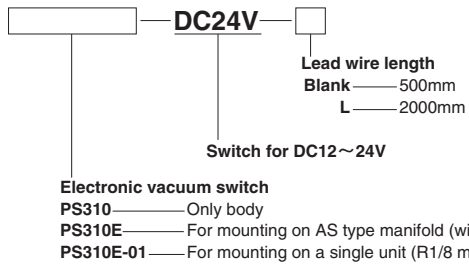
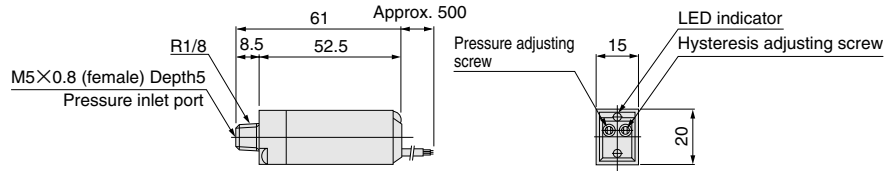


Electronic Vacuum Switch Order Codes



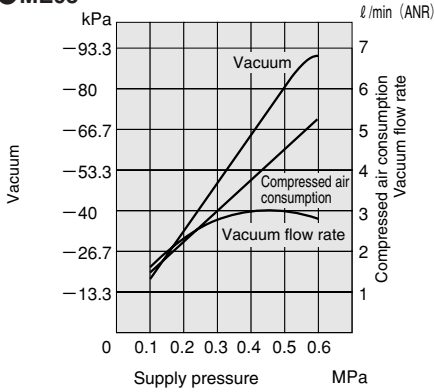
Dimensions of Electronic Vacuum Switch (mm)

PS310E-01

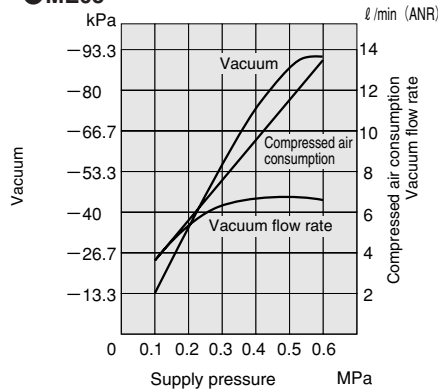


Air Consumption, Vacuum and Vacuum Flow Rate

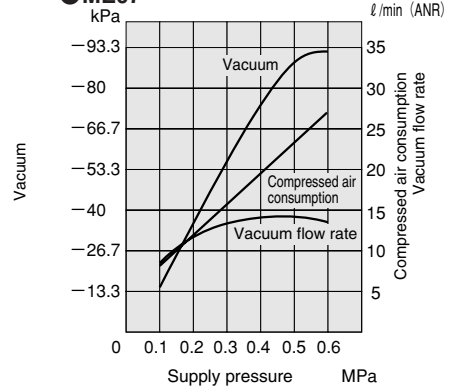
ME03



ME05



ME07

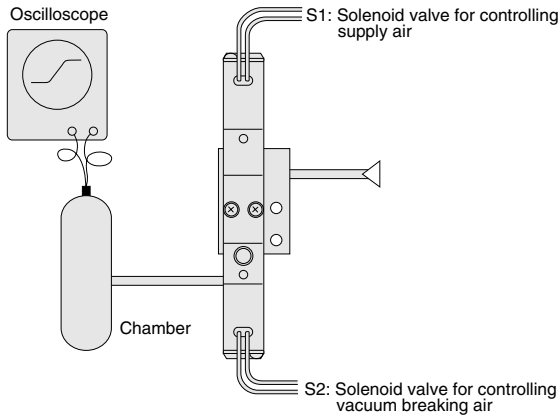


Remark: Graphs are for each single ejector unit. If the unit with solenoid valve requires the same vacuum level, set the supply pressure 0.03~0.05MPa [4.4~7.3psi.] higher than the single ejector unit's case.

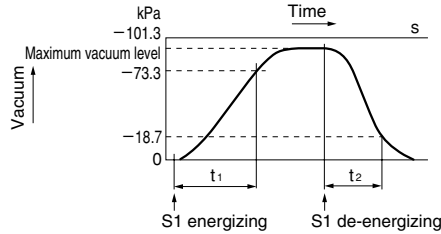
1MPa = 145psi. 1kPa = 0.145psi. -100kPa = -29.54in.Hg 1 l/min = 0.0353ft³/min.

Time to Reach Vacuum and Vacuum Breaking Time

Measurement method



ME□-E1

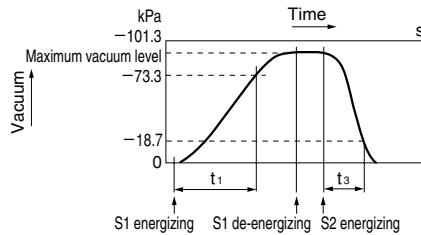


Air pressure: 0.5MPa [73psi.]
Adjusting needle for vacuum breaking flow: Fully open
t₁: Time to reach -73.3kPa [-21.65in.Hg] in the chamber after energizing S1.

t₂: In ME□-E1, time to reach -18.7 kPa [-5.52in.Hg] in the chamber after de-energizing S1.

t₃: In ME□-E2, time to reach -18.7kPa [-5.52in.Hg] in the chamber after energizing S2 and when vacuum was at its maximum level.

ME□-E2



Response time

Model	Chamber capacity cm ³ [in. ³]	5 [0.305]			10 [0.610]			20 [1.22]			50 [3.05]			100 [6.10]			200 [12.2]			500 [30.5]		
		t ₁	t ₂	t ₃	t ₁	t ₂	t ₃	t ₁	t ₂	t ₃	t ₁	t ₂	t ₃	t ₁	t ₂	t ₃	t ₁	t ₂	t ₃	t ₁	t ₂	t ₃
ME03		0.4	0.1	—	0.7	0.2	—	1.1	0.3	—	3.2	0.6	—	5.8	1.1	—	—	—	—	—	—	—
ME05		0.2	0.1	0.1	0.3	0.1	0.1	0.5	0.1	0.1	1.5	0.3	0.1	2.6	0.5	0.2	7.0	0.8	0.4	12.0	1.8	0.8
ME07		0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.1	0.1	0.6	0.2	0.1	1.0	0.3	0.2	1.8	0.4	0.4	4.7	1.0	0.8

Note: Some degree of variation may occur due to piping size and chamber shape. The figures can be viewed as a guide.

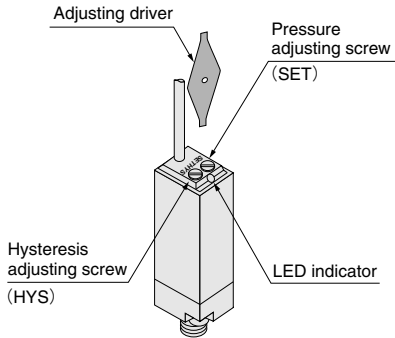
Handling Instructions and Precautions



Electronic Vacuum Switch

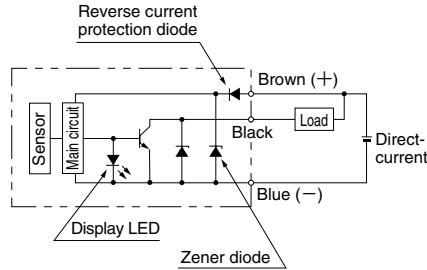
Pressure regulation

Rotate the pressure adjusting screw (SET) to set the pressure. Rotating the pressure adjusting screw to the right (clockwise) increases the vacuum setting. In addition, use the hysteresis adjusting screw (HYS) to set the hysteresis. Rotating the hysteresis adjusting screw to the right (clockwise) increases the hysteresis by shifting the OFF position.



- Cautions:**
1. To set the pressure and hysteresis, use the special screwdriver provided or a small screwdriver of appropriate size, and adjust by rotating them carefully without applying excessive force.
 2. To ensure accurate pressure setting, use a pressure gauge to perform the setting while switching the vacuum switch on and off.
 3. Do not apply pressure to the pressure detection area of more than 0.2MPa [29psi].

Wiring instructions

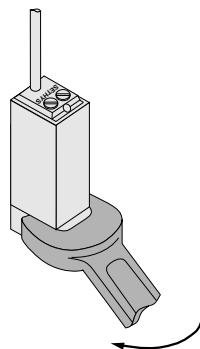


- Brown: Lead wire for connecting the (+) polarity that activates the switch
- Black: Lead wire for connecting the load
- Blue: Lead wire for connecting the (-) polarity

- Cautions:**
1. Do not subject the lead wires to strong pulling force or excessive bending.
 2. Pay attention to the lead wire colors to connect. While the lead wires between brown and blue, for connecting to the power supply, are protected by diodes for protection of reverse current, the output circuits do not have a surge current protection function. Miswiring could cause damage to the output transistor.
 3. Do not connect and use the vacuum switch with a load that exceeds its switching capacity.

Mounting

1. As subjecting the vacuum switch to strong shocks could lead to damage or erratic operation, be careful when handling it.
2. Do not apply a wrench to the body cover when mounting as a single unit (PS310E-01). When tightening, always apply the wrench to the metal part of the adapter.



General precautions

1. If using in locations subject to dripping water, dripping oil, etc., or to large amounts of dust, use a cover to protect the unit.
2. Always thoroughly blow off (use compressed air) the piping before connecting it to the micro ejector. Intrusion into the piping of chips, sealing tape, rust, or other foreign material generated during piping operations could result in valve air leaks or a degradation in micro ejector performance.
3. Use clean air that does not contain deteriorated compressor oil or other contaminants. Install an air filter (with filtration of a minimum 40 μm) close to the micro ejector to eliminate any collected liquids or dust in air line. Always use a mist filter for cases where the pressurized air contains large amounts of oils. Moreover, drain the air filter at regular intervals.
4. Use a regulator to adjust the pressure of air supplied to the micro ejector. Where the piping length to the micro ejector is long, set the pressure at a little higher than normal. If using an air supply valve, use a valve with an effective area that is at least three times as large as the area of the micro ejector nozzle.
5. Use one vacuum pad for one micro ejector. Use of two or more pads could result in picking errors, and extend the amount of time required to reach the set vacuum level.
6. At periodic intervals, replace the filters (order code: ME□ MA-F) installed as standard equipment with the micro ejector body.