

Direct insertion type

Zirconia Oxygen Gas Analyzers

Detector type: ZFK8 / Transmitter type: ZKM

Zirconia oxygen gas analyzer, ideal for combustion control



ZKM2



ZKM1



ZFK8

- Modular detector design allows easy field replacement of zirconia element
- Enhanced safety design with integrated and remote power isolation functions
- High-speed response of 4 to 7 seconds
- Case structure available in two types: IP66 and IP67
- May be programmed without opening the case cover (ZKM1)
- Direct insertion system eliminates the need for gas sampling devices

Energy Saving and Environmentally Friendly

Fuji's zirconia oxygen gas analyzers are widely used; not only in industries of high energy consumption, such as steel, power, petroleum/petrochemicals, ceramics, paper/pulp, food, and textile industries, but also in various combustion facilities, such as garbage incinerators and medium-to-small sized boilers, as combustion controllers, achieving a significant energy-saving effect. The oxygen concentration control ensures complete combustion, thus reducing CO₂, SO_x, and NO_x emissions and helping prevent global warming and air pollution.

The transmitter is available in two case structures: IP66 and IP67.



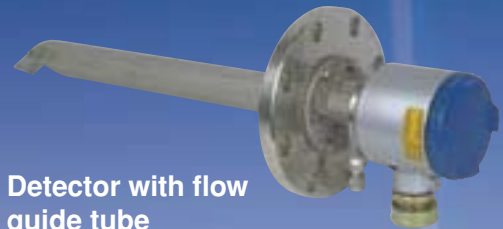
Transmitter <IP67>
(Type: ZKM2)



Transmitter <IP66>
(Type: ZKM1)



Zirconia oxygen detector
(Type: ZFK8)



Detector with flow
guide tube

Easily replaceable zirconia element



Settings may be made from the front panel without opening the cover



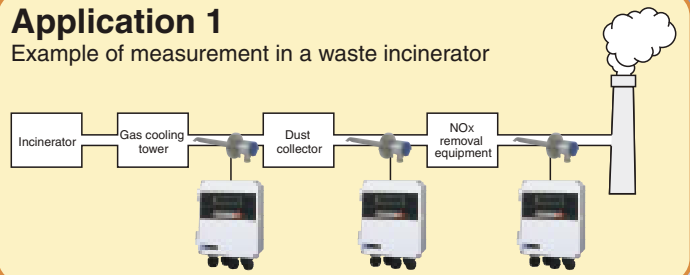
Make the settings from the front panel.

High safety level

- (1) Detecting a break of the thermocouple for heater control in the sensor unit, the analyzer stops the power supply to the detector.
- (2) The power supply to the detector may also be stopped by external contact input in an emergency.
- (3) The key lock function prevents operational errors.

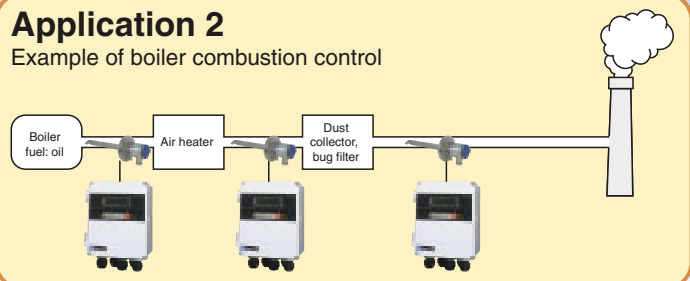
Application 1

Example of measurement in a waste incinerator

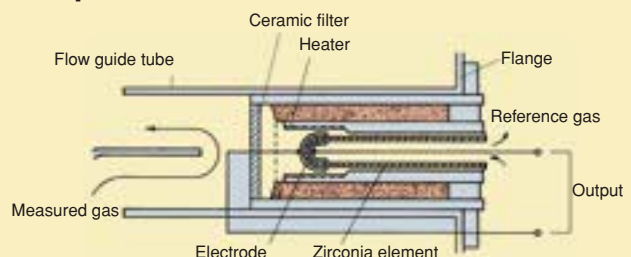


Application 2

Example of boiler combustion control



Principle of the detector

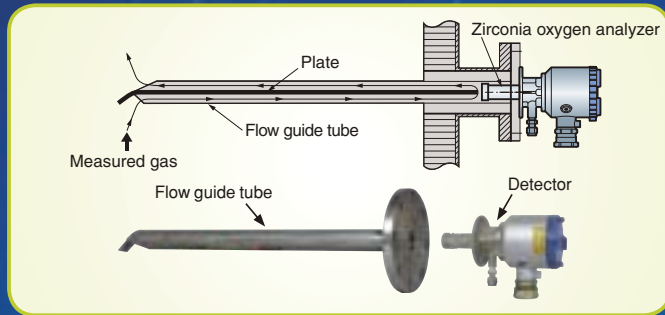


No need for gas sampling devices and a rapid response

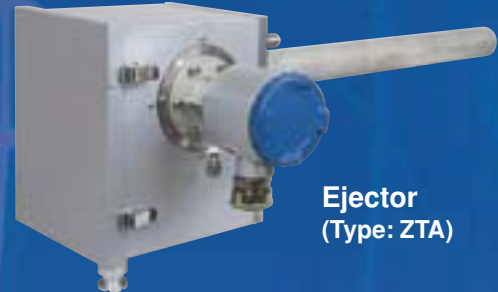
Response speed: 4 to 7 sec.

The flow guide tube design ensures a rapid response of 4 to 7 sec.

An ejector is available for high-temperature measurement (up to 1,500°C).

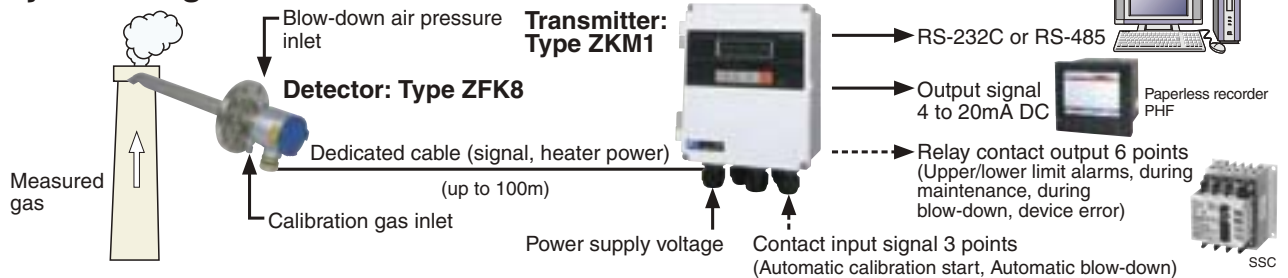


Various flow guide tubes, including one with a blow-down nozzle for high particulate levels, and models made of anti-corrosive materials, are available.



Ejector
(Type: ZTA)

System diagram



Code symbols

<Detector>

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16																
Z F K 8 R - 5 - - - - - 1 - - - - -																
Description																
1																Cal. gas inlet Connection for ϕ 6 mm tube (SUS) Connection for ϕ 1/4 inch tube (SUS)
2																
	1															Power supply AC 100 to 120V 50/60Hz AC 200 to 240V 50/60Hz(CE marking)
	3															
		0 Y 0														Flow guide tube (Flange) (Model) (Length)
		5 A 3														Flow guide tube None None
		5 A 5														SUS304 For general use 300mm
		5 A 7														SUS304 For general use 500mm
		5 A 1														SUS304 For general use 750mm
		5 B 3														SUS304 For general use 1000mm
		5 B 5														SUS316 For corrosive gas 300mm
		5 B 7														SUS316 For corrosive gas 500mm
		5 B 1														SUS316 For corrosive gas 750mm
		5 C 3														SUS316 For corrosive gas 1000mm
		5 C 5														SUS316 With blow-down nozzle 300mm
		5 C 7														SUS316 With blow-down nozzle 500mm
		5 C 1														SUS316 With blow-down nozzle 750mm
		6 D 8														SUS316 With blow-down nozzle 1000mm
		6 E 8														SUS316 For high particulate concentrations 800mm
		Z Z Z														SUS316 With cover for high particulate concentrations 800mm
																Others Others Others
																Thermal insulation cover
																None With
																Reference air inlet
																None Connection for ϕ 6 mm tube (SUS)
																Connection for ϕ 1/4 inch tube (SUS)
																Filter specifications
																Standard
																Language
																Japanese English Chinese
																Specification name plate
																Standard (100 to 120 V AC, 50/60 Hz)
																Standard (200 to 240 V AC, 50/60 Hz)

<Transmitter>

1 2 3 4 5 6 7 8 9 10 11 12												
Z K M - - - - - 1 - - - - - 1												
Description												
1												Case structure Small size (IP66) Large size (IP67)
2												Output signal 4 to 20mA DC 0 to 1V DC Others
	B											Communication functions RS-232C RS-485
	E											Mounting fixture Panel mount Pipe mount
	Z											Optional functions
		1										None
		2										Combustion efficiency display function Note 1
		3										Blow-down
		4										Auto calibration
		5										Combustion efficiency display + blow-down Note 1)
		6										Combustion efficiency display + Auto calibration Note 4)
		7										Blow-down + Auto calibration Combustion efficiency display + blow-down + Auto calibration Note 4)
			Y									Language
			1									Japanese
			2									English
			3									Chinese
				Y								Cock-option
				1								None (specify "none" for auto calibration)
					1							With

Note 1: A thermocouple K or R is required for temperature measurement to enable the combustion efficiency display function.
Note 4: When you select this display, rich mode will be a simultaneous display.

<Ejector>

1 2 3 4 5 6 7 8							
Z T A - - - - - 1 - - - - - 1							
Description							
1							Measured gas temperature For high temperatures (max. 1500°C) For general use (max. 800°C)
2							Insertion length [mm]
	B						500
	C						750
	D						1000
	E						1500
		1					Power supply
		3					AC 100/115V 50/60Hz
		5					AC 200/220V 50/60Hz
							AC 230V 50/60Hz

<Replacement zirconia sensor>

AC100 to 120V: ZFK8YY15-0Y0YY-0YY
AC200 to 240V: ZFK8YY35-0Y0YY-0YY



