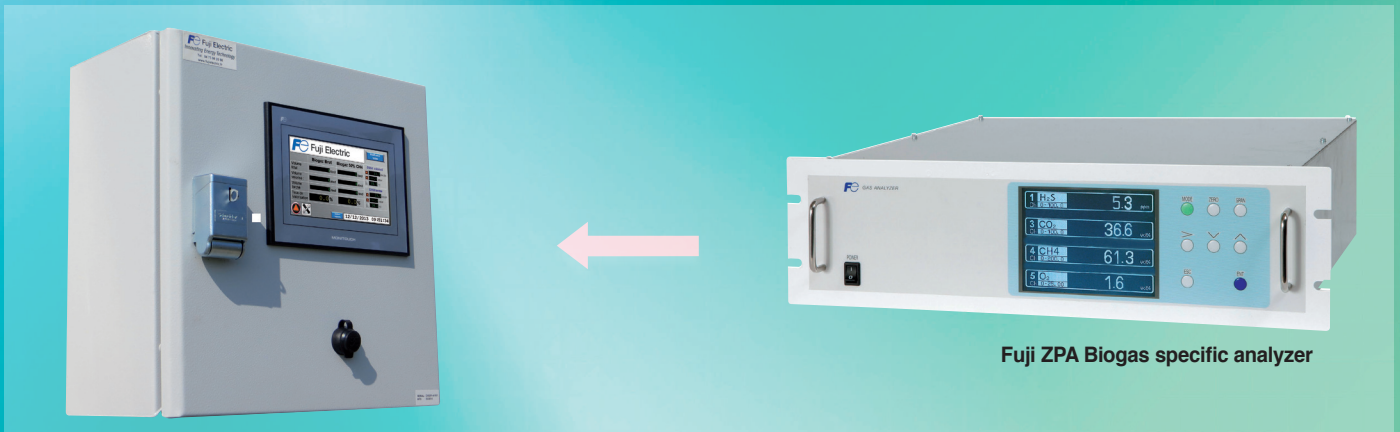


# Biogas Analysis System ZPSB

CH<sub>4</sub> / CO<sub>2</sub> / O<sub>2</sub> / H<sub>2</sub>S



Fuji ZPA Biogas specific analyzer

**GLOBAL FUJI  
SOLUTION**

### Part of the global FUJI Biogas solution

The Biogas ZSPB analyzer system is a part of the FUJI Biogas global solution including

- Instrumentation, measurements, software, control
- Service : installation, commissioning, training, maintenance contracts

**COMPACT**

### Simultaneous & Continuous measurement of CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub> et H<sub>2</sub>S

Wall-mounted or standalone analyzer cabinet depending on selected options  
Easy and fast installation and commissioning

**LOW MAINTENANCE**

### Low operation cost & high reliability

Fuji Electric CH<sub>4</sub> et CO<sub>2</sub> NDIR optical benches famous for reliable and accurate industrial measurements  
Specific protection of optical components to resist to H<sub>2</sub>S and other aggressive components  
Fuji Electric Sample Switching Technology for long life time of the H<sub>2</sub>S cell, **without dilution**  
Automatic calibration (option).

**PRECISE**

### Famous high performances of Fuji analyzers

ZPA Biogas analyzer using latest Fuji Electric NDIR technology from new ZP Series  
Cross-interferences minimized.

**FLEXIBILITY**

### Flexible and adaptable customized solutions site by site

Polyester standard cabinet for outdoor installation  
Industrial & biogas specific sampling system (high humidity, dust and corrosion) designed for each application  
Measurement ranges freely configurable by the operator  
Multipoint sampling system with Fuji Electric touchscreen POD interface (option)  
ATEX sample heated line (option).

## Application examples

- Landfill site, Ultimate waste storage site
- Upstream & downstream gas treatment biogas
- Digesters and fermenters
- Sewage treatment plants and laboratories



## ■ Specifications

ZPSB Biogas Analyzer System is based on the last Fuji ZP Series analyzer generation

### General specifications

<b>Measured components</b>	1 to 4 measured components : CH <sub>4</sub> / CO <sub>2</sub> / O <sub>2</sub> / H <sub>2</sub> S		
<b>Technology</b>	CH <sub>4</sub> & CO <sub>2</sub> : NDIR O <sub>2</sub> : Galvanic cell sensor H <sub>2</sub> S : Constant potential electrolytic sensor		
<b>Measurement Ranges</b>	CH <sub>4</sub> & CO <sub>2</sub> O <sub>2</sub> H <sub>2</sub> S H <sub>2</sub> S	0 – 20 %vol 0 – 10 %vol 0 – 500 ppm 0 – 500 ppm	0 – 100 %vol 0 – 25 %vol 0 – 2000 ppm 0 – 5000 ppm
<b>Power supply</b>	100 to 240 V AC 50/60 Hz		
<b>Display</b>	Backlit LCD display (Standard) FUJI touch panel interface (Multipoint Sampling Option)		
<b>Displayed information</b>	Standard : measured components, concentrations, alarms, configuration menus, calibrations and advanced diagnostics Option : advanced functions with multipoint sampling (see multipoint system option)		
<b>Dimensions</b>	Standard Single Point Wall mounted cabinet : 750 x 750 x 500 (mm) (width x height x depth)		
<b>Weight</b>	Standard Single Point Wall mounted cabinet : 50 kg		
<b>Structure</b>	Standard Single Point Wall mounted cabinet : consolidated polyester cabinet for outdoor use		

### Performances

<b>Response time</b>	CH <sub>4</sub> , CO <sub>2</sub> & O <sub>2</sub> : 30 sec H <sub>2</sub> S (0 – 2000 ppm) : 180 sec H <sub>2</sub> S (0 – 5000 ppm) : 300 sec
<b>Repeatability</b>	CH <sub>4</sub> , CO <sub>2</sub> & O <sub>2</sub> : ± 0,5% PE H <sub>2</sub> S : ± 2% PE
<b>Linearity</b>	CH <sub>4</sub> , CO <sub>2</sub> & O <sub>2</sub> : ± 1% PE H <sub>2</sub> S : ± 2% PE

### Inputs/outputs

<b>Analog Outputs</b>	4 – 20 mA (one analog output per component)
<b>Bus Outputs</b>	Standard : Concentration measurements and status signals (alarms, calibrations) RS485 Modbus RTU Option : Ethernet Modbus IP (multipoint sampling)
<b>Digital Outputs</b>	Standard : Dry contact general alarm including analyzer fault and sampling system fault General Alarm light indicator on cabinet front door

### Environment conditions

<b>Ambiant temperature</b>	-5°C to +40°C
<b>Ambiant humidity</b>	90% RH max

### Biogas sample conditioning

<b>Sampling</b>	PTFE or Stainless Steel tube - 4 to 6 mm internal diameter - Option : ATEX heated line
<b>Biogas Pressure</b>	Sampling pump for ambient pressure or low pressure biogas (< 300 mbar g) High pressure biogas : system with pressure reducer
<b>Single point system</b>	Continuous measurement of a single stream : sampling, dryer, filtration, bypass, flow adjustment, H <sub>2</sub> S absorption (option)
<b>Multipoint system (Optional)</b>	Additional advanced features : <ul style="list-style-type: none"><li>• FUJI Touchscreen interface and PLC</li><li>• Configuration of the number of components measured (max. 4)</li><li>• Configuration of the number of biogas streams analyzed (max. 6)</li><li>• Configuration of stream switching sequence, measurement times, purge times</li><li>• Automatic or manual switching setting</li><li>• Display of the 4 (max) measured components concentrations of the 6 (max) analyzed streams</li><li>• Display of sampling and analyzer alarms</li><li>• Modbus output of the measurement, status and alarms</li><li>• Analog outputs and digital outputs (option)</li></ul>



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