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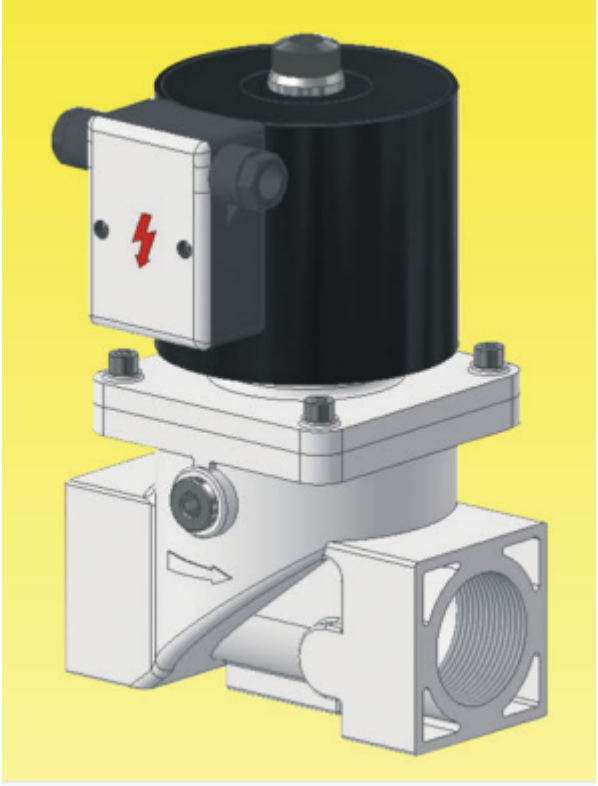
诺 一

AMR
Gas Solenoid Valve



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AMR Gas Solenoid Valve

Overview

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

AMR.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 city gas, liquefied petroleum gas, natural gas and other kinds of gas to do two-position on-off power exchange for heating and combustion medium pipeline, and carry out temperature automatic control. It is widely used in gas heat setting in metallurgical industry, textile industry, printing industry, kiln heating in glass and light bulb industry and gas heating automatic control system in other industries.

Fig. 1 AMR.N Fast opening and closing Gas Solenoid Valve

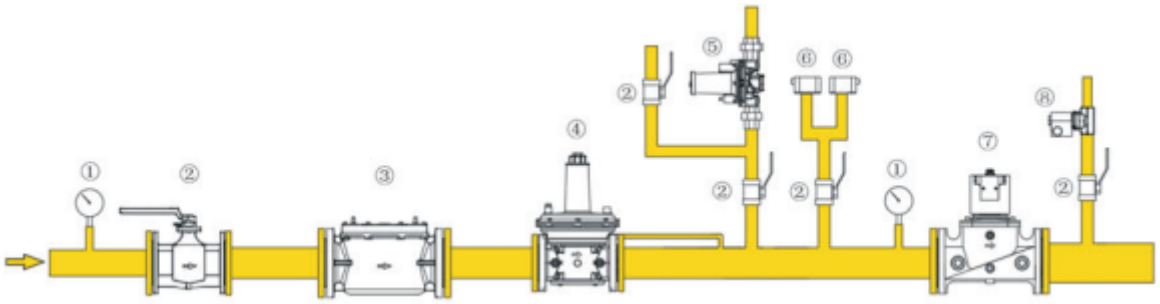
Fig. 2 AMR.L slow opening and fast closing gas solenoid valve

Features

- It has a wide range of models and specifications and is suitable for a variety of gas media.
- The opening and closing time of the AMR.N series is less than 1 second, while the AMR.L series is adjustable in 2-30 seconds.
- 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 360mabr.
- It has high safety, reliability, adaptability and economy.
- The opening time and flow rate of AMR.L series gas solenoid valve can be adjusted.
- It has passed CE type inspection and certification and conforms to EN 60730-1:2016+A1:2019 Class A standard.

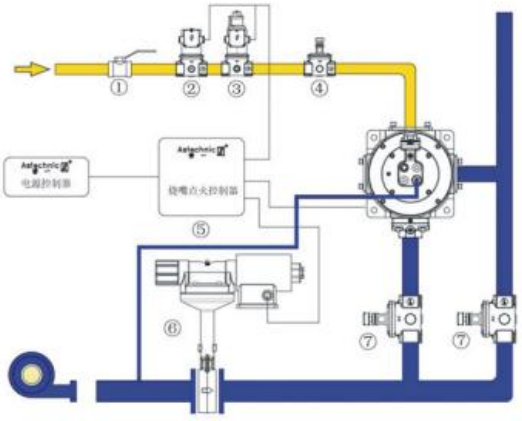
Functions and Applications

- AMR series gas solenoid valve is a safety equipment suitable for cutting off gas circuit.
- The reliable working characteristic of AMR series gas solenoid valve is fast opening and closing, so its opening time and closing time are less than 1s. Therefore, it is usually installed in the gas pipeline as a device for safety and regulating gas flow.
- Gas solenoid valve AMR series is used for ignition burner or low power gas switch in automatic control combustion system. It is generally controlled by the controller to cut off the gas when the burner is active or flameout to ensure the safety of combustion. The utility model is used for the safe cutting off of the gas pipeline in front of the gas main line or burner. It is used as an automatic cut-off valve for gas in front of the burner.



① Pressure gauge
② Gas manual shutoff valve
③ FilterAF
④ Stabilizing ValveADJ
⑤ Release ValveAMS
⑥ Pressure switch
⑦ Gas normally closed solenoid valve
⑧ Gas normally open solenoid valve

Fig. 3 AMR.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
⑤BurnerIgnition Controller ACU460/ACU480
⑥ Air Pulse Solenoid Valve ACK
⑦ Manual air control valve

Fig. 4 AMR. N/Lis used to safely cut off the gas pipeline before the burner.

Installation dimensions and specifications

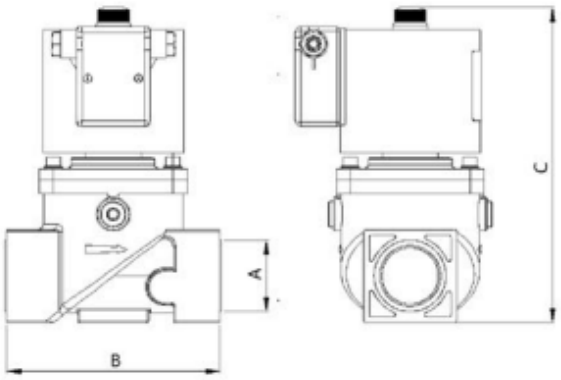


Fig. 5 Structure diagram of AMR.N thread connection

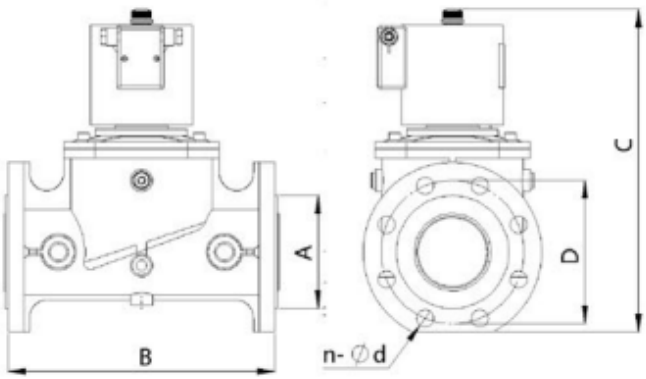


Fig. 6 Structure diagram of AMR.N flanged connection

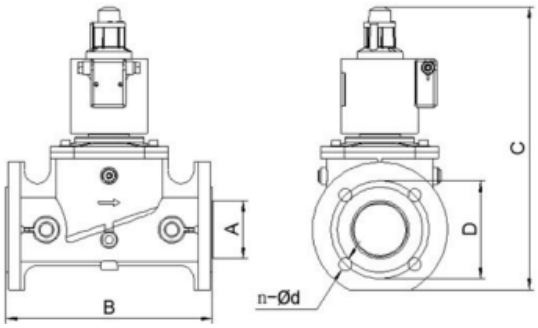


Fig. 7 Structure diagram of AMR.L Flanged connection

Model	Nominal inner diameter	Connection mode	Interface A	B/mm	C/mm	D/mm	N-φd	ACPower/W
AMR1.N	DN15	Thread connection	Rp 1/2	65	108	--	--	9
AMR2.N	DN20	Thread connection	Rp 3/4	95	167	--	--	10
AMR3.N	DN25	Thread connection	Rp 1	95	167	--	--	10
AMR35.N	DN32	Thread connection	Rp 11/4	153	223	--	--	35
AMR4.N	DN40	Thread connection	Rp 11/2	153	223	--	--	35
AMR6.N	DN50	Thread connection	Rp 2	158	229	--	--	35
AMR72.N	DN65	Standard flange	DN65	307	358	φ145	4-φ18	55
AMR82.N	DN80	Standard flange	DN80	307	358	φ160	8-φ18	55
AMR100.N	DN100	Standard flange	DN100	350	390	φ180	8-φ18	94
AMR72.L	DN65	Standard flange	DN65	307	420	φ145	4-φ18	55
AMR82.L	DN80	Standard flange	DN80	307	420	φ160	8-φ18	55

AMR.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8

Fig. 8

图9

Fig. 9

For additional settings, please refer to the following steps:

1. Loosen the two screws of the plastic cover (see Fig. 8), remove the cover, and you can see three function adjustment knobs (see Fig. 9).

2. Flow regulation (see Fig. 10): through the adjustment nut with flat position, the maximum flow can be set.

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 rate; (ii) rotate the wrench clockwise to reduce the flow rate; it is recommended that the downward stroke of this knob not exceed 6mm (that is, no more than 6 laps).

3. Initial quick-open stroke setting (see figure 11): when the solenoid valve is powered on, it allows a preset small flow to be opened quickly, which can be used for ignition.

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

b. Factory setting: fast start stroke closed (whole 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 figure 12): 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10

图11

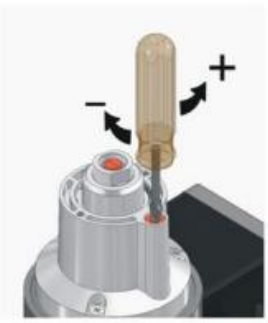


图12

Fig. 10 Fig. 11 Fig. 12

Technical Parameters of AMR.N/L Gas Solenoid Valve

- Opened: AMR. N series less than 1 second; AMR. L series adjustable from 2 to 30 seconds;
- Product structure: direct-acting type (caliber above 100, secondary valve opening);
- Working medium: non-corrosive gas liquids such as coal gas, liquefied petroleum gas, natural gas;
- Maximum operating frequency: AMR series 20 times per minute; AMR. L series 1 time per minute;
- Working temperature: -15°CC~60°C;
- Coil temperature: 65C (ambient temperature 20°C);
- Protection class: IP54, do not install in the open air;
- Sealing material: nitrile rubber;
- Body material: valve aluminum alloy; AISI 302 steel spring.

- Standards and certifications: "A" level standards;
- Working pressure difference: 0~0.04MPa;
- Maximum working pressure: DN15-80 360mbar, DN100 200mbar;
- Rated voltage: AC220VA (its specifications can be made for special order);
- Service life: meet JB/T 7352-2010 technical requirements;
- Leakage amount: in line with JB/T 7352-2010 technical requirements;
- Rated flow coefficient: in line with JB/T 7352-2010;

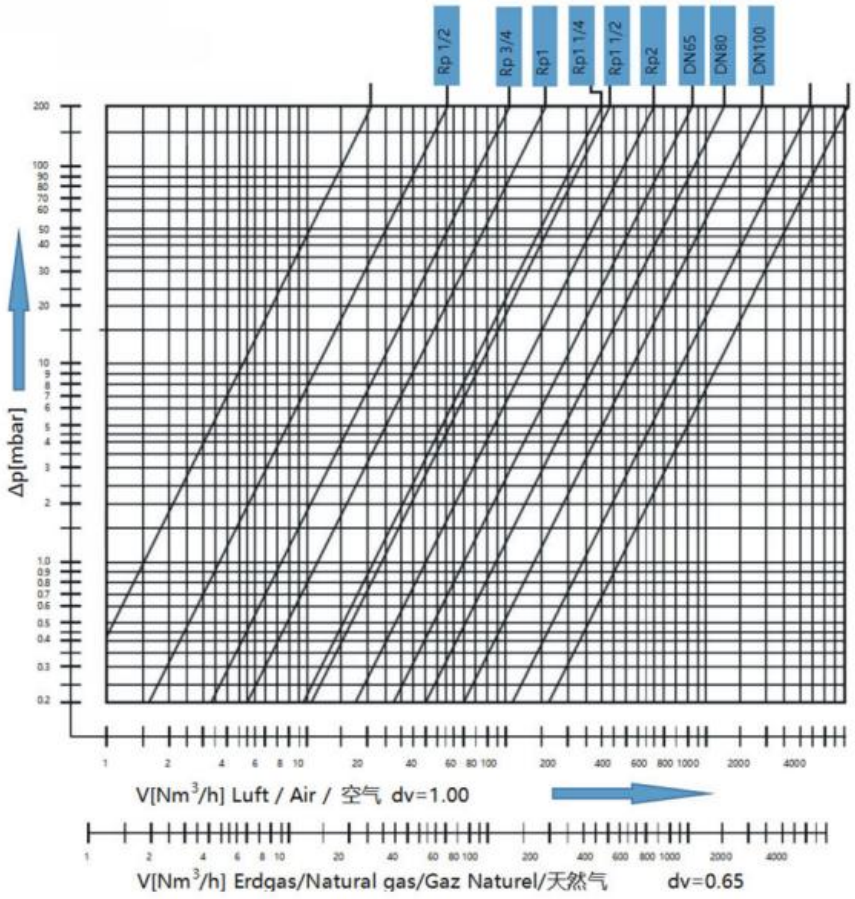


Fig. 13 Flow and pressure corresponding chart of AMR gas solenoid valve

Order code and Model of AMR.N/L Gas Solenoid Valve

No.	Order code	Model	Product Description	Actions
1	103010150001	AMR1.N	Thread connection Rp 1/2	N: fast opening
2	103010200001	AMR2.N	Thread connection Rp 3/4	
3	103010250001	AMR3.N	Thread connection Rp 1	
4	103010320001	AMR35.N	Thread connection Rp 11/4	
5	103010400001	AMR4.N	Thread connection Rp 11/2	
6	103010500001	AMR6.N	Thread connection Rp 2	
7	103010650001	AMR72.N	Flanged connection DN65	
8	103010800001	AMR82.N	Flanged connection DN80	
9	103011000001	AMR100.N	Flanged connection DN100	
10	103010650002	AMR72.L	Flanged connection DN65	L: slow opening
11	103010800004	AMR82.L	Flanged connection DN80	

Wiring of AMR.N/L Gas Solenoid Valve

● According to the marks on the terminal block, connect the live wire and the zero line respectively, with 1.0-2.5mm2, withstand voltage 500V BVR line;

Precautions for system design, installation and maintenance of AMR.N/L Gas Solenoid Valve

- When installing, it is advisable to choose a horizontal pipe section with less vibration, 90 degrees installation is allowed below DN50, and only horizontal installation is allowed above DN65;
- The parameters on the solenoid valve nameplate should be consistent with the actual use requirements;
- The arrow on the solenoid valve body should be consistent with the flow direction of the medium;
- Please purge the pipeline thoroughly before installation to avoid foreign matter damage to the diaphragm and cause solenoid valve failure;
- If installed outdoors and in harsh environments, corresponding effective protection should be done;
- It is recommended to install filter AF upstream of the solenoid valve for protecting the solenoid valve from foreign matter, dust, etc.
- It is recommended to install a manual shut-off valve upstream of the solenoid valve, which can be isolated in time and easy to maintain when the solenoid valve fails;
- If the valve opening and closing fail during use, 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 an indoor room with an ambient temperature of 0-40C and a relative humidity of ≤ 80% non-corrosive gas, and it is not allowed to be stored in the open air.
- It ensures that all functions of the system comply with the specifications of the valve (gas type, working pressure, flow rate, ambient temperature, voltage, etc.).
- The maintenance cycle is once a year, and the number of maintenance is increased according to the situation, such as: corrosive gas;

Horizontal piping, vertical piping