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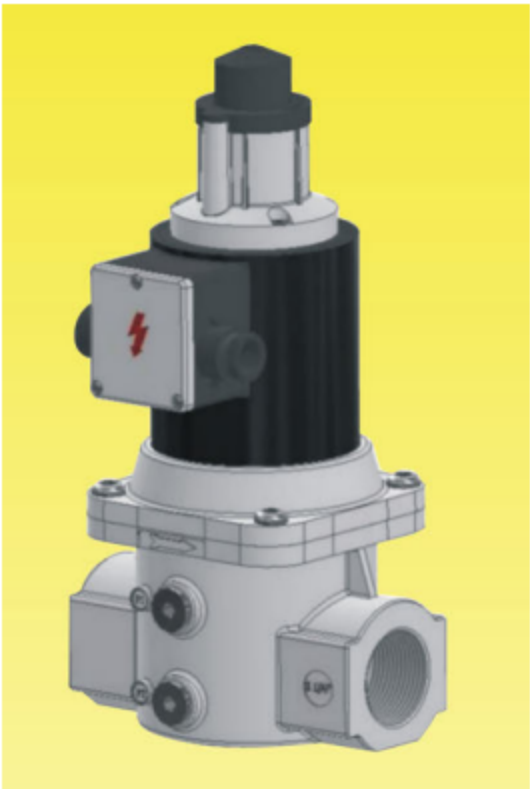
诺 一

AVE.N/L
Gas Solenoid Valve



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AVE.N/L Gas Solenoid Valve

Overview

AVE.N series fast opening and closing gas solenoid valve.

AVE.L series slow opening and fast closing gas solenoid valve.

Both series are widely used in the field of safe transportation control to provide opening and closing or cutting off gas supply.

The solenoid valve is suitable for gas media, such as natural gas, methane, liquefied petroleum gas and other gases to do two-position on-off power exchange for heating and combustion medium pipelines.

It is widely used in gas heat setting of metallurgical industry, textile industry, printing industry, kiln heating of glass and light bulb industry and automatic control system of gas heating in other industries.

Fig. 1 AVE.N series fast opening and closing gas solenoid valve

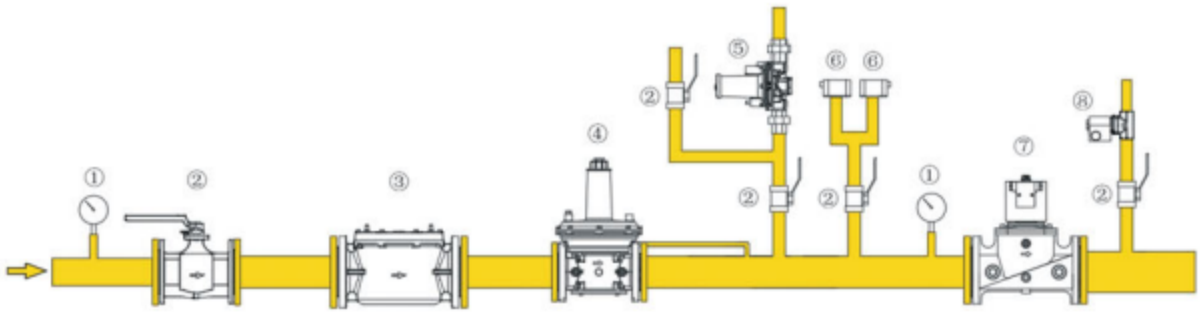
Features

- It has a wide range of models and specifications and is suitable for a variety of gas media.
- Open time and close time: AVE. N series less than 1 second; AVE.L series 2-30 seconds adjustable.
- The coil connection box has a power indicator, which can directly observe the power on and off state of the valve.
- It can work normally under vacuum, negative pressure and zero pressure, and the highest working pressure can reach 200mabr.
- It has high safety, reliability, adaptability and economy.
- The opening time and flow rate of AVE.L series gas solenoid valve can be adjusted.
- It has passed the CE type inspection and certification, and complies with EN 161:2011+A3:2013, Class A.

Fig. 2 AVE.L series slow opening and fast closing gas solenoid valve

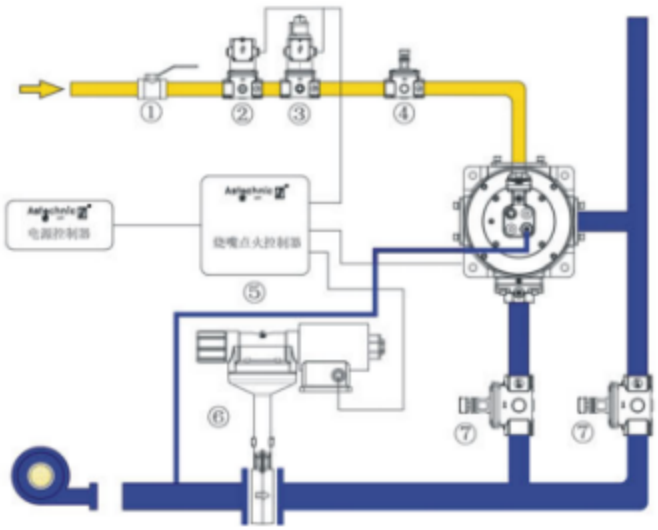
Functions and Applications

- AVE series gas solenoid valve is a safety equipment suitable for cutting off gas circuit.
- AVE.N/L series gas solenoid valves have reliable working characteristics, so they are usually installed in gas pipelines as equipment for safety and gas flow regulation.
- AVE.N/L series gas solenoid valve is often closed, the power on quickly opens, the green light is on after the power is turned off, the light is turned off immediately after the power is cut off. There are by-pass holes on both sides of the valve body, and the aperture is G1/4 ".
- AVE.L series gas solenoid valves are usually closed, and the mode state set by the factory can be re-adjusted in the power-on state for the first time, the opening time and the output flow of the back end can be adjusted, and the fast or slow opening section within the range of opening stroke can be adjusted.



① Pressure gauge
② Gas manual shutoff valve
③ Filter AF
④ Stabilizing Valve ADJ
⑤ Release Valve AMS
⑥ Pressure switch
⑦ Gas Solenoid Valve AMR
⑧ Gas normally open solenoid valve

Fig. 3 AVE.N/L is used for safe cut-off of Gas main Road



① Gas manual shutoff valve
② Gas manual shutoff valve AVE.N/ AMR.N
③ Gas quick opening solenoid valve AVE.L
④ Gas Fine Regulating Valve ASH
⑤ Burner Ignition Controller ACU460/ACU480
⑥ Air Pulse Solenoid Valve ACK
⑦ Manual air control valve

Fig. 4 AVE.N/L is used to safely cut off the gas pipeline in front of the burner

Installation dimensions and specifications

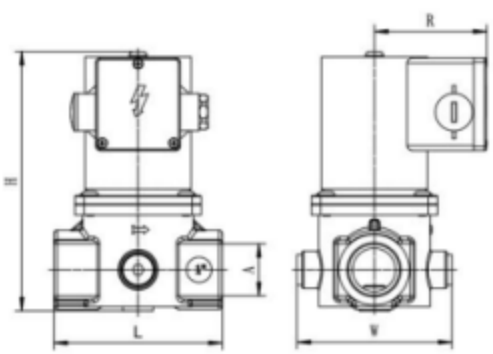


Fig. 5 Structure diagram of AVE .N Thread connection

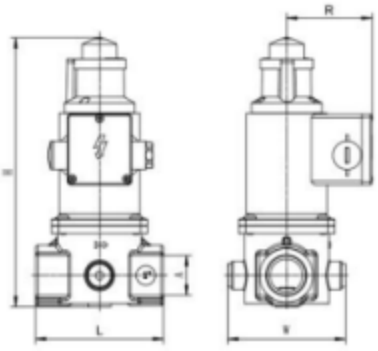


Fig. 6 Structure diagram of AVE.L Thread connection

Model	Nominal inner diameter	Connection mode	Internal thread	Length	Width	Height	Coil rotation radius	230V AC Power
			A	L	w	H	R(mm)	(W)
AVE15N	DN15	Thread connection	Rp 1/2	72	71	111	62	14
AVE20N	DN20	Thread connection	Rp 3/4	100	92	155	65	20
AVE25N	DN25	Thread connection	Rp 1	100	92	155	65	20
AVE32N	DN32	Thread connection	Rp 1 1/4	147	113	214	77	41
AVE40N	DN40	Thread connection	Rp 1 1/2	147	113	214	77	41
AVE50N	DN50	Thread connection	Rp2	170	139	226	81	60
AVE15L	DN15	Thread connection	Rp1/2	72	71	167	62	14
AVE20L	DN20	Thread connection	Rp 3/4	100	92	210	65	20
AVE25L	DN25	Thread connection	Rp 1	100	92	210	65	20
AVE32L	DN32	Thread connection	Rp 1 1/4	147	113	288	77	41
AVE40L	DN40	Thread connection	Rp 1 1/2	147	113	288	77	41
AVE50L	DN50	Thread connection	Rp2	170	139	300	81	60

AVE.L slow opening function adjustment

Slow opening function factory setting: maximum flow, valve port full slow opening (fast open stroke closed), valve port opening time about 8 seconds after electrification.

图7

Fig. 7

图8

Fig. 8

For additional settings, please refer to the following steps: 1. Loosen the two screws of the plastic lid (see Fig. 7), remove the lid and you can see three functions.

Can adjust the knob (see Fig. 8).

2. Flow regulation (see Fig. 9): maximum flow can be set through an adjustment nut with a flat position.

a. Adjustment range: 0-100% (recommended > 50%).

b. Factory setting: 100% (maximum flow), factory adjusted knob to the top position.

c. Adjustment method: place the wrench on the adjusting hexagonal nut: (i) rotate the wrench counterclockwise to increase the flow; (ii) rotate the wrench clockwise to reduce.

Flow rate; it is recommended that the downward stroke of this knob should not exceed 6mm (that is, no more than 6 laps).

3. Initial quick-open stroke setting (see Fig. 10): when Solenoid valve is powered on, it is allowed to turn on a preset small flow quickly, available.

In ignition.

a. Adjustment range: 0-100% (recommended < 50%).

b. Factory setting: fast start stroke closed (all slow open), the factory has adjusted the knob to clockwise limit.

c. Adjustment method: place the screwdriver in the slot of the adjusting screw, which is located in the center of the valve: (i) rotate the screwdriver counterclockwise to increase the quick opening stroke; (ii) rotate the screwdriver clockwise to reduce the quick opening stroke; fine-tuning within 2 laps is recommended.

4. Slow opening time adjustment (see Fig. 11): after the Solenoid valve is powered on, after the valve port passes through the fast opening stroke, the slow opening speed of the valve port can be set by this knob.

a. Adjustment range: 2-30 seconds.

b. Factory setting: about 8 seconds.

c. Adjustment method: place the screwdriver in the slot of the adjusting screw: (i) rotate the screwdriver counterclockwise to increase the opening speed until it is fully opened; (ii) rotate the screwdriver clockwise to reduce the opening speed until it is completely closed; fine-tuning within 4 laps is recommended.

图9

Fig. 9

图10

Fig. 10

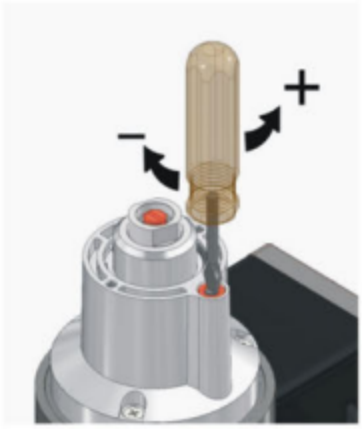
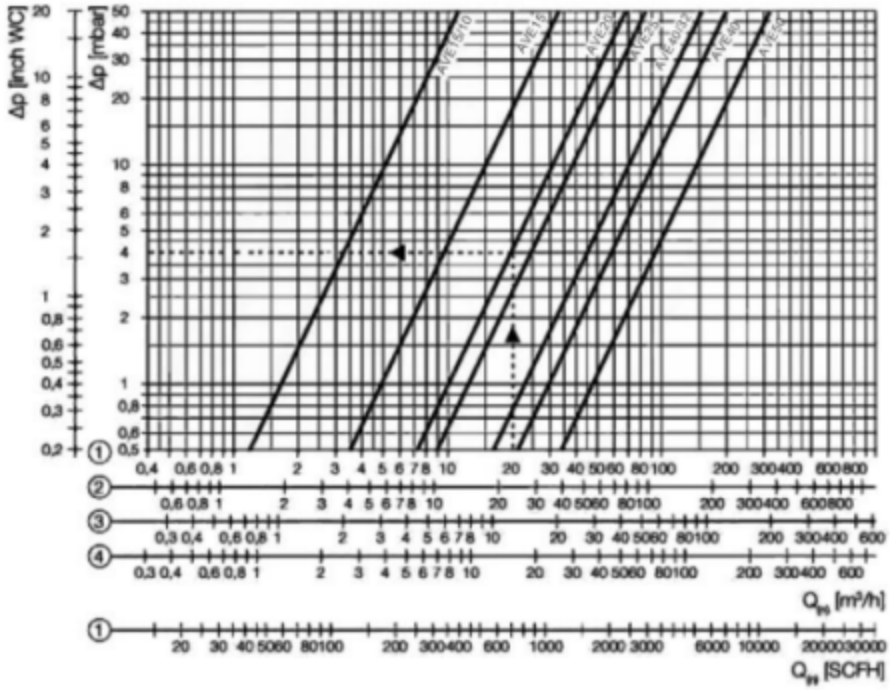


图11

Fig. 11

Technical Parameters of AVE.N/L Series Solenoid valve

- Opened: AVE. N series less than 1 second; AVE. L series adjustable from 2 to 30 seconds;
- Working medium: natural gas, methane, liquefied petroleum gas, etc.;
- Working temperature: -15°C~60°C;
- Maximum operating frequency: AVE. N series 20 beats per minute; AVE. L series 1 time per minute;
- Maximum working pressure: DN15- 50 200mbar;
- Rated voltage: 50/60Hz, 230Vac, coil class F, 360° rotation, 100% long-term continuous operation.
- Protection class: IP54, do not install in the open air;
- Sealing material: nitrile rubber;
- Body material: valve aluminum alloy; AISI 302 steel spring;
- Coil temperature: 65°C (ambient temperature 20°C) ;
- Standards and certifications: "A" standard;
- Service life: meet JB/T 7352-2010 technical requirements;
- Leakage: in line with JB/T 7352-2010 technical requirements;
- Rated flow coefficient: in line with JB/T 7352-2010 regulations.



■ 1 = natural gas [Natural gas] (ρ = 0.80 kg/m3) ■ 2= town gas [Town Natural gas] (ρ = 0.64 kg/m3)
■3= LPG [liquefied petroleum gas] (ρ = 2.01 kg/m3) ■4=air[air (ρ = 1.29 kg/m3)

Fig. 12 Corresponding chart of flow pressure of solenoid valve

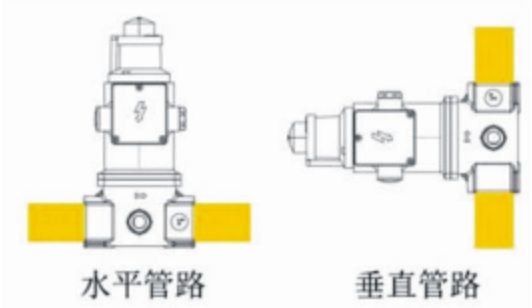
Order code and Model AVE.N/L Series Solenoid valve

No.	Order code	Model	Product Description	Action
1	103030600001	AVE15N	Thread connection Rp 1/2	N: fast opening
2	103030200001	AVE20N	Thread connection Rp 3/4	
3	103030100001	AVE25N	Thread connection Rp 1	
4	103030300001	AVE32N	Thread connection Rp 1 1/4	
5	103030400001	AVE40N	Thread connection Rp 1 1/2	
6	103030500001	AVE50N	Thread connection Rp 2	
7	103040100001	AVE15L	Thread connection Rp 1/2	N: slow opening
8	103040200002	AVE20L	Thread connection Rp 3/4	
9	103040250002	AVE25L	Thread connection Rp 1	
10	103040300001	AVE32L	Thread connection Rp 1 1/4	
11	103040400001	AVE40L	Thread connection Rp 1 1/2	
12	103040500002	AVE50L	Thread connection Rp 2	

AVE.N/L Gas Solenoid Valve wiring

●Connect the hot wire and zero wire respectively according to the mark on the terminal, and use the BVR line with 1.0-2.5mm and 500V voltage.

Precautions for installation and use of AVE. N/L gas solenoid valve



Horizontal pipeline Vertical pipeline

- The horizontal pipe section with less vibration should be selected during installation. 90 degrees installation is allowed below DN50, and horizontal installation is only allowed on DN65.
- The parameters on the solenoid valve nameplate should be consistent with the actual use requirements.
- The arrowhead on the solenoid valve body should be consistent with the media flow direction.
- Please clean the pipe thoroughly before installation to avoid the failure of solenoid valve caused by foreign body damage diaphragm.
- Effective protection should be done if installed outdoors and in harsh environment.
- It is recommended to install a filter AF upstream of the solenoid valve to protect the solenoid valve from foreign bodies, dust, etc.
- It is suggested that a manual cut-off valve should be installed upstream of the solenoid valve. When the solenoid valve fails, it can be isolated in time and is convenient for maintenance.
- If the opening and closing of the valve fails in use, you can check whether the coil is powered off; whether the power supply and medium pressure are normal.
- When the solenoid valve is not installed temporarily, it can be stored in the room where the ambient temperature is 0-40 ℃ C and the relative humidity is less than 80%. Open-air storage is not allowed.
- Ensure that all functions of the system comply with valve specifications (gas type, working pressure, flow rate, ambient temperature, voltage, etc.).
- Maintenance cycle once a year, and increase the number of maintenance as appropriate, such as corrosive gases.