

G-TRAN Series Pirani Gauge [SW1-1/SW1-2]

This is a wide range Pirani gauge which measures from atmospheric pressure to 5×10^{-2} Pa (3.75×10^{-4} to 760Torr, 5×10^{-4} to 1013mbar). In addition, this gauge removes control and display panels from traditional controllers, keeping the minimum necessary functions only, thus saving cost and space.



SW1-1



SW1-2

Features

- ▶ **Wide-range Measurement**
Measures from atmospheric pressure to 5×10^{-2} Pa (3.75×10^{-4} to 760Torr, 5×10^{-4} to 1013mbar)
- ▶ **Wiring Reduction**
Combined sensor and controller, thus reducing cables, saving space and energy.
- ▶ **Improvement in Visibility**
LED error verification for better visibility
- ▶ **One-touch Adjustment**
Atmospheric adjustment and the zero point adjustment can be done in one-touch
- ▶ **Maintenance**
Sensor head can be replaced easily
- ▶ **Measured value output signal**
Pressure is 0 to 10V Log output
- ▶ **Control Output Signal**
2 set point output (SW1-1)
- ▶ **Serial Communication Type**
RS232C/RS485 communication (only SW1-2)
- ▶ **Certification**
Conforms with CE

Applications

- ▶ Process control in low vacuum processes such as for photovoltaic field, FPD, semiconductor, optics and electronic parts manufacturing systems
- ▶ Process control in low vacuum range processes for industrial equipment such as vacuum furnaces, etc.
- ▶ Process control in low vacuum system, which requires multiple process chambers, such as in-line sputtering and single wafer processing equipment

Model	SW1-1	SW1-2
Connectable sensor	1 pc	
Compatible sensor head	SWP-16 (NW16)	
Measurable pressure range	5.0×10^{-2} to 1.0×10^{-5} Pa (3.75×10^{-4} to 760Torr, 5×10^{-4} to 1013mbar)	
Accuracy*	1×10^{-1} to 1×10^{-4} Pa (7.5×10^{-4} to 75Torr, 1×10^{-3} to 100mbar) : $\pm 10\%$ 5.0×10^{-2} to 1.0×10^{-1} Pa (3.75×10^{-4} to 7.5×10^{-4} Torr, 5×10^{-4} to 1×10^{-3} mbar), 1×10^{-4} to 1×10^{-5} Pa (75 to 760Torr, 100 to 1013mbar) : $\pm 20\%$	
Repeatability	1×10^{-1} to 1×10^{-4} Pa (7.5×10^{-4} to 75Torr, 1×10^{-3} to 100mbar) : $\pm 2\%$	
Sampling time	5 times in 50ms running average	
Value output	Output voltage DC 0 to 10V Pressure indication (Log) 1.7V to 8.0V 1V/decade	
Update time	50ms	
Control input signal	Open collector input, Negative logic ADJ Adjustment (ZERO point, atmosphere adjust)	—
Control output signal	Open collector output, negative logic [rating: 30V _{MAX} , 50mA _{MAX} , 70mW] Error signal Set point 1, 2	—
Monitor for setpoint	Set point 1, 2: 0 to 10V Log output	—
Serial communication type	—	RS232C/RS485
LED display	POWER/ERROR: Power error LED SET-1: Set point 1LED SET-2: Set point 2LED	—
Material of filament	Pt	
Operating temperature range	10 to 40°C (50 to 104°F)	
Operating humidity range	15 to 80% (not condensing)	
IP rating	IP30 (sensor unit)	
Fixing position	Free	
Power supply voltage	DC18V to 30V, 2W (4.8W w/power input)	
Input/output connector	D-sub 15-pin (M2.6 screw)	
Weight	150g (SWP-16)	
Dimension (Power supply) W×D×H	70mm×46mm×28mm	
Applicable standard	CE	

SW1-1

SW1-2

Unit : mm

1850E/2012060000UYO