

# Fixed Gas Detector SI-100

Fixed gas detectors are installed at places where potential gas hazard exists to measure gases such as oxygen, toxic gas and combustible gas. The instrument is capable of detecting the concentration of pertinent gas for which the fixed gas detector has been installed – it provides alert to central office via alarm and visual display when the gas concentration exceeds predefined value. Communication to the controller is based on standard 4-20mA analog output communication.

The fixed gas detector also shows the concentration of gas and diagnostic result of the unit through its LCD display based on built in calibration mode. **SI-100 gas detector is Air, dust and explosion proof.** It is certified with TRTS certification from Russia.

The fixed gas detector is available in options of O<sub>2</sub>, CO, H<sub>2</sub>S, SO<sub>2</sub>, NH<sub>3</sub>, H<sub>2</sub> and Combustible gas has to be selected accordingly for gas which is to be monitored in production, commercial or any other specific ambient environment.

## Features :

- Easy magnetic bar operations
- Large LCD Display with backlight (blue)
- Explosion proof structure
- water/dust proof

**Applications include** installation in Petrochemical Plants/Refineries, Steel Plants, Shipbuilding yard, Waste Water treatment plants, Sewage treatment plant, Chemical plants etc.

## SI 100C Fixed Gas Detector (Option)

In case of requirement for an economy model, SI100C is available with all parameters remaining same except LCD display is not provided.



## Double Alarm Features



**Audio    LED**



## Alarm Modes (SI100) :

	External Alarm	LED	LCD	Analog Output
Exceed Low alarm limit	Low alarm	Low	Reading	Based on reading
Exceed High alarm limit	High alarm	High	Reading	Based on reading
Sensor Fail	Low alarm	Fault	"FAIL SEn" message	2mA
Calibration Fail	Low alarm	Fault	"FAIL SEn" message	2mA
Over Range	Low alarm	Fault	"Over" message	2mA

## Specifications :

<b>Part No.</b>	SI1000910	SI1000110	SI1000210, SI1000510, SI1000310, SI1000710	SI1000410
<b>Measuring gas</b>	Combustible	O <sub>2</sub>	CO, H <sub>2</sub> S, SO <sub>2</sub> , NH <sub>3</sub>	H <sub>2</sub>
<b>Measuring type</b>	Diffusion Type			
<b>Measuring method</b>	Catalytic	IR	Galvanic	Electrochemical cell
<b>Measuring range</b>	0~100%LEL	0~100%LEL	0~30%VOL	CO : 0~500ppm, H <sub>2</sub> S : 0~100ppm, SO <sub>2</sub> : 0~20ppm, NH <sub>3</sub> : 0~100ppm
<b>Sensor life time</b>	> 5 years	> 2 years	< 2 Years	> 2 years
<b>Response time</b>	< 15sec / 90%scale	<30sec/90% scale (IR)	< 15sec/90% scale	< 30sec/90% scale
<b>Accuracy</b>	±3%/Full scale			
<b>Resolution</b>	1%LEL	0.1%VOL	1PPM	1PPM
<b>Parameter Control</b>	<b>SI100:</b> Front 3 magnetic switch(calibration, maintenance, alarm setting) <b>SI100C:</b> One switch interface (calibration), console set available (option)			
<b>Operation mode display</b>	<b>SI100:</b> Digital LCD display with blue backlight, 4 Indicator LED <b>SI100C:</b> 2-LED (operating & zero cal., span cal.)			
<b>Alarm display</b>	<b>Only in SI100:</b> Visual : LCD alarm display with backlight, Indicator LED			
<b>Alarm output signal</b>	<b>Only in SI100:</b> Relay contact(Max 30Vdc, 5A) when Alarm occurred			
<b>Alarm level set</b>	<b>Only in SI100:</b> Programmable within detection range			
<b>Output signal</b>	Analog : 4-20mA			
<b>Cable/Distance</b>	Power + Signal cable : 3-wire CVVSB 1.5sq or AWG20/2,500m max,			
<b>Conduit connection</b>	NPT 3/4" (2way)			
<b>Mounting type</b>	Wall mount			
<b>Program set mode</b>	<b>Only in SI100</b> { " Alarm value(1,2,3 alarm) Alarm time(instant & delay)1~30min Alarm dead band Relay output on/off			
<b>Operating temperature</b>	-20°C ~ +55°C			
<b>Operating humidity</b>	5% to 95% RH(Non-condensing)			
<b>Operating power</b>	<b>SI100:</b> 10~34VDC 500mA, <b>SI100C :</b> 9~34VDC			
<b>Material</b>	Aluminium, Stainless steel(STS304)			
<b>Size</b>	<b>SI100:</b> WHD 135 × 164 × 110 mm <b>SI100C:</b> WHD 102 × 137 × 87 mm			
<b>Weight</b>	<b>SI100:</b> 1.9kg, <b>SI100C:</b> 1.0kg			
<b>Approval</b>	Ex d IIC T5 (IP65)_korea Ex, IECEx, ATEX, CNEx, INMETRO, PESO			
<b>Options</b>	<b>SI100:</b> Battery type, Built-in Light bar, Moveable <b>SI100C:</b> Console			

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