

# ZR802S, ZR22S

Explosion proof Zirconia Oxygen Analyzer

## Expand the Explosion-Proof product line-up



ZR802S Converter

ZR22S Detector

**Contributes to OPEX reduction in safe operation and maintenance work**

- **High-reliability zirconia sensor**  
Long-life sensor using Yokogawa's original technology
- **Intuitive Operation**  
Interactive HMI for easy operation
- **Maintaining the high operating rate**  
Sensor self-diagnosis function to maintain high operating rate
- **Various communication**  
Analog output (HART7)  
Digital communication (Modbus TCP/RTU)

### Excellent operability converter

Operation without open the cover using an infrared switch



### Reliable detector

Zirconia Sensor of Long Life and Stable Operation

#### Yokogawa's original sensor structure

##### Long-life

High durability due to original method  
Special coating protects from deteriorating



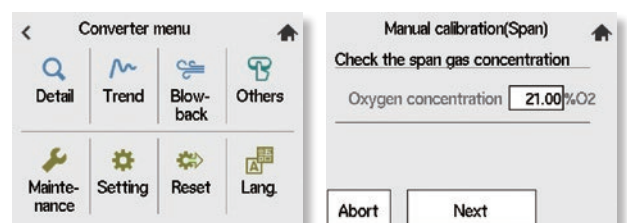
##### Easy replacement

One-touch replacement be able to without for wire connection

##### Durable to dust

Special coating protects from dust  
No need for dust filter

### Touch panel operation when the cover is open



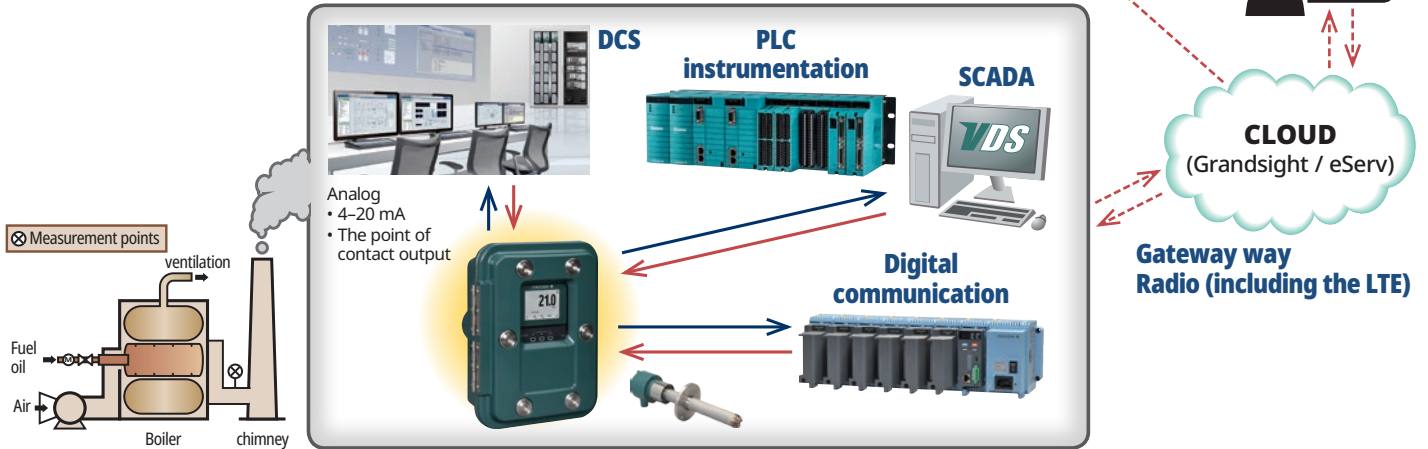
# Creating new value with industrial IOT (IIOT)

Manage even a large-scale plant, the subdivided plant with the minimum staff



- Daily life management
- Self-diagnosis information
- Detailed information at the time of the abnormality

Remoteness Support



## Specification

<b>Measurement Object</b>	Oxygen concentration in combustion exhaust gas and mixed gases (excluding inflammable gases)
<b>Measurement System</b>	Zirconia System (Detector ZR22S, Converter ZR802S)
<b>Oxygen Concentration</b>	0.01 to 21 vol% O <sub>2</sub>
<b>Measurement Range</b>	O <sub>2</sub> : 0.01–100 vol% (In the case of explosion-proof use, oxygen concentration shall not exceed 21 vol% O <sub>2</sub> )
<b>Sample gas temperature</b>	0 to 700°C 700 to 1400°C (with High Temperature Probe Adapter)
<b>Sample gas pressure</b>	-5 to +5 kPa (For 0.15 probe, -0.5 to +5 kPa)
<b>Probe length</b>	0.15, 0.4, 0.7, 1.0, 1.5, 2.0 m
<b>Analog Output</b>	Out put points; Two points (input-output isolation) Out put signal; 4 to 20 mA DC linear or log can be selected
<b>Contact Output</b>	Contact output points; Four points (one is fail-safe, normally open) Contact capacity; 30 VDC 3 A or 250 VAC 3 A (load resistance)
<b>Contact Input</b>	Contact input points; Two points Contact capacity; Off-state leakage current 3 mA or less

<b>Digital Communication</b>	HART7 (AO1, 250 to 550 Ω) Ethernet (Modbus TCP) RS-485 (Modbus RTU)
<b>Ambient Temperature</b>	ZR22S: -20 to +60°C ZR802S: -20 to +55°C
<b>Power Supply Voltage</b>	100 to 240 VAC 50/60 Hz
<b>Hazardous location approvals</b>	ATEX, IECEx, FM, CSA, China Ex, Korea Ex, Taiwan Ex, India Ex

## Characteristics

<b>Repeatability</b>	O <sub>2</sub> : ± 0.5% F.S. (0 to 5 vol% O <sub>2</sub> or more and less than 0 to 25 vol% O <sub>2</sub> range) O <sub>2</sub> : ± 1% F.S. (0 to 25 vol% O <sub>2</sub> or more and up to 0 to 100 vol% O <sub>2</sub> range)
<b>Linearity</b>	O <sub>2</sub> : ± 1% F.S. (0 to 5 vol% O <sub>2</sub> or more and less than 0 to 25 vol% O <sub>2</sub> range) O <sub>2</sub> : ± 3% F.S. (0 to 25 vol% O <sub>2</sub> or more and less than 0 to 50 vol% O <sub>2</sub> range) O <sub>2</sub> : ± 5% F.S. (0 to 50 vol% O <sub>2</sub> or more and up to 0 to 100 vol% O <sub>2</sub> range)
<b>Drift</b>	O <sub>2</sub> : Both zero and span ± 2% F.S. /month
<b>Response Time</b>	Response of 90% within 5 seconds.

(Refer to the general specification (GS 11M13G01-01EN) for details)

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