

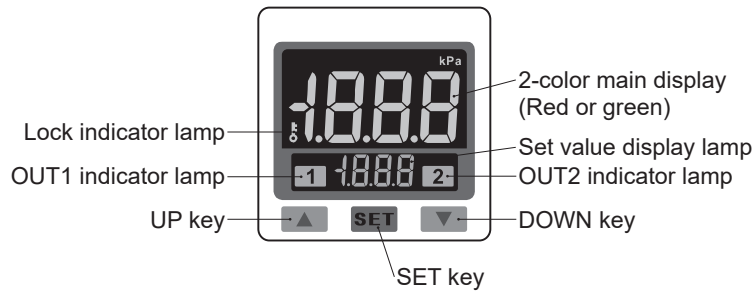
Usage methods

1. How to operate the valve

- Energization (supply power after confirming the wiring.)
- Energize the lead wire (black: vacuum, gray: vacuum burst) of the solenoid valve that you want to operate. The valve will operate.

2. Usage methods of the pressure sensor

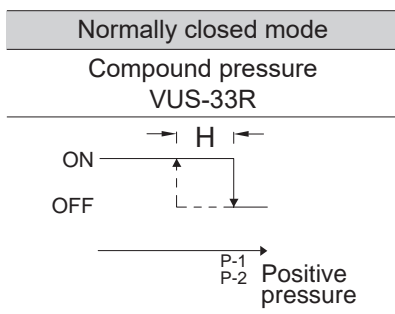
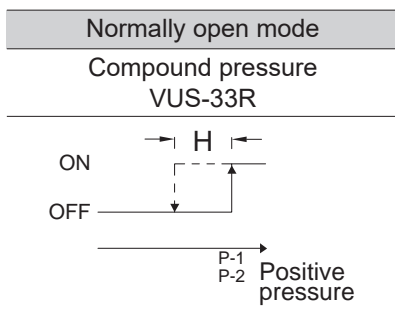
■ The names and functions of each part



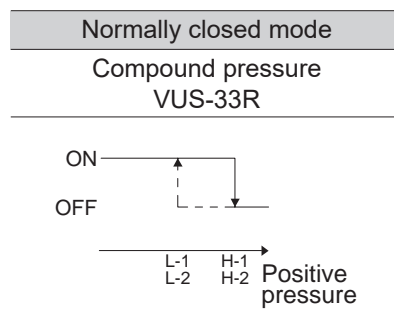
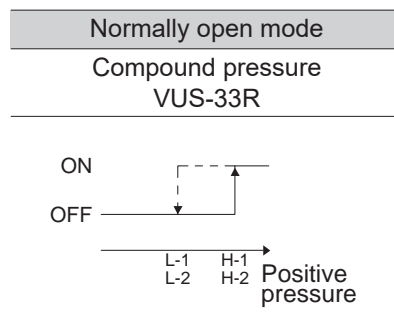
■ Switch output

Switch output operation can be selected from below.

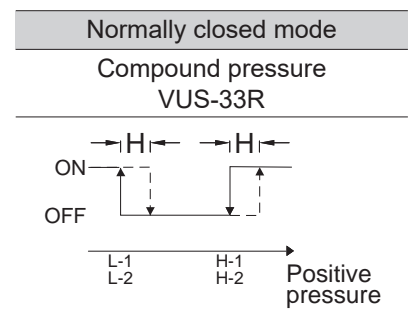
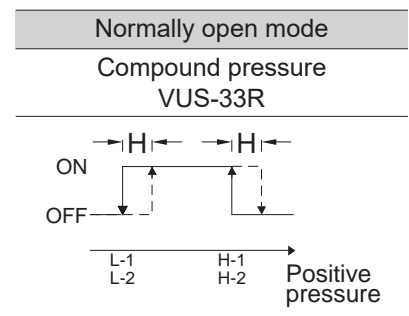
● One-point setting mode



● Hysteresis mode



● Window comparator mode



*1. When the hysteresis is set to 2 digits or less, if the input pressure is very close to the set pressure, malfunction may occur in the sensor output.

*2. In the window comparator mode, if the two set points are smaller than the fixed hysteresis set value, the switch output may not operate.

Usage methods

■ Hysteresis setting

Hysteresis setting helps prevent chattering due to pressure pulsation, etc.

■ Response time

Response time of the switch output can be set.

Setting the response time helps prevent erroneous detection due to unexpected pressure fluctuations.

■ Changing the display color

The display color when the switch output is ON/OFF can be set from red and green.

■ Power saving mode

This function switches to the power saving mode if no button is pressed for 30 seconds.

Operate any button while in power saving mode to return to measurement mode.

■ Fine adjustment mode

This function allows fine adjustment of the displayed value within $\pm 2.5\%$ range.

It unifies variations in the display value when using multiple pressure sensors.

Vacuum pump system

VSJP
VSJPM

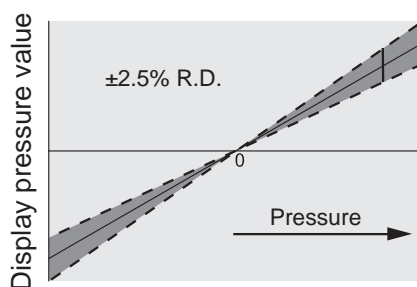
VSNP
VSNPM

VSXP
VSXPM

VSQP

VSZPM

This function eliminates small pressure errors in the output value and makes the displayed value uniform. The value displayed on the pressure sensor can be set within $\pm 2.5\%$ R.D.



— The initial setting is the value set at the factory (factory setting).

■ Pressure setting display value - Allowable setting range

R.D. (Real Detect measured value)

* Setting resolution: $\pm 0.1\%$ R.D.

How to use

■ Zero value setting

This function forces the display pressure to be set to zero.

If a pressure of more than $\pm 3\%$ of atmospheric pressure is applied, an error message will be displayed and the unit will be disabled.

■ Maximum/minimum value display

This function displays the maximum and minimum pressure values since the power was turned ON.

The values are reset when the power is turned OFF.

■ Button lock/unlock mode

The lock function mode is used to lock the keys and prevent erroneous outputting of the switch due to an incorrect key being pressed. When the button is locked, a key symbol appears on the main display.

■ Error display description

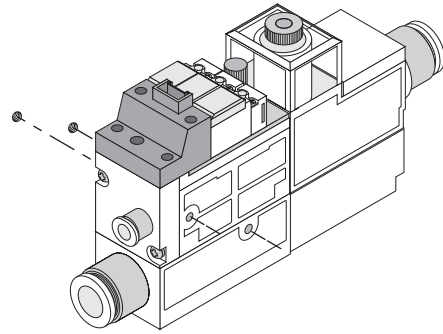
Error name		Error display	Description	Processing method
Overcurrent error	out1	Er1	The load current of output 1 exceeds 125mA.	Turn OFF the power and check the cause of the overcurrent. Next, lower the load current to 125mA or less and then turn ON the power again.
	out2	Er2	The load current of output 2 exceeds 125mA.	
Residual pressure error		Er3	At zero clear setting, the atmospheric pressure is $\pm 3\%$ F.S. or more.	Perform zero clear operation again after setting the applied pressure to the atmospheric pressure state.
Working pressure error		HHH	The applied pressure exceeds the upper limit of the pressure setting value.	Adjust applied pressure to within the working pressure range.
		LLL	The applied pressure exceeds the lower limit of the pressure setting value.	
System error		Er4	Internal system error	Turn OFF the power and then turn it ON again. If the error is not resolved, contact us.
		Er5		
		Er6	Internal data error	
		Er7		

Note) Refer to the instruction manual included with the product for details on setting each function.

Usage methods

3. Fixing method

To secure the vacuum unit VSQP, fasten M3 screws through the fixing holes on the resin body. (Refer to the dimensions for the fixing hole pitch.)



Vacuum pump system

VSJP
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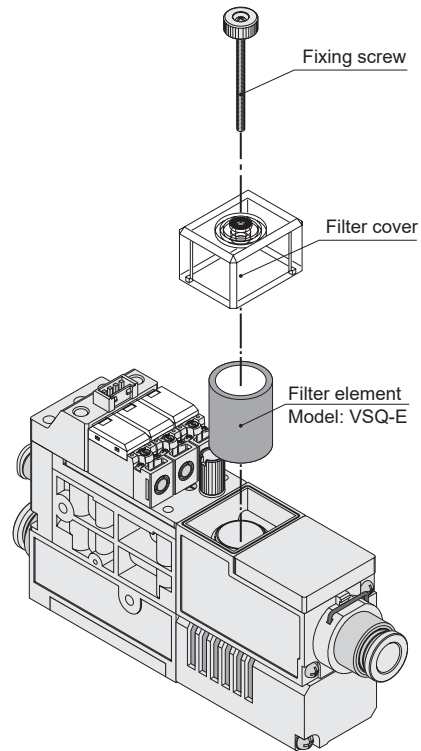
VSXP
VSXPM

VSQP

VSZPM

4. How to replace the filter element

Remove the fixing screws to replace the filter element. After replacing the filter element and checking that the filter packing has not fallen out, securely fix it with tightening torque of 0.3 to 0.5 N·m.



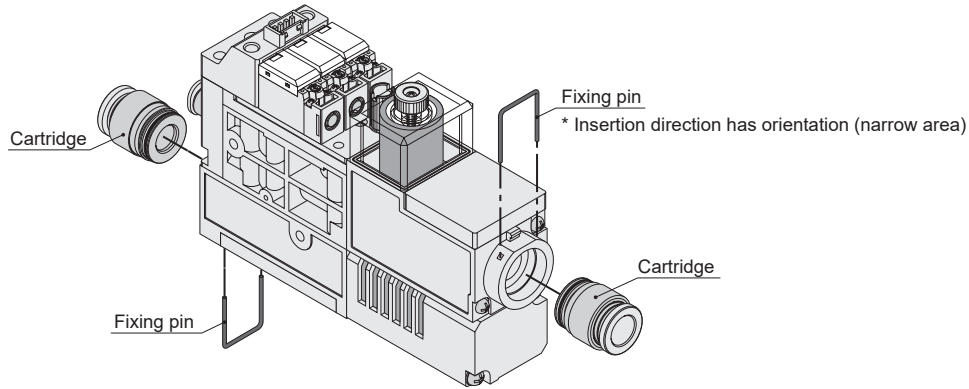
Usage methods

5. How to replace the cartridge fitting

Cartridge fittings can be replaced according to the following procedure.

- (1) Pull out the stop pin with a flathead screwdriver, etc.
- (2) Pull out the cartridge in the connection direction.

(Note) When mounting the cartridge to the body, mount after checking that there is no dirt, fluff, etc. adhering to the O-ring.



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