Pirani Vacuum Gauge New Lineup
SW100 Series

Components Division
ULVAC, Inc.

Pirani Vacuum Gauge SW100 Series

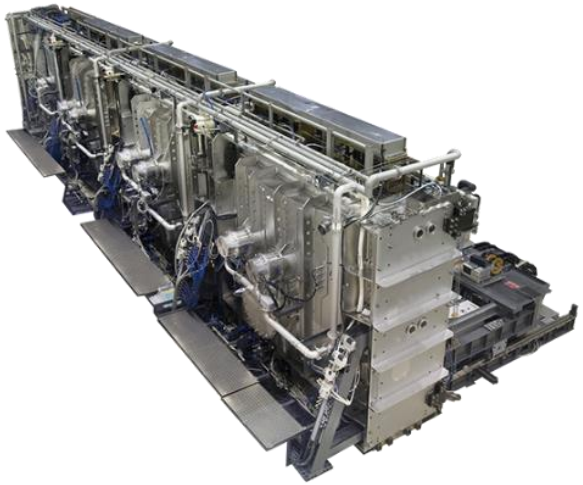
Features and improvements of SW100 series

- High usability: Set point setting, condition check, etc. by connecting PC/Android.
- Flexible analog output: Compatible analog output with the existing ones users already have (SW100-A).
- Excellent shock resistance: Sensor head that has excellent shock resistant structure (patented).

Pirani Vacuum Gauge SW100 Series

Applications of SW100

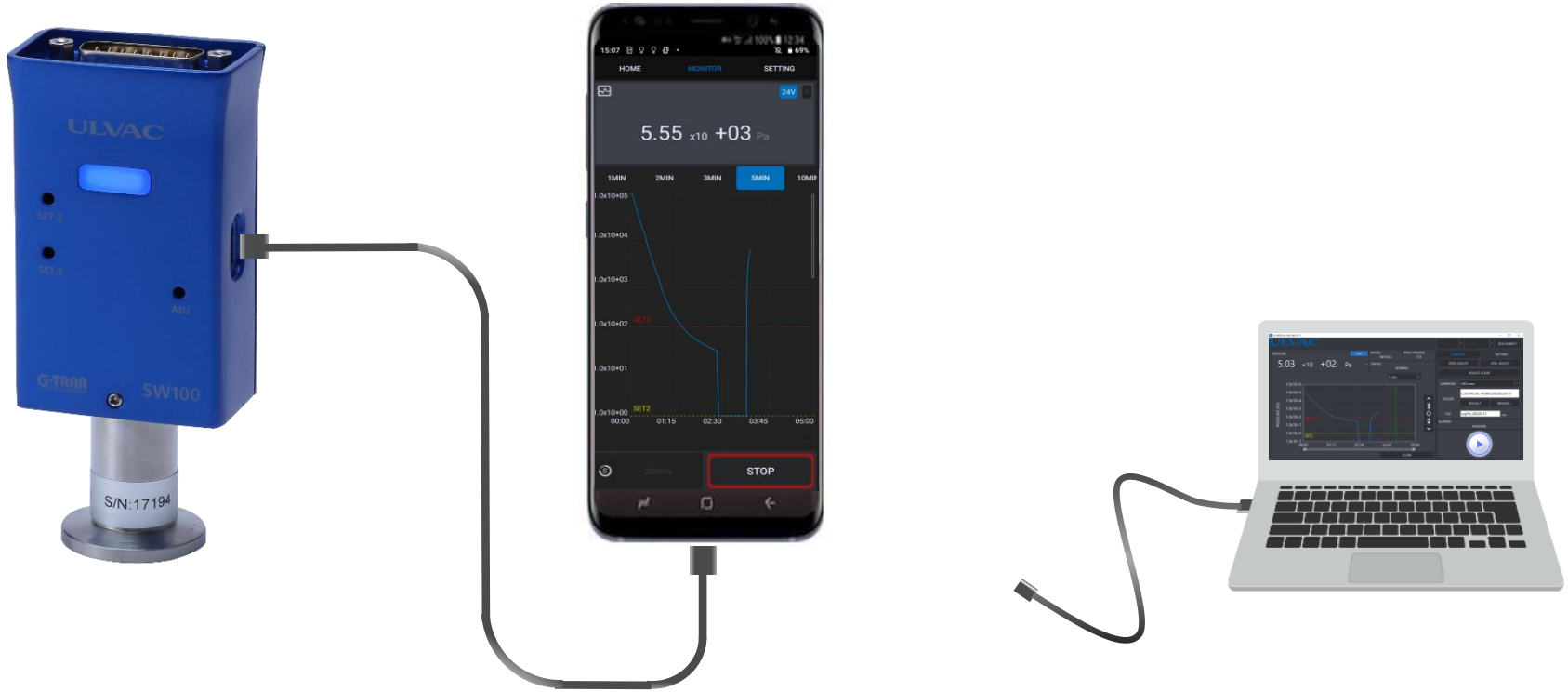
- FPD/semiconductor/electric parts production equipment
- Pumping dolly for manufacturing home appliance or automobile
- Industrial equipment such as vacuum furnaces
- Various analyzing equipment



Higher usability

- Convenient functions by connecting PC/smartphone

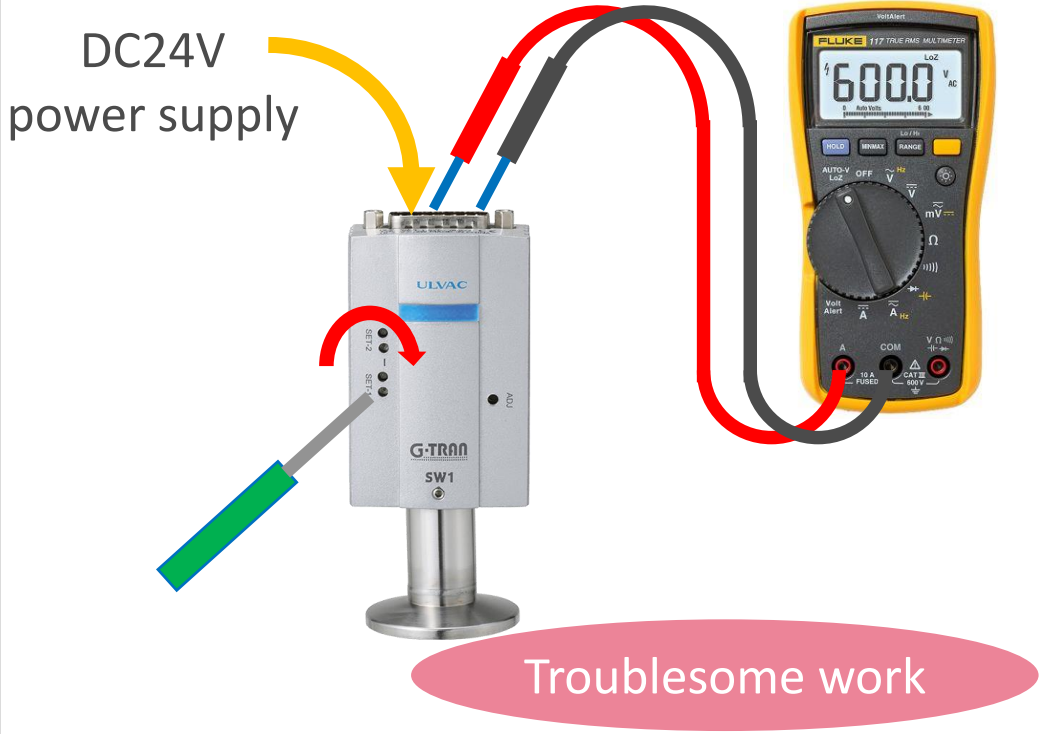
Application software: UL-MOBI for Windows/Android



Higher usability

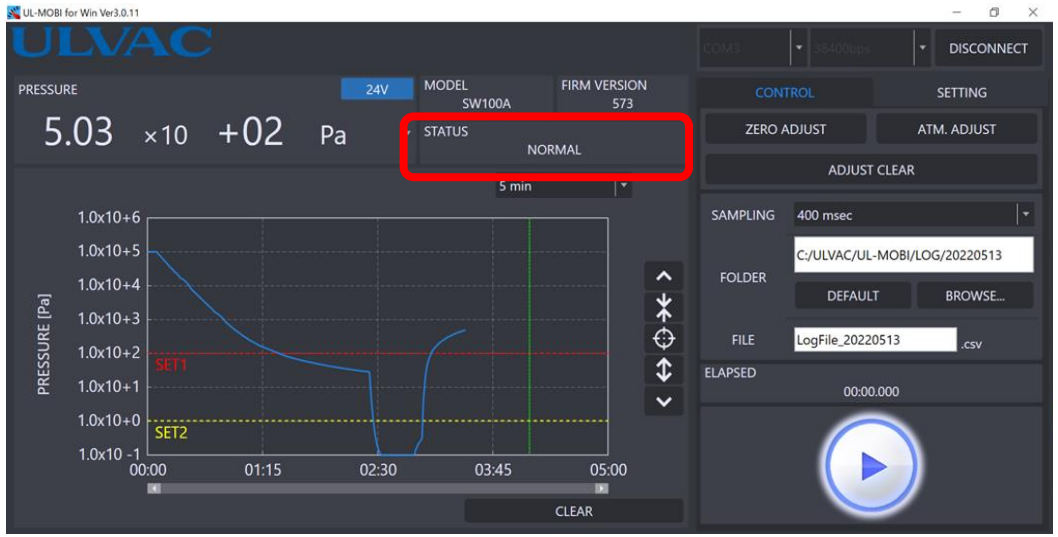
- Easy set point setting (SW100-A)

Previous model / competitors' models	SW100
Need a power supply from a customer's system. Rotate a an adjusting trimmer with monitoring the output voltage on the electric tester.	Connect a PC/Android by a USB cable. Just set the set point value on the numeric keypad of the application software 'UL-MOBI.'



Higher usability

- Easy status check when a error occurs → Efficient maintenance

Previous model / competitors' models	SW100
Only know if some error occurred from LED status. e.g. on state, blinking or off state when error. For the details of the error, need to check the instruction manual. Or cannot know if any error occurred from LED status. 	Can know that some error occurred from LED status, but also the details of that on the application software 'UL-MOBI.' e.g. filament break, etc. 

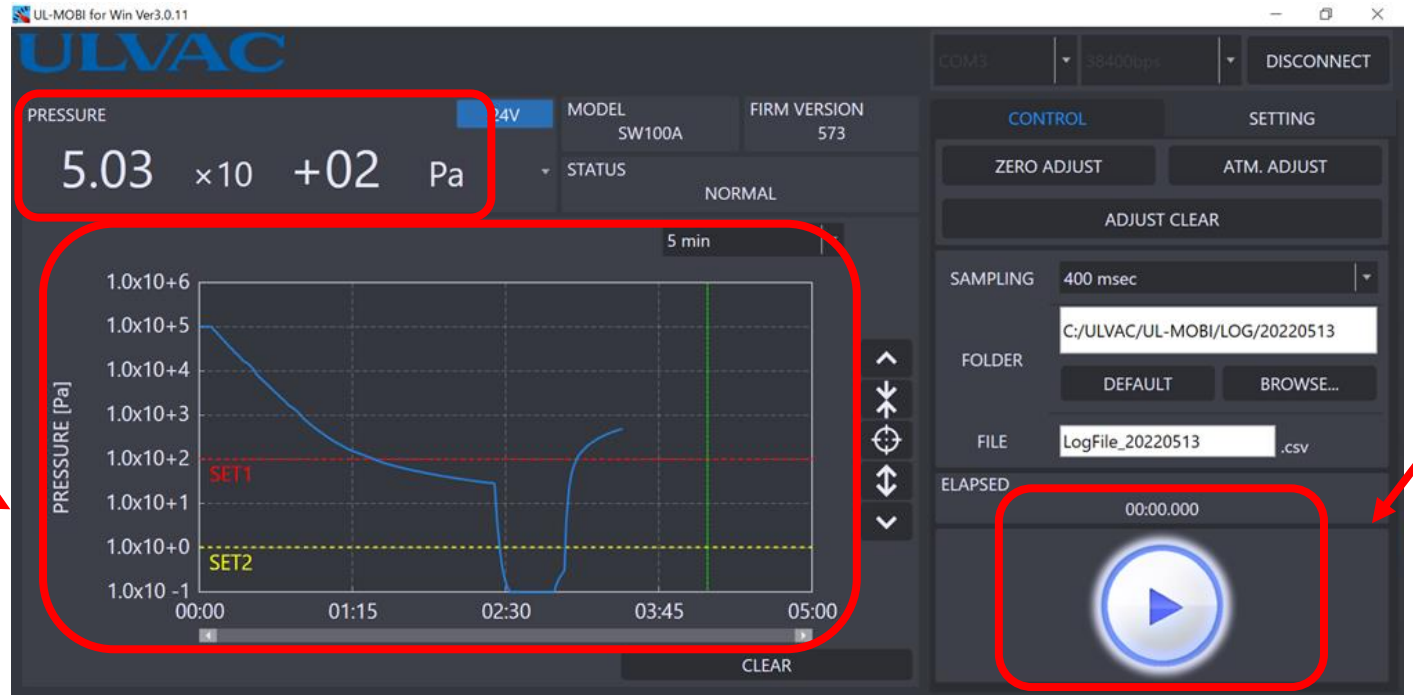
Higher usability

- Easy operation check / also available data logging

Easy pressure check in equipment start-up or easy operation check after exchange of vacuum gauge, by the trend graph display.

Can save measured data as a CSV format file by the data logging function.

Measured data displayed not only as numbers but also by trend graph.

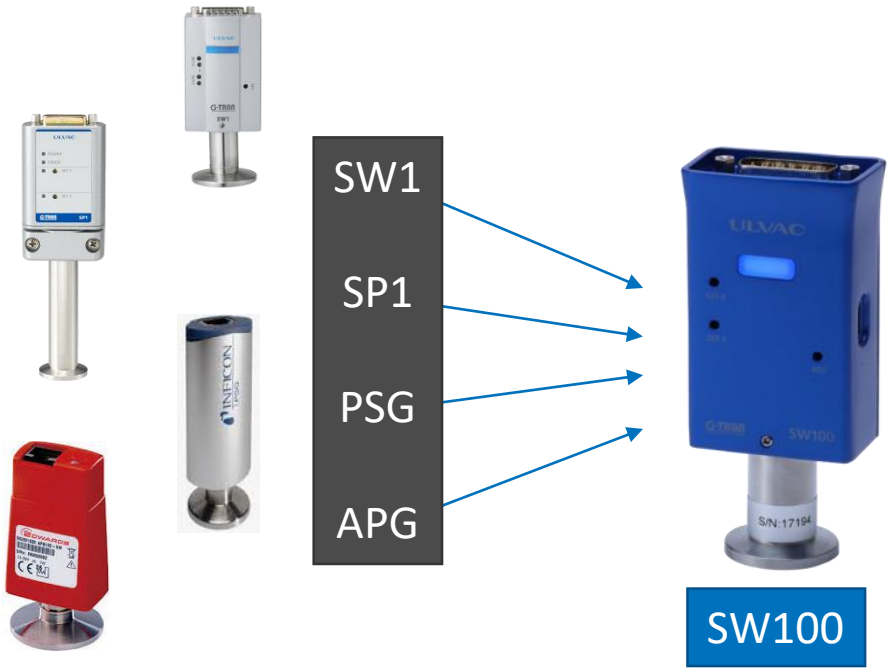


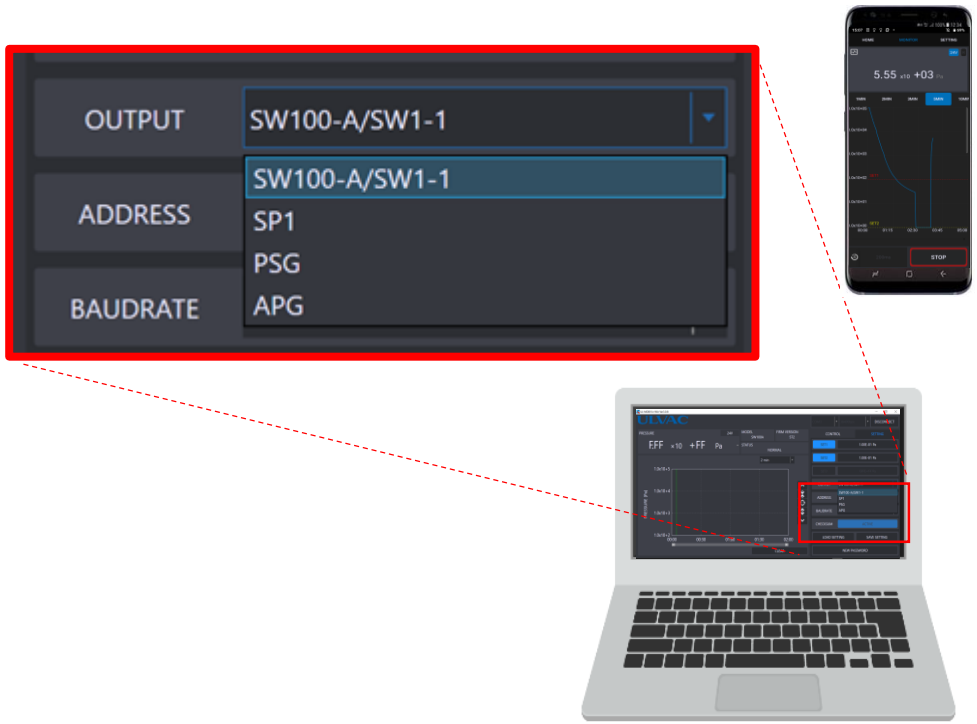
Data is possible to be saved as a CSV format file as necessary.

*Need power supply when measurement.

Flexible analog output (SW100-A)

- Compatible analog out put with the existing ones users already have.





* Please ask when another output is required.

Analog output form is selectable from those of the previous model or competitor’s models on the application software ‘UL-MOBI.’

Excellent shock resistance

- Patented inner structure
- Strong against vibration of roughing pumps, shock of open/close action of valves or shock when atmospheric pressure ventilation, etc.
- Also suitable for pumping dollies for manufacturing home appliance or automobile where vibration can occur.

SW100 specifications

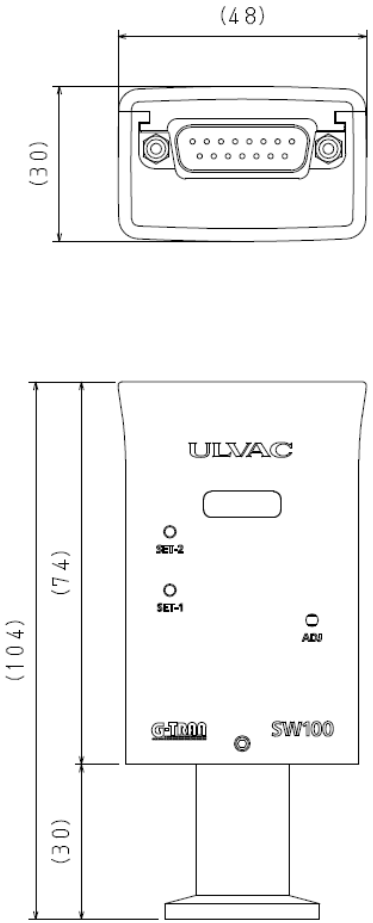
	SW100-A / SW100-R	SW1-1 / SW1-2	SP1
Power supply voltage	DC14-30V	DC18-30V	DC24±2V
Connector	D-sub15pin	D-sub15pin	D-sub15pin
Measurable pressure range	5 x 10^{-2}Pa to 1 x 10^{+5}Pa	5 x 10^{-2}Pa to 1 x 10^{+5}Pa	4 x 10^{-1}Pa to 3 x 10^{+3}Pa
Accuracy	1 x 10^{-1}Pa to 1 x 10^{+4}Pa: ±10% 5 x 10^{-2}Pa to 1 x 10^{-1}Pa: ±20% 1 x 10^{+4}Pa to 1 x 10^{+5}Pa: ±20%	1 x 10^{-1}Pa to 1 x 10^{+4}Pa: ±10% 5 x 10^{-2}Pa to 1 x 10^{-1}Pa: ±20% 1 x 10^{+4}Pa to 1 x 10^{+5}Pa: ±20%	4 x 10^{-1}Pa to 1 x 10^{+0}Pa: ±50% 1 x 10^{+1}Pa to 5.1 x 10^{+1}Pa: ±30% 5.1 x 10^{+1}Pa to 7.6 x 10^{+2}Pa: 15% 7.6 x 10^{+2}Pa to 1 x 10^{+3}Pa: ±30% 1 x 10^{+3}Pa to 3 x 10^{+3}Pa: ±50%
Operating temperature range	10-40 ℃	10-40 ℃	10-40 ℃
Analog output	①P=10^(V-C) ②Non-linear (SP1 compatible) ③P=10^((V-3.572)/1.286) *SW100-A	P=10^(V-C) *SW1-1	Non-linear非線形
Set point	2	2	2
Sensor head	SWP-16(NW16),SWP-R1/8(R1/8),SWP-P18(Φ18),SWP-P15(Φ15),SWP-25(NW25),SWP-CF16(ICF034)	SWP-16(NW16),SWP-R1/8(R1/8),SWP-P18(Φ18),SWP-P15(Φ15),SWP-25(NW25),SWP-CF16(ICF034)	WP-01(Φ18),WP-02(Φ15),WP-03(R3/8),WP-16(NW16)
Filament material	Pt	Pt	Pt

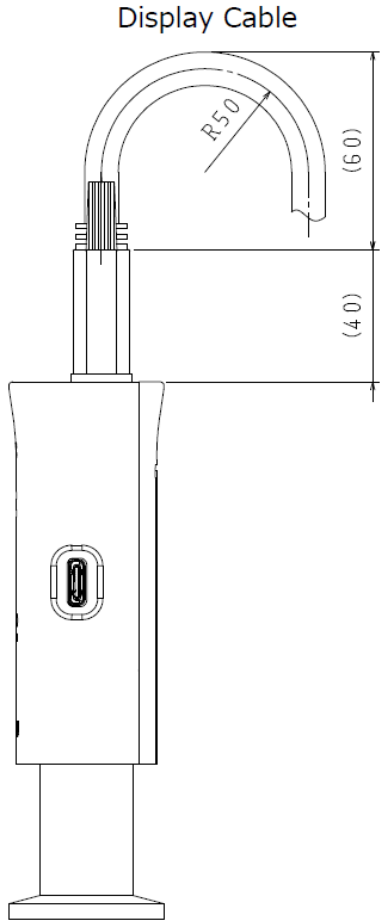
Analog output model: SW100-A
Serial communication model: SW100-R

Analog output model: SW1-1
Serial communication model: SW1-2

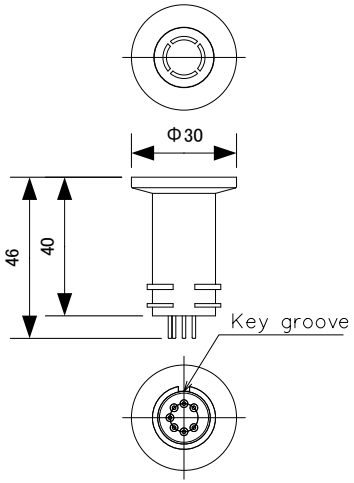
Dimensions

SW100

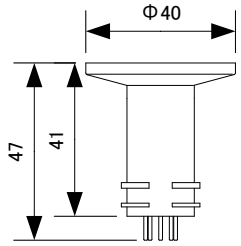




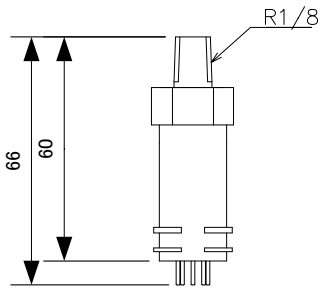
Sensor head (SWP series)



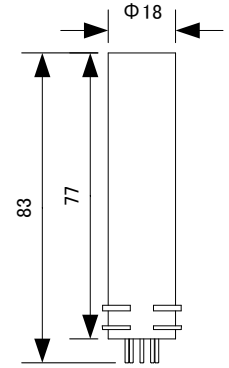
SWP-16
NW16



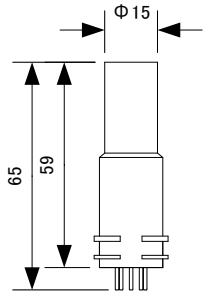
SWP-25
NW25



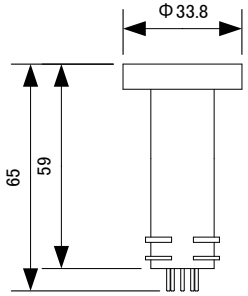
SWP-R1/8
R1/8



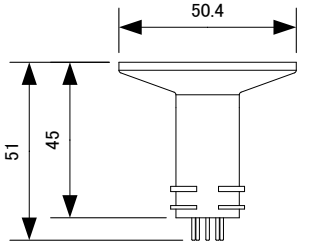
SWP-P18
Φ18tube



SWP-P15
Φ15tube



SWP-CF16
CF16(ICF034)



SWP-1S
ASME BPE sanitary1″