Automotive Emission Analyzer

[Carbon Monoxide, Hydrocarbon, Carbon Dioxide and Oxygen]

**AUTOMOTIVE
EMISSION ANALYZER**

MODEL **ZKE**

**Exhaust Gas Tester Helps
Protect the Global Environment**

CO   HC CO_2 O_2

Carbon monoxide, hydrocarbon, carbon dioxide, and oxygen*
contained in the exhaust gas of vehicles can be measured.

(* Only ZKE-O can measure O_2)

1999-09-16 16:18
CO   1.25 vol%
HC   105 vol.ppm
CO_2 5.76 vol%

ANZEN

The Latest Digital Technology Is Incorporated into

This Exhaust Gas Analyzer/Tester Can Also Measure CO2 wh
Global Warming, in Addition to CO and HC, to Help Protect t
Environment.

Large LCD Monitor with Backlight

The easy-to-read digital LCD with large characters can display the measured and computed values all at once and allow you to check the information at a glance.
And the backlight automatically turns off, resulting in a long life.

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Display:
1999-09-16 15:49
CO   1.28 vol%
HC   110 volppm
CO2   5.96 vol%

■ Easy operation and accurate measurement.

Turn on the power switch → Warming up is displayed / Warming up for 5 minutes → Press the (MEAS) key (Automatic zero calibration 15 seconds) → Insert the probe (Display turns on) → Insert the probe into the muffler → Measuring is displayed → Measurement results → OK: Press the (MEAS) key → Automatic purge 15 seconds → Measurement ends / NG: Readjust the engine

Equipped with a High-precision Solid Infrared Sensor and Galvanic O2 Sensor.
A small and reliable, high-precision solid infrared sensor and galvanic O2 sensor that are vibration and shock resistant and superior in stability make it possible to carry out work comfortably.

AFR [Air-to-fuel Ratio] and LAMBDA [Air Excessive Ratio*] Are Displayed.
AFR (air-to-fuel weight ratio) and LAMBDA (value obtained by dividing the actual AFR by a theoretical AFR of 14.8) can be displayed, so it is possible to easily view and determine whether the engine can be run stably.
* If the LAMBDA value is greater than 1, the AFR is lean, and if smaller than 1, the AFR is rich.

Automatic Zero Calibration Function Is Available.
The automatic zero calibration function allows you to easily perform a zero calibration by one-touch operation. There is no worry about a drift even for long hours of continuous operation, and stable and accurate measurement is always possible.

Errors Are Displayed on the Monitor Screen.
Errors such as sampling clogging or probe insertion failure are displayed on the monitor screen.

Data Can Be Output by Connecting a Printer.
Data can be output to an external special printer using the special output port for an external printer (RS-232C) to ensure error-free management. (option)

### Warm-up Time Is Approximately 5 Minutes.
Warm-up time has been reduced to approximately 5 minutes. (Compared to our previous model)
Warming up and a timer are displayed on the monitor to make work easier.

ZKE-O is also available, which can measure the amount of residual oxygen (O2) contained in the exhaust gas. (Please specify ZKE-O at the time of ordering.)

TOMOTIVE

ISSION ANALYZER

Membrane filter

Calibration gas inlet port

Monitor screen

Brightness adjustment key (light)

Brightness adjustment key (dark)

Drain separator

Measurement/ standby key

MODE key

Increment key

ESC (Escape) key

Digit selection key

SET key
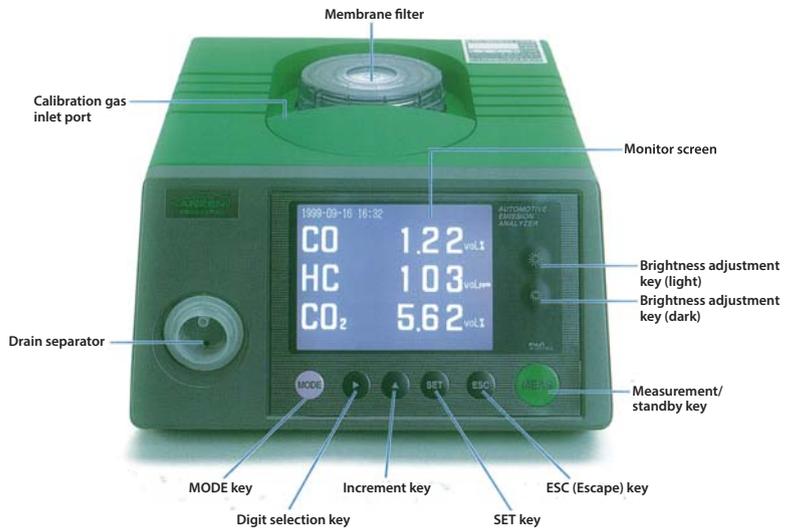
LCD Monitor Display

Press the MODE key to switch between the following modes: Measurement Screen 1 (CO, HC, CO_2), Measurement Screen 2 (O_2, AFR, LAMBDA), Measurement Screen 3 (Screens 1 and 2), and Menu Screen, along with the date and time display. In addition, the following messages are displayed: "Insert probe," "Warming up," "Measuring," "Next calibration," surge/drop, and (F) indicating a drop in the gas amount resulting from filter clogging.

Standard Screen (Measurement Screen 1)
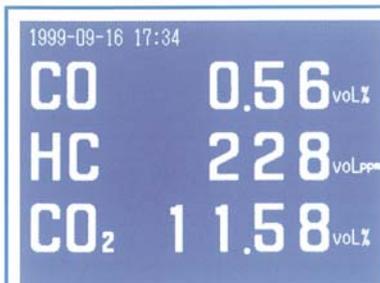
Displays CO (carbon monoxide) ⋯ %, HC (hydrocarbon) ⋯ ppm
CO_2 (carbon dioxide) ⋯ %
Also displays the date (year/month/day) and time (hour/minute) of measurement.

AFR Screen (Measurement Screen 2)

Displays the computed values for O_2 (oxygen) ⋯ % [for ZKE-O only], AFR (air-to-fuel ratio), and LAMBDA (air excessive ratio).
Also displays the date (year/month/day) and time (hour/minute) of measurement.

Data List Screen (Measurement Screen 3)/Menu Screen

Option

Emission Analyzer Carrier

Special Printer

Standard Gas (Standard Accessory)

P-11 (Mixture of 4 Types of Gases)

■ Specifications

Model	ZKE	ZKE-O
Certification number	JATA-CO/HC-5	
Measurement object	Carbon monoxide, hydrocarbon, carbon dioxide (and oxygen) contained in the exhaust gas of vehicles Sample gas is directly introduced from the tailpipe	
Measurement method	Non-dispersive infrared (NDIR) method, (oxygen analyzer: galvanic cell method)	
Display (digital) — CO	0 to 10.00 vol% (minimum display resolution 0.01 vol%)	
Display (digital) — HC	0 to 10000 vol.ppm (Minimum display resolution ≤ 2000 vol.ppm/1 vol.ppm > 2000 vol.ppm/10 vol.ppm)	
Display (digital) — CO_2	0 to 20.00 vol% (minimum display resolution 0.02 vol%)	
Display (digital) — O_2	-	0 to 25.00 vol% (minimum display resolution 0.02 vol%)
Display (digital) — AFR	Air-fuel ratio: Displays the computed value	
Display (digital) — LAMBDA	Air excessive ratio: Displays the computed value	
Response time	95% response time within 15 seconds	
Warm-up time	Approx. 5 minutes	
Drain treatment	Automatic separation and drainage method	
Operating conditions	Ambient temperature: 0 to 40 ℃	
	Ambient humidity: 90% RH or less	
External output	RS-232C	
Power supply	100 to 240 V AC, 50/60 Hz, approx. 32 VA	
Weight	Approx. 5 kg	
Analyzer dimensions	270 (W)×365 (D)×156 (H) mm Probe: 640 mm Sampling tube: 4,000 mm	
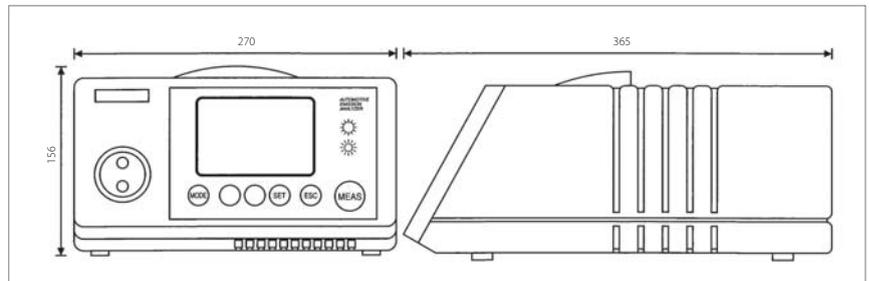
Manufacturer   Fuji Electric Instruments Co., Ltd.

■ Before using this product, carefully read the precautions indicated by ⚠**DANGER**, ⚠**WARNING**, and ⚠**CAUTION** in the manual supplied with this product to ensure correct use.