

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

This is a wide range pirani gauge which measures from atmospheric pressure to  $5 \times 10^{-2}$  Pa. ( $3.75 \times 10^{-4}$  Torr,  $5 \times 10^{-4}$  mbar) In addition, cost reduction and space saving were realized by removing control and display panels from conventional controller (sensor unit), and keeping minimum necessary functions only.



SW1-1/SWP-16



SW1-2/SWP-R1/8

## Features

- ▶ **Wide-range Measurement**  
Measures from atmospheric pressure to  $5 \times 10^{-2}$  Pa.
- ▶ **Improvement in Shock Resistance**  
Design structure is highly resistance to shock
- ▶ **Exceptional measure accuracy at Atmospheric pressure.**  
Within  $\pm 20\%$  of measurement accuracy  
Measurement is not dependent on the mounting position  
(Patent number 4878289)
- ▶ **Filament Material · Platinum (Pt)**  
Corrosion-resistant platinum is used as the filament material
- ▶ **Improvement in Visibility**  
With high visible LED for error verification
- ▶ **One-touch Adjustment**  
Atmospheric adjustment and the zero point adjustment can be done in one-touch operation
- ▶ **Maintenance**  
Sensor head can be replaced easily.
- ▶ **Flange model expansion addition of R1/8 flange model in to the line up**
- ▶ **Measured Value Output Signal**  
Pressure output in 0 to 10V by log

- ▶ **Control Output Signal**  
2 set point output (SW1-1)
- ▶ **Serial Communication Type**  
RS-232C/RS-485 communication (SW1-2)
- ▶ **Applicable Standard**  
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
- ▶ For pumping unit (system) which it has a vibration and/or shack in the manufacture process

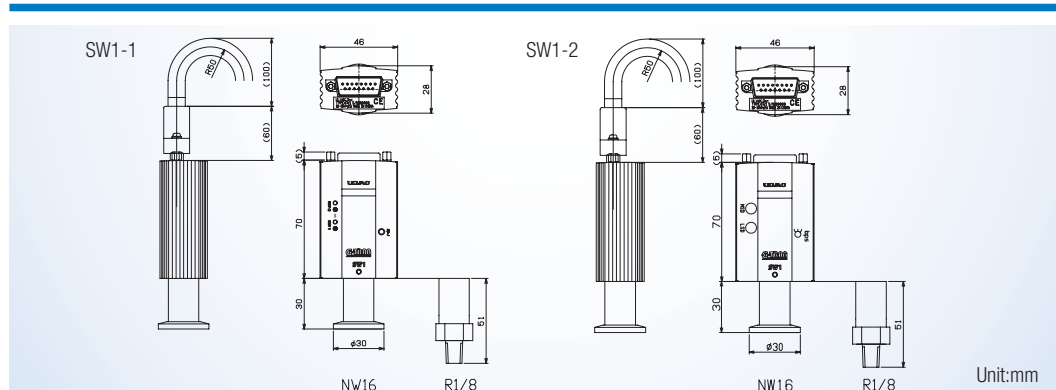
# G-TRAN Series Pirani Gauge [SW1-1/SW1-2]

## Specifications

Model	SW1-1	SW1-2
Connectable sensor head	1 pc	
Compatible sensor head	SWP-16 (NW16), SWP-R1/8(R1/8)	
Measurable pressure range	5.0×10 <sup>-2</sup> to 1.0×10 <sup>+5</sup> Pa	
Accuracy*	1×10 <sup>-1</sup> Pa to 1×10 <sup>+4</sup> Pa: ±10% 5.0×10 <sup>-2</sup> to 1.0×10 <sup>-1</sup> Pa, 1×10 <sup>+4</sup> Pa to 1×10 <sup>+5</sup> Pa: ±20%	
Repeatability	1×10 <sup>-1</sup> Pa to 1×10 <sup>+4</sup> Pa: ±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 <sub>MAX</sub> , 50mA <sub>MAX</sub> , 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	
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 (M2.6mm screw) - side sensor unit	
Weight	150g (with SWP-16)	
Dimension (Power supply) W×D×H	70mm×46mm×28mm	
Standard accessories	Quick manual	
Option	Input/output connector (D-sub 15-socket (M2.6mm screw)), Inspection result data sheet, General calibration test report, JCSS calibration certificate	
Applicable standard	CE	

\* The value indicates accuracy after atmospheric pressure adjustment and zero point adjustment.

## Dimensions



ULVAC, Inc. Components Division

[www.ulvac.co.jp/en](http://www.ulvac.co.jp/en)

Overseas Sales in Japan TEL +81-467-89-2261

USA : ULVAC Technologies, Inc. TEL +1-978-686-7550  
 GERMANY : ULVAC GmbH TEL +49-89-960909-0  
 CHINA : ULVAC (SHANGHAI) Trading Co.,Ltd. TEL (86)21-6127-6610  
 TAIWAN : ULVAC TAIWAN, Inc. TEL +886-3-579-5688  
 KOREA : ULVAC KOREA, Ltd. TEL +82-31-683-2922  
 SINGAPORE : ULVAC SINGAPORE PTE LTD TEL +65-6542-2700

PHILIPPINES : ULVAC SINGAPORE PTE LTD Philippines Branch TEL +63-46-437-7700  
 VIETNAM : ULVAC SINGAPORE PTE LTD Vietnam Representative Office TEL +84-8-6299-8262  
 INDONESIA : ULVAC SINGAPORE PTE LTD Indonesia Representative Office TEL +62-21-8990-5070  
 THAILAND : ULVAC (THAILAND) LTD TEL +66-2-7388883  
 MALAYSIA : ULVAC MALAYSIA SDN. BHD. TEL +60-3-5121-4700  
 INDIA : ULVAC, Inc., India Branch TEL +91-40-27007006

▶ This catalog is subject to change without notice.  
 ▶ This catalog is published in order to sell this product in overseas. Please see Japanese catalog when purchasing in Japan.