

# PORTABLE GAS ANALYZER

DATA SHEET

ZFY

This unit is a simple and stable analyzer using a single-beam infrared-ray system. It is designed for measuring carbon dioxide gas (CO<sub>2</sub>), carbon monoxide (CO) or methane (CH<sub>4</sub>), and is used to measure atmospheric gases in agricultural vinyl greenhouse, carbon dioxide gas in rooms or carbon dioxide gas, carbon monoxide, ethane, etc., in thermal processing furnaces.



## FEATURES

1. Single-beam NDIR system is used for simple structure, providing excellent stability without interference of other gases.
2. The adoption of a unique mass-flow type sensor assures high sensitivity and long service life.
3. One-touch zero/span calibration, self-diagnosis function and 2-range select function assure easy operation and maintenance.
4. Sampling devices such as pump, filter, flow checker, etc., are built-in to allow the user to make measurements simply by connecting a sampling tube.
5. Compact design offers easy carrying and handling.

## SPECIFICATIONS

- 1) Application : Facilities gardening, measurement of gases in rooms, combustible exhaust gas, gases in thermal processing furnaces or ceramic industry furnaces, and various tests
- 2) Measurement principle :  
NDIR (Non-dispersive Infrared-absorption method; single-beam system)
- 3) Measuring components and measurement range :
 

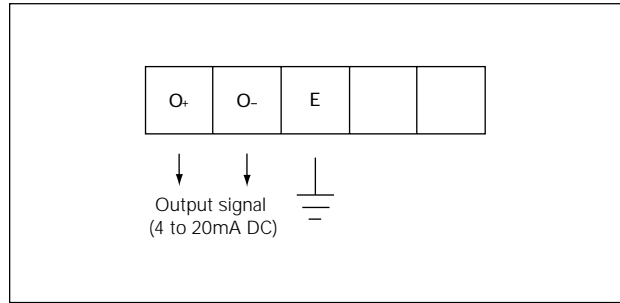
Measurement range	Measuring components		
	CO <sub>2</sub>	CO	CH <sub>4</sub>
0 to 0.2/0.5%	○	×	×
0 to 0.5/1.0%	○	○	×
0 to 1.0/2.0%	○	○	○
0 to 2.0/5.0%	○	○	○
0 to 5.0/10.0%	○	○	○
0 to 10.0/20.0%	○	○	×
0 to 20.0/50.0%	○	○	×
0 to 50.0/100.0%	○	×	×
- 4) Repeatability : ±0.5%FS
- 5) Drift : ±2%FS /day for zero and span
- 6) Linearity : ±2%FS
- 7) Response : 90%, less than 15sec

- 8) Sample flow : About 1R/min (pump, filter and flowmeter, built-in)
- 9) Analog output :  
4 to 20mA DC (allowable load; less than 550Ω)
- 10) Indicator : 4th code digital display
- 11) Calibration : One-touch calibration using canned gas or compressed standard gas (φ6 tube connection attachment supplied)
- 12) Warming time :  
About 30min
- 13) Gas connecting parts material :  
SUS, polyethylene, polypropylene, CaF<sub>2</sub>, tolon, chloroprene
- 14) Power source :  
100V or 115V AC ±10%, 50/60Hz, about 40VA (power cord supplied)
- 15) Self-diagnosis function :  
Calibration range over, analyzer error, etc.
- 16) Sample gas condition :  
Dust; 0 to 10mg/Nm<sup>3</sup>(filter should be used at the front for continuous measurement)  
Temperature; Less than 50°C at analyzer inlet  
Pressure; -2.94 to +2.94kPa {-300 to +300mmH<sub>2</sub>O}
- 17) Installation condition :  
Temperature; 0°C to 40°C  
Humidity; 90%RH or less  
Installation place; indoor (Do not install in a place near combustible exhaust gas. Be sure to install on a flat stand.)
- 18) Case :  
Plastic, portable type (with ventilating holes)
- 19) Dimensions : (H)170 × (W)260 × (D)375mm
- 20) Mass :  
Approx. 5kg

### Code symbols

1	2	3	4	5	6	7	8	9	code	Description
Z	F	Y						1		Measuring components (4th code)
			B							CO
			D							CO <sub>2</sub>
			E							CH <sub>4</sub>
										Measurement range (5th code)
				G						0~0.2 / 0.5%(Not available for CO and CH <sub>4</sub> )
				H						0~0.5 / 1.0%(Not available for CH <sub>4</sub> )
				J						0~1.0 / 2.0%
				K						0~2.0 / 5.0%
				L						0~5.0 / 10.0%
				M						0~10.0 / 20.0%(Not available for CH <sub>4</sub> )
				N						0~20.0 / 50.0%(Not available for CH <sub>4</sub> )
				P						0~50.0 / 100.0%(Not available for CO and CH <sub>4</sub> )
								1		Output signal (6th code)
										4-20mA DC
								1		Power source (7th code)
										100V AC 50/60Hz
								2		115V AC 50/60Hz
										Application (9th code)
								A		General use (combustible exhaust gas, greenhouse, atmospheric gas)
								B		For heat processing furnace gas, (about 30% H <sub>2</sub> contained)
								C		For heat processing furnace gas, (about 65% H <sub>2</sub> contained)
								D		For ceramic industry

### Connection diagram



### Scope of delivery

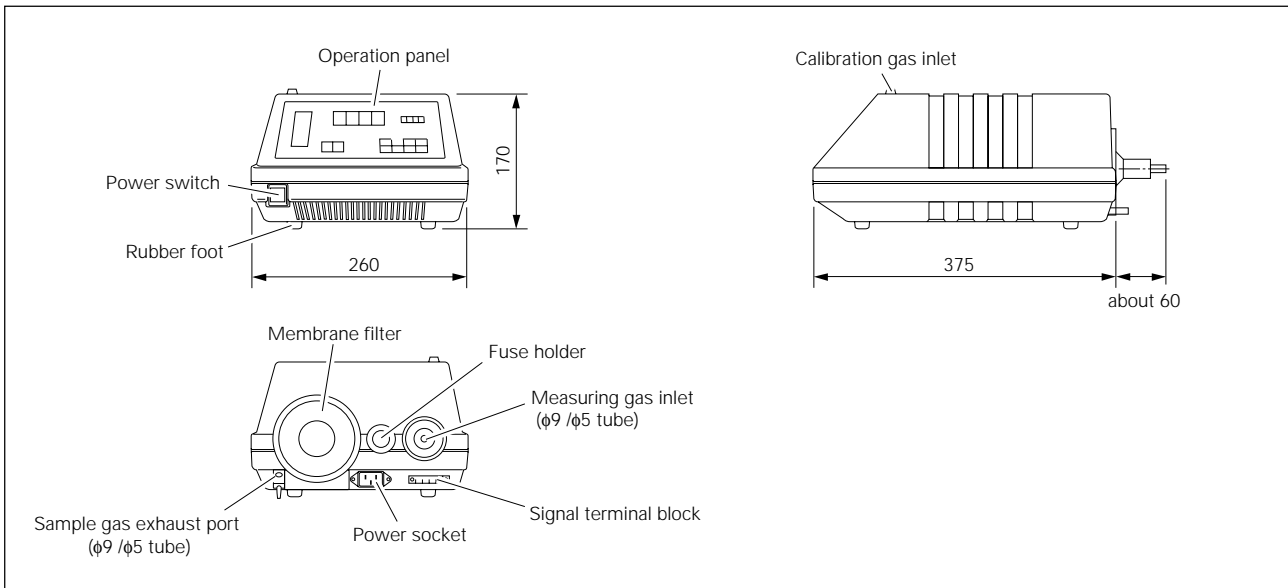
Main body	1
Power cord	1
Power fuse (tube type 1A, φ6.4 × 30)	1
Filter paper	25
Calibration gas pipe joint	1
Main body vinyl cover	1
φ9/φ5 Toalon tube, 5cm (for connection of φ6 tube)	1
Hose band (for φ10)	2

### Optional items

Zero/span calibration standard gas

(Type: ZBM 1 ℓ canned gas available in the unit of 12 cans)

### Outline (Unit: mm):



⚠ Caution on Safety

\*Before using this product, be sure to read its instruction manual in advance.

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