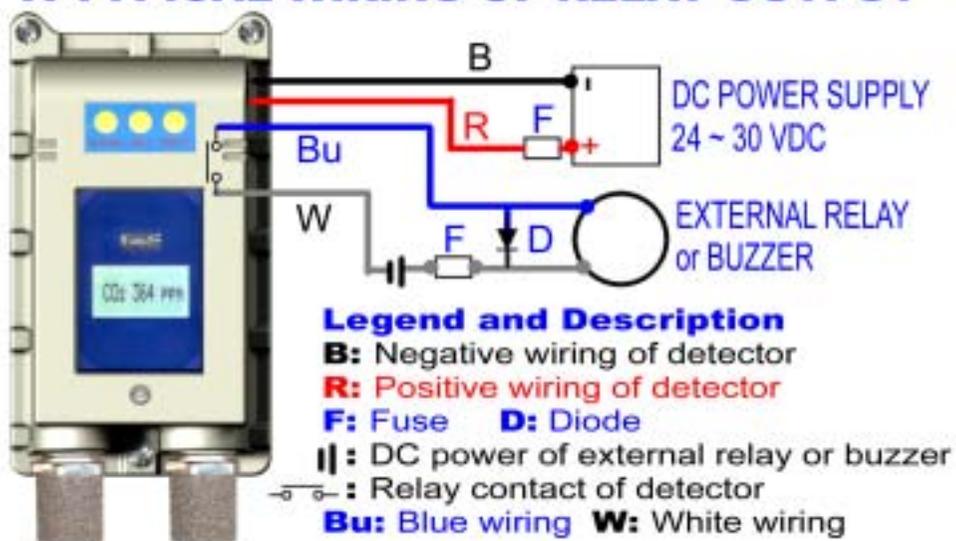
### A TYPICAL WIRING OF ANALOG OUTPUT



A recommend fuse is 0.2 A in the above.

## 5. Relay output

### A TYPICAL WIRING OF RELAY OUTPUT



A recommend fuse is 0.2 A, the diode could be 1N4002 or 1N4004 in the above.

6. In order to meet waterproof, the wiring material and parts should be met the requirement also.
7. The wiring size is not less 0.5 mm<sup>2</sup> or 20 AWG. In the case of long-distance wiring, to apply bigger size or 30 VDC power is better.
8. The detector attached wiring connectors and shrink sleeves for the wiring. Due to spacing problems, do not use

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# Wall-mount type of Combustible gases Detector

## Model: GTF200-FL

electrical tape. For the connecting the wires, to solder them is better than using connectors that do not cut wires while replace or reinstall to avoid shortage of wires length.

9. There are two 1/2" NPT female connectors which might use one normally. Please blind the other with tape seal.

### Specifications (Specification maybe changed without notice)

model	GTF200-FL-A	GTF200-FL-R
type	wall-mount	
sensor	catalytic sensor	
target	General flammable gases	
sampling method	diffusion	
measuring range	1.00 ~ 40.00 %LEL of methane base (standard type) 1.0 ~ 100.0 %LEL of methane base (optional type)	
changeable target gases & range (standard type)	Methane : 500 - 20,000 ppm Propane : 300 - 11,000 ppm Iso-Butane : 250 - 9,800 ppm Hydrogen : 300 - 12,000 ppm Ethanol : 400 - 16,500 ppm	
available targets	Methane, Propane, Butane, Iso-Butane, n-Pentane, n-Hexane, n-Heptane, Iso-Octane, Methanol, Ethanol, Iso-Propanol, Acetone, Toluene, Ethyl Acetate, Hydrogen, Cyclohexane, Acetylene, Ethylene etc.	
resolution/accuracy / sampling time	20 ppm / ±5 %F.S. / continuity	
alarm level	high alarm resetable	
analog output	4    20 mA max. load resistance    500 ohm	N/A
relay output rating	N/A	single pole normal open relay with self-hold function 30VDC, 1A
buzzer / flash lamp	available	
backlight alphanumeric LCD	available	
construction	dustproof and waterproof ( meet to IP65)	
size	193 mm x 91 mm x 40 mm	
net weight	about 700 g	
power supply	24 ~ 30 VDC	
power consumption	about 3W	
ambience temperature	-10 ~ 45 degree in Celsius	
ambience humidity	less 95 %RH and non-condenser	
packing size	about 208 mm x 156 mm x 68 mm	
gross weight	about 1,100 g	

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# Wall-mount type of Combustible gases Detector Model: GTF200-FL

## 1. Power on display

After power on, the GTF200-FL combustible gases detector will display a series of messages, including welcome, model no and combustible gases concentration (vol%).

G A S T E C H  
W E L C O M E

WELCOME

M O D E L ... A 0 3  
GTF200-FL-A

Show the model no. (Show it at power on only.)  
GTF200-FL-A is a standard type with 4 ~ 20 mA analog output.  
GTF200-FL-R is an optional type with relay output.

WARMING-UP  
WAIT....

It's warming up now, please wait. (Show it at power on only.)

----- CH4  
Non-Detect

Show the concentration of combustible gases.  
Legend description and range:  
CH4: Methane, 1.00 - 40.00%LEL and/or 500 - 20,000 ppm  
C3H8: Propane, 1.40 - 50.00%LEL and/or 300 - 11,000 ppm  
I-Bu: Iso-Butane, 1.40 - 54.00%LEL and/or 250 - 9,800 ppm  
H2: Hydrogen, 0.75 - 30.00%LEL and/or 300 - 12,000 ppm  
EtOH: Ethanol, 1.25 - 50.00%LEL and/or 400 - 16,500 ppm  
It may shows Non-Detect while concentration of combustible gases is lower than above range; and may shows Over Rang while concentration of combustible gases is higher than above range.

## 2. Settings

The following operating procedure describes the settings. In the operation, press NEXT key or idle 3 minutes, the display will back to the concentration of combustible gases.

----- CH4  
Non-Detect

In the display, press NEXT key to enter next function.

TEST ALARM

In the display, press ADJ key, the buzzer and flash lamp will action. Press ADJ key again, they will stop. (The relay will make action in TEST ALARM also, if detector model has relay output.)  
Press NEXT key to enter next function.

Target Gas  
CH4  
<UPDN> + <ADJ>

In the display, press UPDN and ADJ keys at same time, will change target gas.  
There are CH4, C3H8, I-Bu, H2 and EtOH could be changed in the standard type.  
Press NEXT key to enter next function.

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# Wall-mount type of Combustible gases Detector Model: GTF200-FL

## Buzzer Limit

10.00%LEL UP

In the display, press ADJ key, to reset the buzzer limit. The last words of last row might show UP, press ADJ key will increase the setting limit. Press UPDN key, the word will change to DN; press ADJ key will decrease the setting limit.

Press NEXT key to enter next function.

## Flash Limit

7.00%LEL UP

In the display, press ADJ key, to reset the flash limit. The last words of last row might show UP, press ADJ key will increase the setting limit. Press UPDN key, the word will change to DN; press ADJ key will decrease the setting limit.

Press NEXT key to enter next function.

## Relay A. L.

5.00%LEL UP

In the display, press ADJ key, to reset the relay action limit. The last words of last row might show UP, press ADJ key will increase the setting limit. Press UPDN key, the word will change to DN; press ADJ key will decrease the setting limit.

**Note: this function is available in relay output model only.**

Press NEXT key to enter next function.

## Relay R. L.

1.00%LEL UP

In the display, press ADJ key, to reset the relay release limit. The last words of last row might show UP, press ADJ key will increase the setting limit. Press UPDN key, the word will change to DN; press ADJ key will decrease the setting limit.

**Note: this function is available in relay output model only.**

Press NEXT key to enter next function.

## Methane Cal. Low?

<UPDN> + <ADJ>

In the display, press UPDN and ADJ keys at same time, to enter low point calibration function.

Press NEXT key to jump calibration function and enter next function.

**Warning! Except necessary, do not execute calibration. It is necessary to execute calibration after power on 7 days. An error operating should loss accuracy.**

## Cal. Low

500 ppm UP

In the display, user has to finish low point calibration.

Press ADJ key, to meet low point concentration of combustible gases. User has to prepare 500ppm+/- 50ppm of Methane gas and enter real concentration. The last words of last row might show UP, press ADJ key will increase the calibrating value. Press UPDN key, the word will change to DN; press ADJ key will decrease the calibrating value.

Press NEXT key to finish calibration and enter next function.

## Methane Cal. High?

<UPDN> + <ADJ>

In the display, press UPDN and ADJ keys at same time, to enter high point calibration function.

Press NEXT key to jump calibration function and enter next function.

**Warning! Except necessary, do not execute calibration. It is necessary to execute calibration after power on 7 days. An error operating should loss accuracy.**

## Cal. High

10000 ppm UP

In the display, user has to finish low point calibration.

Press ADJ key, to meet low point concentration of combustible gases. User has to prepare 10000ppm+/- 500ppm of Methane gas and enter real concentration. The last words of last row might show UP, press ADJ key will increase the calibrating value. Press UPDN key, the word will change to DN; press ADJ key will decrease the calibrating value.

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# Wall-mount type of Combustible gases Detector Model: GTF200-FL

Press NEXT key to finish calibration and enter next function.

Analog Output  
Calibration ?  
<UPDN> + <ADJ>

In the display, press UPDN and ADJ keys at same time, to enter calibration function. Before the calibration, user needs prepare an ampere meter and makes series into analog current loop.

Press NEXT key to jump calibration function and enter next function.

**Warning! Except necessary, do not execute calibration. It is necessary to execute calibration after power on 24 hr. An error operating should loss accuracy.**

**Note: this function is available in analog output model only.**

Calibration

4 mA UP

In the display, user has to finish calibration.

The last words of last row might show UP, press ADJ key will increase the current output. Press UPDN key, the word will change to DN; press ADJ key will decrease the current output.

Press NEXT key to finish calibration of 4 mA and enter next function.

Calibration

20 mA UP

In the display, user has to finish calibration.

The last words of last row might show UP, press ADJ key will increase the current output. Press UPDN key, the word will change to DN; press ADJ key will decrease the current output.

Press NEXT key to finish calibration of 20 mA and enter next function.

Life Time

29 DAYS

In the display, user can read out the used lifetime of detector. Normally, the sensor of detector has 1,000 days lifetime. It is necessary to renew the sensor beyond that.

**Note 1: due to QC procedure, the used lifetime might be more than 1 day, but it should be less than 30 days.**

**Note 2: Lifetime meter count up during power on only. If the detector is idle for a long time, or used in an environment with high concentration of combustible gases, frequentative power on and off, the lifetime will be shortened even the meter less than 1,000 days.**

Press NEXT key; the display will back to the concentration of combustible gases.

### 3. Alarm message

The concentration of gas is lower than buzzer low limits or higher than the buzzer high limit, the detector not only has audible alarm but also provide clear alphanumeric alarm message for users.

High Alarm  
5125ppm CH4  
10.25%LEL

The combustible gases high alarm and the concentration of combustible gases is 24.0 vol%.

If the concentration of combustible gases is over 25.0 vol% will be indicated > 25.0%.

Press NEXT key, the buzzer will mute and the display will back to the concentration of combustible gases. If the concentration of combustible gases is still higher than buzzer high limit, this message and audible alarm will come again, that will disappear until the concentration of combustible gases is lower than the buzzer high limit.

### 4. Warning message

The GTF200-FL combustible gases detector may auto-off under low or high specified voltage. [If the gas detector is auto-off, it cannot work for detection.](#) At some of case, the detector cannot work but will provide warning message which reminds user to check the detector or its system.

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# Wall-mount type of Combustible gases Detector Model: GTF200-FL

Power Low

Due to input voltage lower than specified, the detector cannot work.

Temp. High

Due to ambience temperature higher than specified, the detector cannot work.

## 5. Maintenance

- 5.1 First-time usage or long-term idle is required to power on the gas detector for a long time (e.g. 30 min.) to improve accuracy and get accurate detective value.
- 5.2 Please store the gas detector it in dry place, e.g. damp-proof box.
- 5.3 Please do not expose the gas detector to sunshine, pollution, and moisture environment.
- 5.4 Use the gas detector often (at least power on the gas detector eight hours one week).
- 5.5 Please use dry soft cloth or soft cloth with little water to clean the body of gas detector. Especially, the porous waterproof housings of sensor and buzzer are disallowing force clean to avoid malfunction. It is one way only to clean the porous waterproof housings that use clean water spray their surface lightly then use dry soft cloth or spongy to remove the water. Please do not use chemical solvent, alcohol, cleanser, or other volatile solvent to clean the gas detector; otherwise the gas detector will be seriously damaged by such kinds of solvents.
- 5.6 Any fault or defect occurs, please refer to Troubleshooting.
- 5.7 The detector is a highly fine instrument. Apart it may cause some dangers such as short of circuit or fire.

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