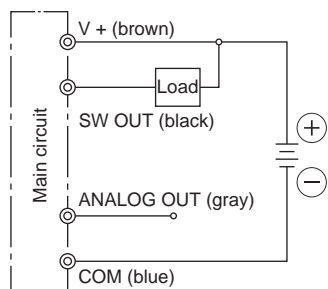
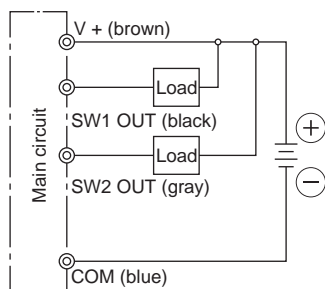


Usage methods

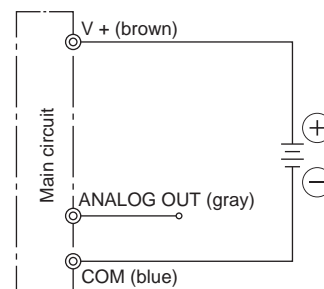
(3) How to wire



Vacuum pressure switch with LED display
(Analog output, with switch output type)



Vacuum pressure switch with LED display
(type with 2-point switch output)



Vacuum pressure switch with
analog output

Ejector system

2. Safety precautions for vacuum pressure switch

- (1) Do not use in atmospheres or gases containing corrosive substances. It risks damaging the switch.
- (2) Do not perform wiring or usage that would introduce noise (surge), etc. It risks damaging the switch.
- (3) Do not use in flammable or explosive gases, liquids, or atmospheres. This may cause fire or explosion, as the product does not have an explosion-proof structure.
- (4) Avoid using in places where the product is exposed to dripping water, oil, dust, etc. This may cause malfunction, as the product does not have a drip-proof structure.
- (5) Do not use where the heat generated exceeds the operating temperature range. It risks damaging the switch.
- (6) Make sure to turn the power OFF before wiring. During wiring, check the lead wire color and do not short-circuit the output terminal and power supply terminal or COM terminal. Short-circuiting could cause switch malfunction.
- (7) Do not apply high tensile force or bending force to the connector cable. It could cause disconnection or damage to the connector unit.
- (8) The performance will not change even if pressure of about 0.5 MPa is instantaneously applied, but do not apply pressures of 0.2 MPa or greater during vacuum burst. If constantly applied, it could damage the switch.
- (9) When setting the pressure and hysteresis, use a small screwdriver and gently rotate within the rotation range of the trimmer, without applying excessive force. If excessive force is applied during adjustment, it could damage the trimmer and base.
- (10) Use a stable DC power supply.
- (11) To connect to an output terminal or power supply terminal (relay, solenoid valve, etc.), install a surge voltage absorption circuit. Avoid usage where current exceeds 80 mA.
- (12) When using a unit power supply such as switching power supply, ground the F.G. (frame ground).
- (13) Do not short-circuit the output terminal (black/gray lead wire) with other terminals.
- (14) Do not apply strong external impact or excessive force to the switch body.

VSX

VSHVSU
VSBVSC

VSG

VSK
VSKM

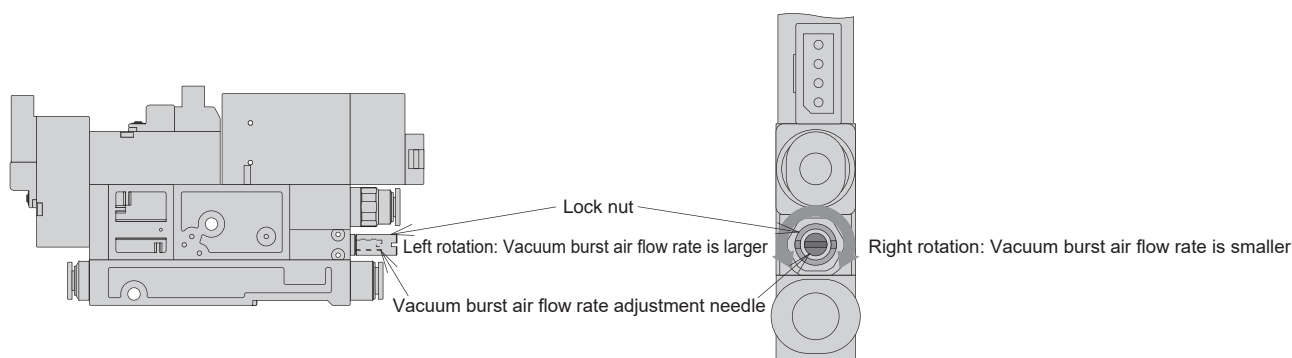
VSJ
VSJM

VSN
VSNM

3. How to adjust vacuum burst air flow rate

- The vacuum burst air flow rate is decreased by turning the vacuum burst air flow adjustment needle to the right (clockwise) and increased by turning it to the left (counterclockwise). After adjusting, securely tighten the lock nut with tightening torque of 0.1 to 0.2 N·m.

* Be sure to use an appropriate flathead screwdriver for adjusting the vacuum burst air flow rate.



VSX
VSXM

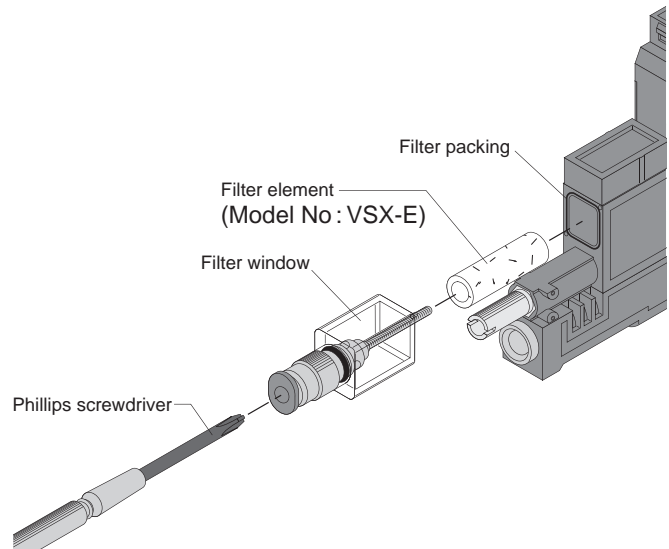
VSQ

VSZM

Usage methods

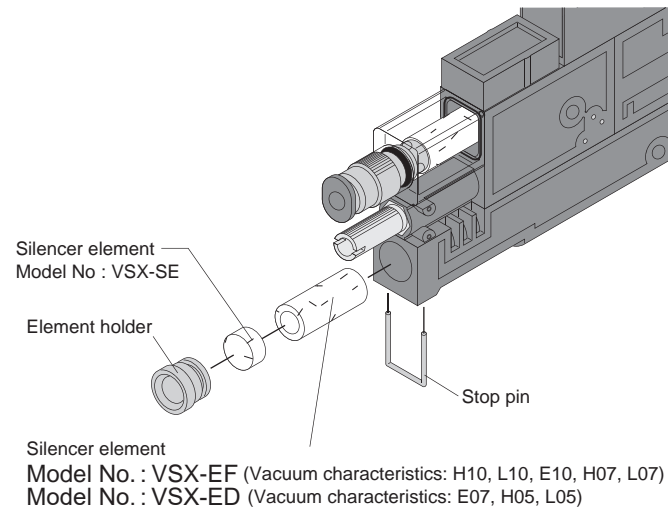
4. How to replace the filter element

- To replace the filter element, remove the piping of the vacuum port, loosen the screw inside the fitting (inside the tube insertion port) using a Phillips screwdriver (Note) with O.D. of 2.5 mm or less, remove the vacuum port and replace. After replacing the filter element and checking that the filter packing has not fallen out, attach the filter element and filter window to the vacuum port and then fasten the vacuum port to the main body. Tighten the screw securely with tightening torque of 0.1 to 0.15 N·m. (Note) Ensure that the locking claw and the driver do not interfere with one another. Scratches or deformation of the lock claw may decrease the tensile strength of the tube.

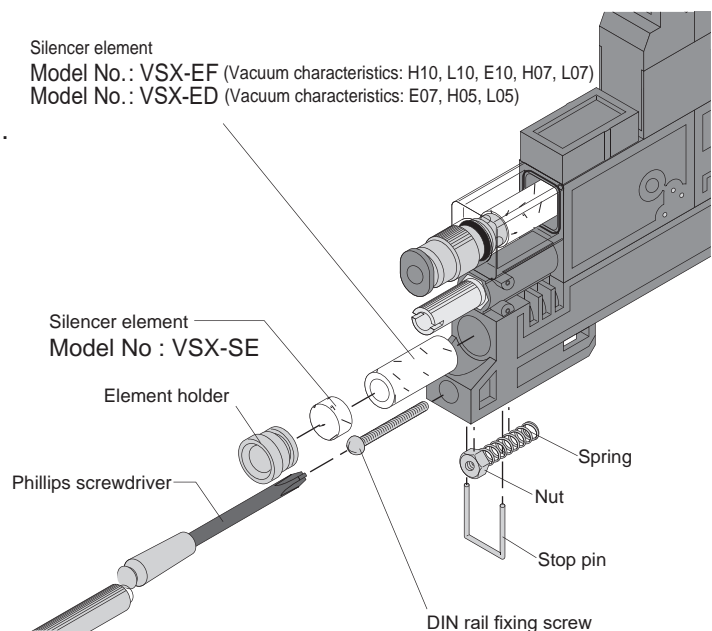


5. How to replace the silencer element

- When replacing the direct mount silencer element, use a flathead screwdriver to remove the stop pin first. After replacing the silencer element, securely insert the stop pin.



- To replace the DIN rail mount silencer element, use an appropriate Phillips screwdriver to remove the DIN rail fixing screws. Next, use a flathead screwdriver to remove the stop pin before replacing. After replacing the silencer element, securely insert the stop pin and fix the DIN rail fixing screws. (Recommended tightening torque: 0.1 to 0.15 N·m)



Ejector system

VSX

VSH/VSU
VSB/VSC

VSG

VSK
VSKM

VSJ
VSJM

VSN
VSNM

VSX
VSXM

VSQ

VSZM

Usage methods

6. Removal and cleaning of nozzle and diffuser

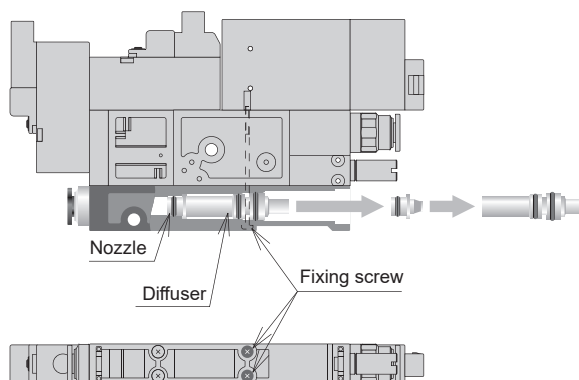
- Remove the silencer element and fixing screws (see figure below) and pull out the diffuser using needle-nosed pliers. To prevent the nozzle from popping out, cover the exhaust port with cushioning material such as a sponge and supply the air for vacuum generation (*5). Since the nozzle will pop out due to the force of air, remove the cushioning material and take out the nozzle.

Remove the deposits on the nozzle, diffuser bore and seal by air blow or wiping (*6).

Assemble the nozzle on the diffuser and supply to the body so that the nozzle does not come off. Push the diffuser in (see figure below) until the diffuser groove aligns with the hole of the fixing screw, and tighten the fixing screw with tightening torque of 0.25 to 0.35 N·m. For mounting the silencer element, refer to "How to replace the silencer element".

(*5) [Warning] Do not point the nozzle outlet at a person while supplying air to the product. The nozzle may pop out and cause injury.

(*6) Do not damage the nozzle, diffuser bore or seal. This will cause performance degradation.



7. How to replace the manifold mounting unit

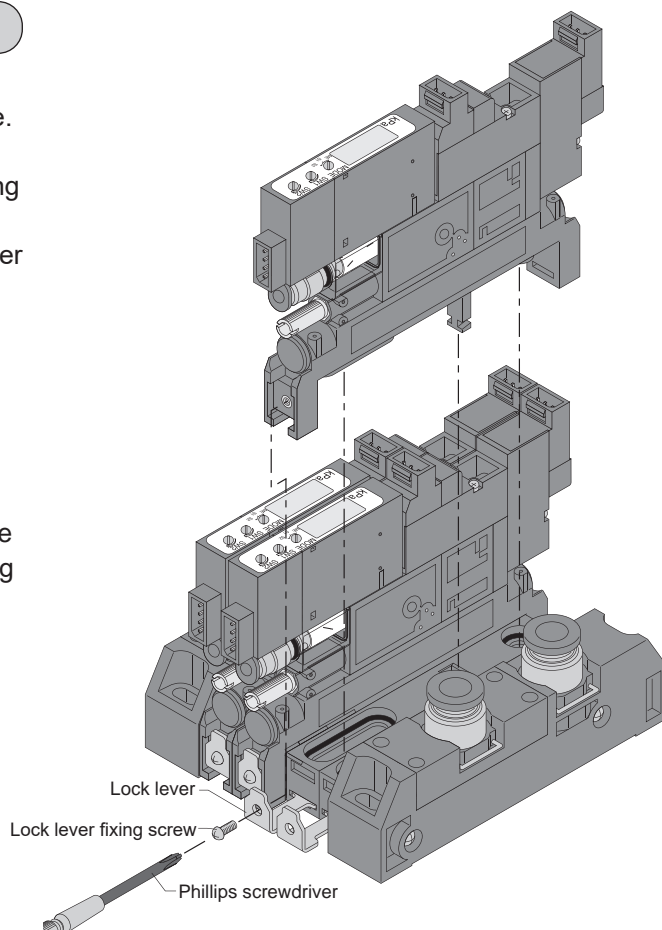
■ How to remove the unit

- Stop the supply air and exhaust the residual pressure.
- Turn the power OFF and remove the wiring.
- Use a suitable Phillips screwdriver to remove the fixing screw.
- Pull out the lock lever fully using a flathead screwdriver and remove the unit.

■ How to install the unit

- Check that the O-ring of the supply port and exhaust port has not fallen out.
- Pull out the lock lever fully to the front and install the unit.
- Push the lock lever while pressing the unit from above and securely fix the lock lever with the lock lever fixing screw.

(Fixing screw tightening torque: 0.15 to 0.2 N·m)



Ejector system

VSX

VSH/VSU
VSB/VSC

VSG

VSK
VSKM

VSJ
VSJM

VSN
VSNM

VSX
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VSZM

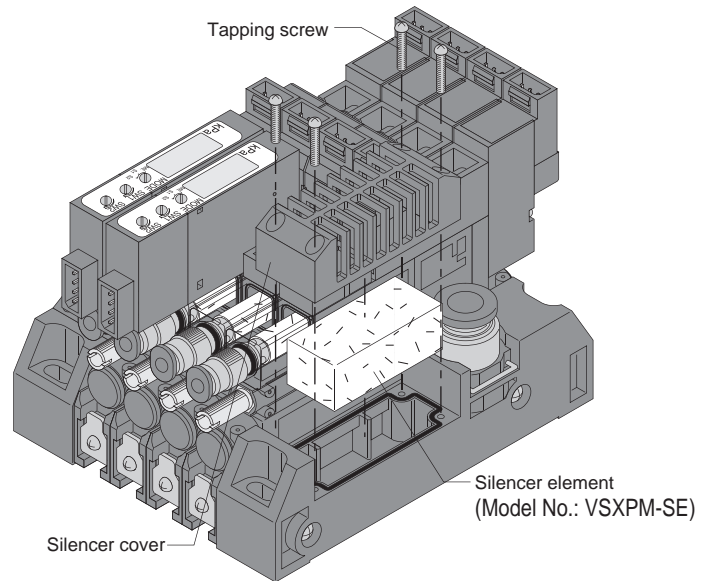
8. How to replace the silencer element for manifold

■ How to remove silencer element

- Use a suitable Phillips screwdriver to remove the four tapping screws.
- Remove the element cover and replace the silencer element (Model No.: VSXPM-SE).

■ How to install silencer element

- Using a suitable Phillips screwdriver, tighten the four tapping screws with tightening torque of 0.3 to 0.4 N·m.



Ejector system

VSX

VSH/VSU
VSB/VSC

VSG

VSK
VSKM

VSJ
VSJM

VSN
VSNM

VSX
VSXM

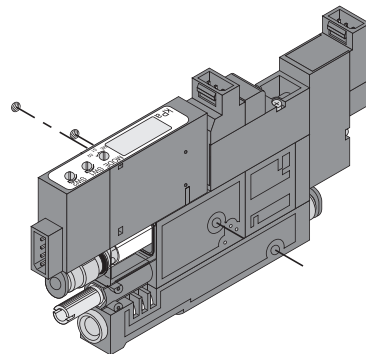
VSQ

VSZM

Fixing method

(1) Direct mount

Tighten and fix with M3 screws using the fixing holes (2 places) on the resin body. (Refer to the dimensions for the fixing hole pitch.)



(2) DIN rail mount

Fit the product into the DIN rail and tighten the DIN rail fixing screw using a suitable Phillips screwdriver.

- If vibration or impact may be applied to the product, install commercially available DIN rail fixing brackets on both sides of the product and fix securely.

