

**AUTO SAMPLING TYPE COMBUSTIBLE GAS DETECTOR ..... TS-4000Ex Series**



- **Continuous measuring of Combustible Gas and Vapours by Continuous sampling**
- **Excellent Measurement Sensitivity and Stability**
- **Long Life Sensor element**
- **Local LCD display**
- **Built-In Subminiature and High-Efficient Micro Pump**
- **3-wires connection**
- **4-20mA Signal output**
- **Calibration by One Person and Easy Maintenance**
- **Highest Safety Certification**



**GENERAL SPECIFICATION**

- TS-4000 Ex series is auto sampling-type combustible gas detector, having a built-in high-efficient micro pump. Likewise, it can detect part per million (PPM), lower explosive limit (LEL) and volume (%), applying semiconductor sensor, catalytic sensor and thermal conductivity sensor.
- It was designed to surveil the gas leak in even hazardous area such as low-temperature, high-temperature, high-humidity, high-ground area, etc., which the barrier place to work in maintenance and repair, continuously sampling gas in those places, using explosion-proof housing.
- It can correctly and rapidly detect the gas through a display that indicate the density of leaked gas in field.
- It is a product that minimizes the influence from the exterior environment (temperature, humidity, pressure, electrical noise, etc.); at the same time, it was manufactured to guarantee long life, high sensitivity, inearity, reproducibility, etc. on a long-term basis.
- It is a 3-wire-type product, no need separate power for operating pump; it makes lower construction expense than 5 or 6 wires. Likewise, it is possible to transmit industry standard output signal (4-20mA. DC) to a control center; at the same time, it realized long-distance transmission of 2,000m.
- It is possible to confirm the detected density at the even local area; at the same time, it provides one-person calibration and maintenance function, using a port on the outside of the detector.

**TOTAL SOLUTION FOR GAS DETECTION SYSTEM**  
 Design, Development, Manufacture, Installation and Servicing for Gas Detection System.

**SYSTEM SPECIFICATION**

<b>Sensor type:</b>	Continuous auto sampling
<b>Function:</b>	Local LCD display type Transmitter type
<b>Service:</b>	Indoor or outdoor locations Including hazardous areas
<b>Measuring range 1:</b>	0-2000ppm Semiconductor cell
<b>Measuring range 2:</b>	0-100% LEL Catalytic cell
<b>Measuring range 3:</b>	0-100% Volume Thermal conductivity cell
<b>Sensor life:</b>	3 to 5 years typical
<b>Accuracy:</b>	± 3% of full scale
<b>Response time:</b>	T90 < 15 sec. With 100% LEL of methan applied
<b>Zero drift:</b>	Less than 3% of full scale per year
<b>Suction flow method</b>	Electrical diaphragm pump
<b>Flow rate</b>	0-2000 ml/min Max.
<b>Electrical Classification:</b>	Explosion-proof, Ex d IIC T5
<b>Warranty:</b>	One year
<b>Approval:</b>	Korea Occupational Safety Association

**ENVIRONMENTAL SPECIFICATION**

<b>Operating Temperature range:</b>	Electronics -40 °C to 70 °C Standard sensor -50 °C to 80 °C High Temp sensor -50 °C to 250 °C
<b>Storage Temperature range:</b>	-40 °C to 70 °C
<b>Operating Humidity range:</b>	5 to 100% RH
<b>Operating pressure range:</b>	ATM. ± 10%

**MECHANICAL SPECIFICATION**

<b>Weight:</b>	7kg 18kg(Including Enclosure)
<b>Material(housing):</b>	Cast aluminum
<b>Material(Enclosure):</b>	Steel(Glass Window)
<b>Mounting Type:</b>	surface mount

**ELECTRICAL SPECIFICATION**

<b>Electrical protection:</b>	EMI/RFI by EN 50082-1
<b>Input power:</b>	24V.DC nominal 18 to 31V.DC/ 230mA max.
<b>Output signal:</b>	4-20mA(600 ohms max. load)
<b>Cable Requirements:</b>	3-wire shield cable. Max distance 2000M
<b>Conduit connection:</b>	1/2" & 3/4" PT & NPT

**DIMENSIONS**

