Vacuum Unit ——AZK Series

AZK Series Vacuum Unit



Product feature

1. Nozzle size: 0.7/1.0/1.2 mm selectable. Vacuum port piping: 4/6/8 mm selectable.
2. 15mm compact body, suitable for limited installation space.
3. 2 x 4.2mm mounting hole for single-unit installation.
4. Quick-release design of vacuum port fitting. Filter can be replaced by detaching the port fitting.
5. Built-in silencer which can be replaced by detaching the clip and cap.
6. DIN rail mounting. Simple installation and disassembly.
(free to choose single unit or manifold)
7. Pressure switch, both digital output and analog output options are selectable.

Ordering code

AZK 10 - 6 6 □ □ N1 □

1 2 3 4 5 6 7

①Nozzle size	②Vacuum (V) port	③Air Supply (P) port	④Exhaust type	⑤Vacuum function	⑥Digital display pressure switch	⑦Mounting
07：∅0.7mm 10：∅1.0mm 12：∅1.2mm	4：∅4mm 6：∅6mm 8：∅8mm	6：∅6mm	Blank: Standard exhaust	Blank: Standard type	Blank: Without pressure switch N1: 2 NPN outputs N2: 1 NPN output + 1 Analog output P1: 2 PNP outputs P2: 1 PNP output + 1 Analog output	Blank: Standard type [Note 1]

Note 1: The standard type can be mounted via body mounting holes or DIN rail.

Specification

General Specifications		
Fluid		Air, non-corrosive gas, or non-flammable gas
Operating pressure range		0.3~0.7 Mpa
range		0~50℃
Proof pressure	Supply circuit	0.8 MPa
	Vacuum circuit	0.2 MPa

Valve Specifications	
Power Supply Voltage Range	DC24 V ± 10%
Actuation Type	Pilot operated
Enclosure	Dustproof
Temperature classification	Class F
Power Consumption	1.0 w
Power Socket	Plug-in type
Response Time	on / off < 7 ms
Manual Override	Non-locking/Locking knob

Digital pressure display switch specifications		
Input power	Power supply voltage	12 to 24 VDC ±10%, Ripple (p-p) 10% or less
	Current consumption	40mA or less
Pressure specifications	Fluid	Non-corrosive gas
	Pressure measuring range	-100~100kPa
	Pressure setting range	-105~105kPa
	Proof pressure	500kPa
	Pressure measur accuracy	±2% F.S. ±1 digit (at 25 ±3°C)
	Repetitive accuracy	±0.2% F.S.
	Temperature characteristics	±3% F.S. (Based on 25°C, range 0 to 50°C)
Display	Display type	7-segment display, Red LED
	Indicator light	OUT1: Red LED / OUT2: Green LED
Output	Analog voltage output	1 to 5 V ±3% F.S., Minimum load impedance...
	Output-delay time	2.5ms、20ms、100ms、500ms、1000ms、1999ms
Unit	AZK-S-N1(2) AZK-S-P1(2)	Mpa、kPa、kgf/cm2、bar、Psi、in Hg、mmHg
Environment	Vibration-resistance	10 to 150 Hz, 1.5 mm total amplitude, 2 hours each in X, Y, Z directions (De-energized)
	Impact resistance	Max. 100 m/s², 3 times each in 3 directions and 6 sides
	Operating temp. range	0~50℃
	Storage temp. range	-20~65℃
	Humidity range	35~85%RH(No condensation)

Nozzle size selection

Nozzle size (mm)	Max. vacuum pressure (kPa)	Max. suction flow (L/min)	Air consumption (L/min)	Noise level (dB)	Standard supply pressure (Mpa)
07：∅0.7 10：∅1.0 12：∅1.0	-91	07：30 10：45 12：63	07：24 10：40 12：58	07：55 10：65 12：75	0.35 [Note1]

Note 1: Standard supply pressure is based on our company's measurement conditions.
It may vary depending on weather, atmospheric pressure, and measurement setup.
If any abnormal popping sound occurs during vacuum generation,
check if the supply pressure is normal (insufficient supply pressure may cause this).

Suitable vacuum pad diameter

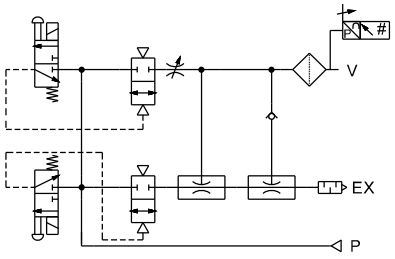
Nozzle size (mm)	∅0.7	∅1.0	∅1.2
Max. suction Flow (L/min)	30	45	63
Air consumption (L/min)	24	40	58

Applicable pad diameter (mm) [Note 1]			
2	O	O	O
4	O	O	O
6	O	O	O
8	O	O	O
10	O	O	O
13	O	O	O
16	O	O	O
20	O	O	O
25	O	O	O
32	O	O	O
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50	-	O	O
63	-	-	O
80	-	-	O
100	-	-	O
125	-	-	O

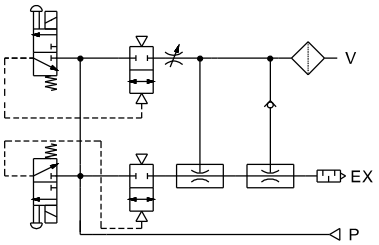
*Note 1: Based on a 1:1 ratio of vacuum unit to vacuum pad.
Applicable pad sizes are for reference/guideline only.

AZK Series Vacuum Unit

Circuit diagram - with digital pressure switch

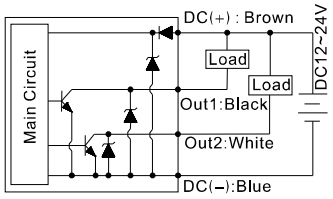


Circuit diagram - without digital pressure switch

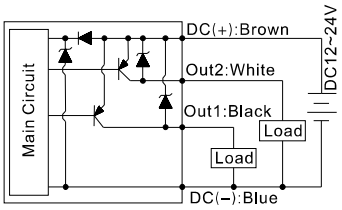


Digital pressure display switch internal circuit and wiring Diagram

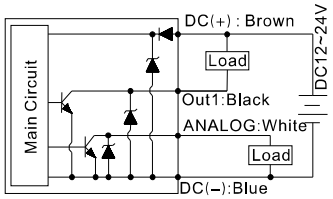
2 NPN Outputs



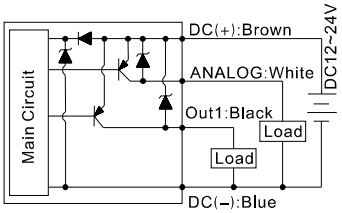
2 PNP Outputs



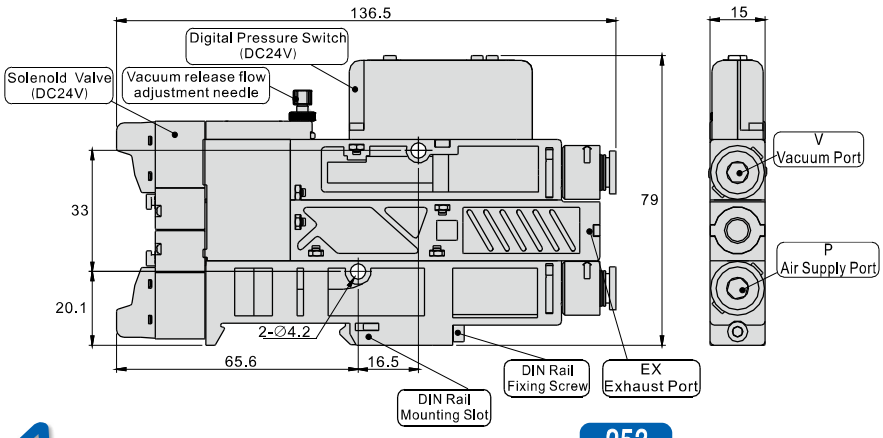
1 NPN + 1 Analog Output



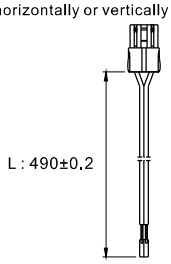
1 PNP + 1 Analog Output



Dimensions



Features a non-polar solenoid valve.
The lead wire terminal can be oriented horizontally or vertically for installation.



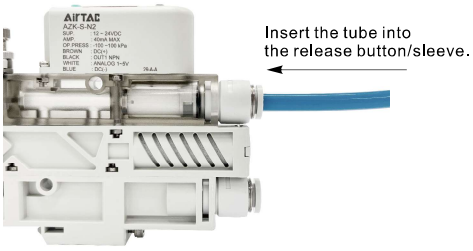
Unit of measurement : mm

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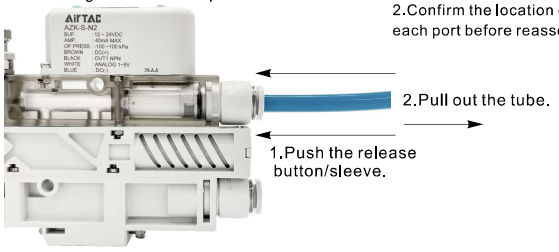
Mounting and maintenance

★Tubing insertion and removal

Inserting the Tube:
Insert the tube into the release button/sleeve.
The tube will automatically be secured by the internal lock claws.



Removing the tube:
Press the release button/sleeve.
The internal lock claws will release,
allowing the tube to be pulled out.

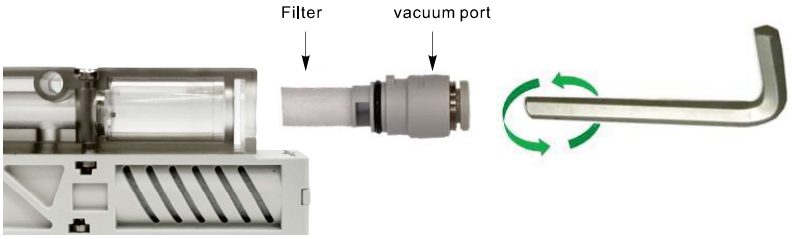


Caution
1.Shut off the supply air and release residual pressure before disassembly.
2.Confirm the location of each port before reassembly.

★Replacement of filter and silencer

Filter:
1.Use a hexagon wrench to unscrew the vacuum port counterclockwise.
2.Remove the filter and replace it.
3.Reassemble the parts in reverse order.

Replacement timing
1.Replace the product after one year of use.
2.Replace the filter or silencer when it becomes contaminated.



Port Size and hexagon socket size	
Vacuum Port Size	Hexagon Socket size
∅4	H3
∅6	H4
∅8	H6

Silencer (Note: Remove the vacuum port first):
1.Use a flat-head screwdriver to pry up the retaining clip.
2.Remove the silencer cover, pull out the old element, and replace it.
3.Reassemble the components in reverse order.

Caution
1.Different silencer colors are used to distinguish between ø0.7 and ø1.0/1.2 nozzle sizes.
2.Remove the vacuum port before replacing the silencer .



Silencer color for each nozzle size	
Nozzle Size	Silencer color
∅0.7	Light blue
∅1.0 / 1.2	White

★Vacuum release flow adjustment needle

Adjustment method
1.To decrease vacuum release flow: Turn the adjustment needle clockwise.
2.To increase vacuum release flow: Turn the adjustment needle counterclockwise.
3.To lock the adjustment: After adjusting the flow, tighten the lock nut clockwise to secure it.

