

## GAS DETECTOR FOR GASES, WHICH ARE LIGHTER THAN AIR YF-517C



### ■ Description

The YF-517C is a 24VDC powered ceiling mount type gas detector for gases, which are lighter than air. This detector is used with the SH5910(Panasonic) dedicated base in order to mount on the ceiling and an electrical junction box.

This detector incorporates a catalytic type gas sensor which is comprised of two elements; 1) element which is sensitive to combustible gases and 2) reference element which is not sensitive to combustible gases. When combustible gases touch with the element 1), they will be combusted on the element 1), causing the temperature and resistance to rise, while not on the element 2). The detector measures the differences of resistance between two elements so as to compensate changes in gas sensitivity corresponding to changes in relative temperature. This sensing method enables a stable sensitivity and prevents false alarms caused by high temperature, high humidity and non-targeted gases like an alcohol gas. The YF-517C can output 3-level voltages - 0V - 6V - 12V - depending on the status of the detector. The output voltages can be converted into dry contact outputs by using the OC-3Ma signal converter (optional).

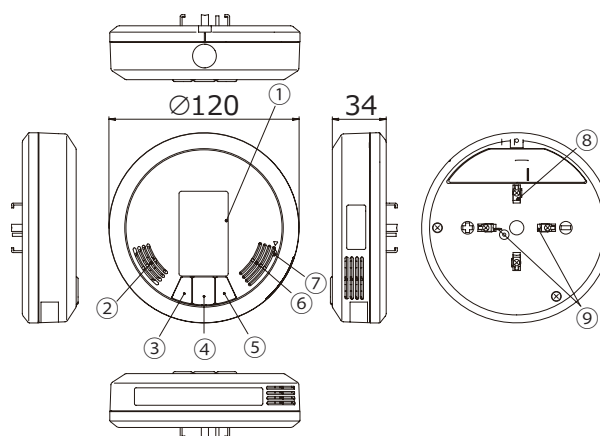
The YF-517C is for use in non-hazardous, indoor locations such as residences, hotels, restaurants, stores, offices and institutional buildings.

The YF-517C has been approved by Japan Gas Appliances Inspection Association as a suitable detector for town gases.

### ■ Features

- Gas Detector for gases, which are lighter than air
- Catalytic combustion type gas sensor
- Temperature compensation element reduces false alarms
- 3-level voltage outputs for Alarm, Trouble and Normal indications
- Self-restoring from alarm status
- Input terminal for remote testing
- Surge protection circuit
- Sensor drift detection circuit
- 24 VDC Power Supply
- Automatic initial inspection function
- Failure diagnosis function
- Replacement time notification function

### ■ Dimensions

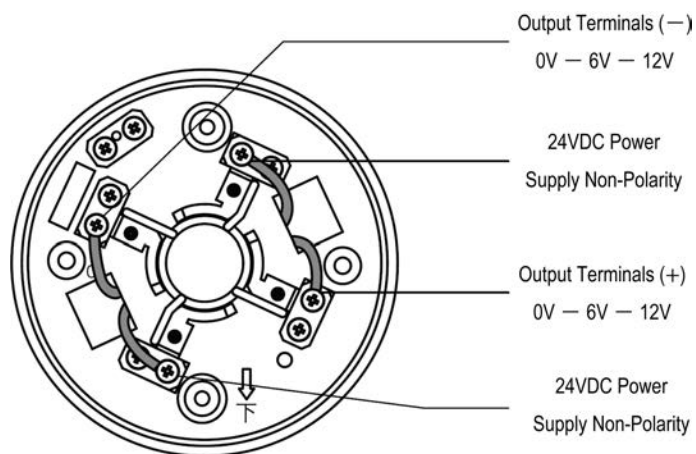


1. Name plate / Replacement period indication
2. Buzzer
3. Power supply LED (Green)
4. Inspection / Stop SW
5. Alarm LED (Red)
6. Gas inlet hole
7. Test input terminal
8. 24VDC power input terminals
9. 3-level voltage output terminals

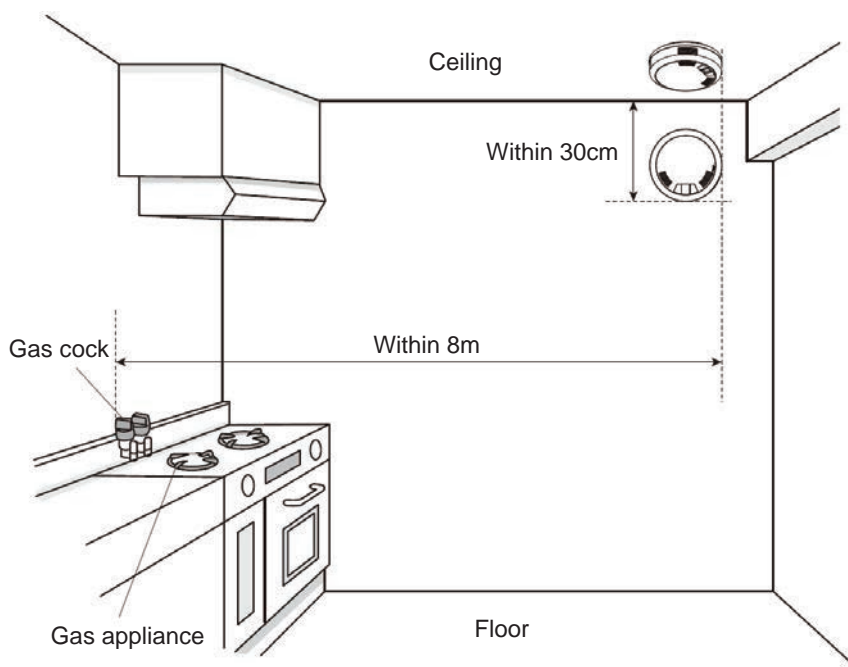
## ■ Output Voltage

Alarm Condition	Output Voltage (Range) [VDC]
Alarm	12 V (12V - 15V)
Normal	6 V (5V - 6V)
Trouble	0V

\* Load resistance: 1.2 k ohms to 50 k ohms



## ■ Detector Location

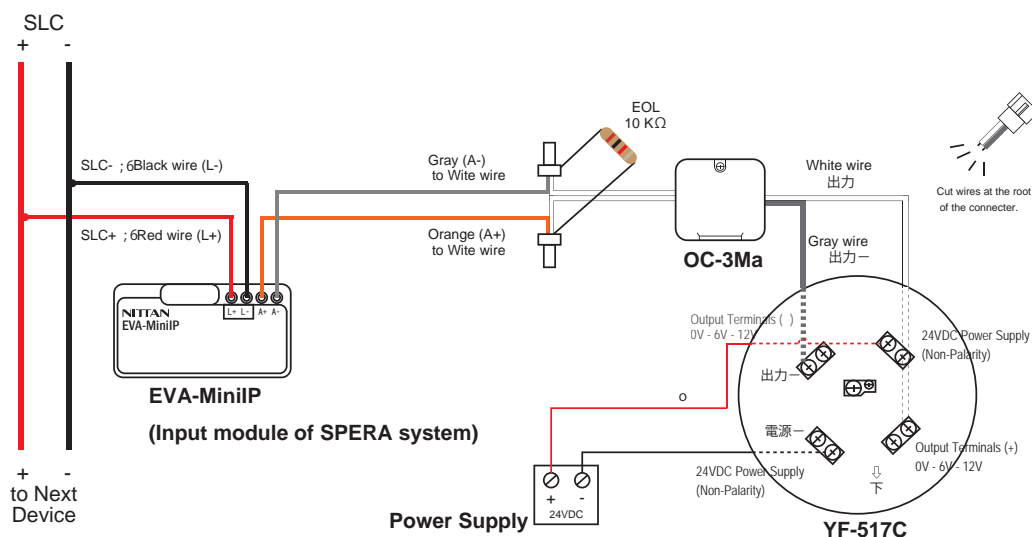


The YF-517C is used to detect town gases that are lighter than air. Therefore, please locate the detector near ceiling level on the wall.

The detector location is where;

- In the same room of the gas appliances.
- Within both a height of 30 cm from the ceiling and a distance of 8 m from gas appliances.
- Where easy to check the alarm indicators.
- Where easy to maintain the detectors.

## Typical Wiring



## Ordering Information

Model	Description
YF-417C	Gas Detector Head for gases, which are heavier than air
YF-517C	Gas Detector Head for gases, which are lighter than air
SH5910	Mounting Base(Panasonic)
OC-3Ma	Signal Converter

## Specifications

Specifications	YF-517C
Approval	GN3VBAC (Approved by Japan Gas Appliances Inspection Association)
Detection Principle	Catalytic Combustion
Target Gas	Town Gas (the gas lighter than the air)
Alarm Concentration	1/100 to 1/4 of Lower Explosive Limit (LEL)
Alarm Notification	Green LED : Power Red LED : Alarm Buzzer : Alarm (automatically restorable) 70 dB/m
Startup Time	40 sec. (Red LED On)
Rated Voltage	24 VDC
Operating Voltage	17 to 40 VDC
Power Consumption	Normal: Approx. 1.5 W      Alarm: Approx. 1.7 W
Output Voltage (Range)	Normal : 6 V Alarm : 12 V Trouble : 0 V
Operating Temperature	-10°C to +50°C (No condensing)
Relative Humidity	85% RH and less
Body Material	Flame retardant resin
Weight	150 g (without Base)
Mounting Base	SH5910(Panasonic, optional)
Accessory	Test gas x 1 pc

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All specifications are subject to change without any notice.  
For more information, contact with NITTAN.

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