Solenoid valve

- Part name: Water inlet valve
- Model: APD-160A
- Rated Voltage: AC220V-240V(Customizable)
- Frequency: 50/60Hz
- Pressure range: 0.02-0.1Mpa

- Scope of application: washing machine, ice machine, coffee machine, water dispenser and other waterappliances.
- Basic principles of components: The coil is energized to generate magnetism, drive the valve core, and change the internal pressure of the water inlet valve through the pressure-boosting hole and the pressure-reducing holeto complete the water inlet and shut-off action of the washing machine.
- Certification requirements: Have TUV & CE & ROHS certification;
- Basic parameters

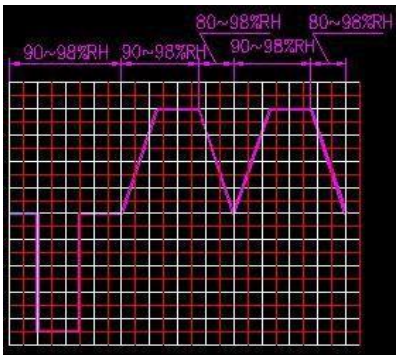
Voltage (V)	customizable
Frequency (Hz)	50/60Hz
Current (mA)	customizable
Water temperature	0℃～65℃
Water pressure	0.02MPa～0.1MPa
Environment temperature	-20℃～65℃

◆ Performance

Item	Test method					Material
Flow rate	water pressure(MPa)	0.02	0.1	0.3	0.8	
	Flow rate(1/min)	>3	>8	>13	>21	
Sealability	Apply 2.5Mpa water pressure to the water inlet valve for 5 minute without dripping;					Guide rod
Insulation resistance	The conductive part, the leaked metal part, and the non-metal part are all greater than 100MΩ					BMC Sealing
Coil resistance	4.7±0.5KΩ					Piston cap
Noise	Sound pressure level is less than 40dB (A)					Diaphragm plate
G3/4 Thread strength	Unbreakable with 2Nm torque					Valve
Water pressure resistance	Rated voltage, hydrostatic pressure is turned on for 5 minutes at 1.96MPa					No leakage or damage
	The water outlet is sealed, and the hydrostatic pressure is maintained at 1.96MPa for 5 minutes.					No leakage or damage
Terminal strength	Apply 40N•10S tension along the axial direction of the terminal and 0.3N•m, 10S along the vertical direction of the terminal.					No loose

◆ Environmental test

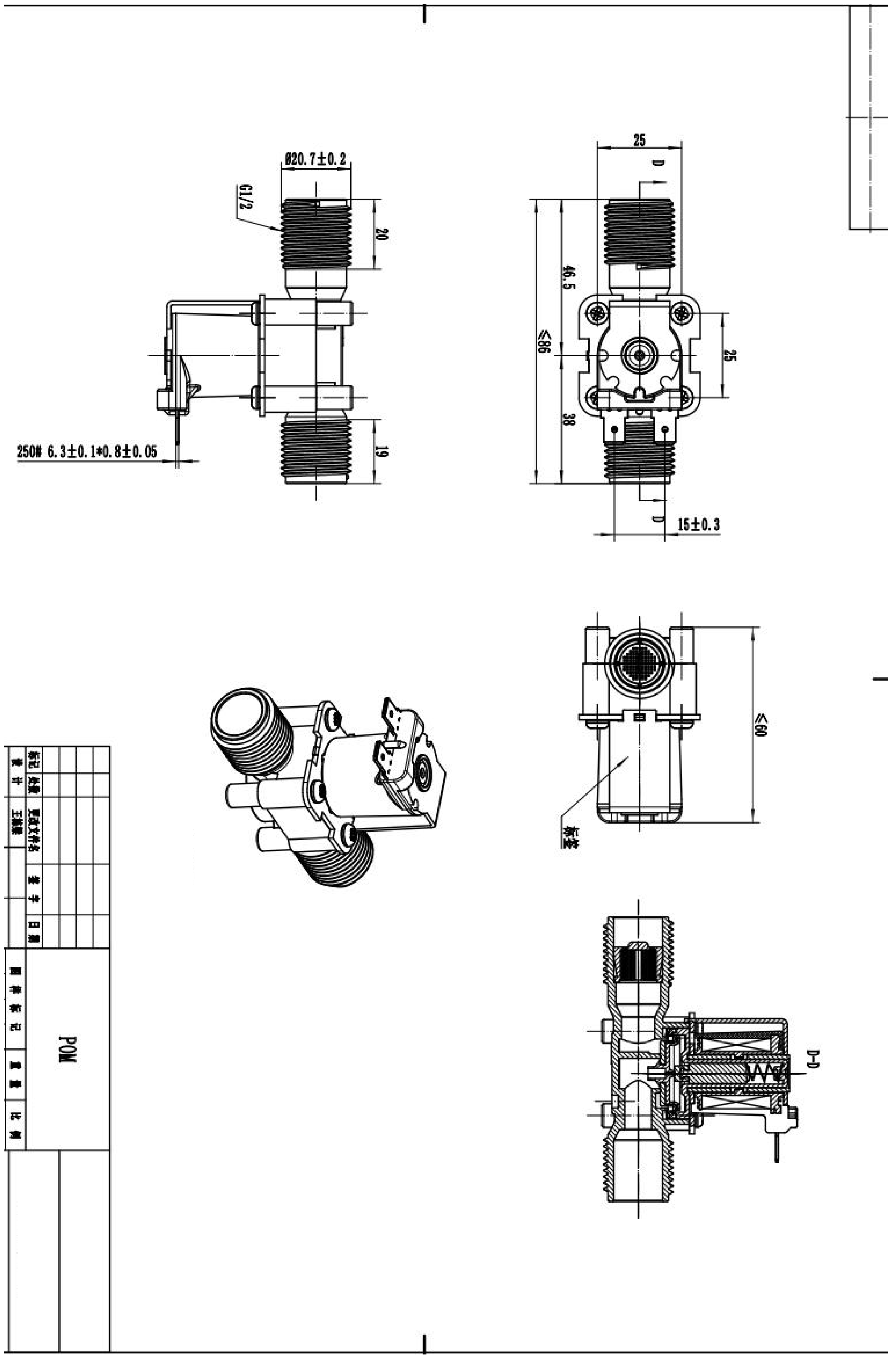
Item	Test method	Specification Value
Moisture resistance insulation test	After preheating at 45±3 ℃ for 4 hours, place it in a constant temperature bath with a temperature of 40±3℃ and a humidity of 90-95%RH for 720 hours. After taking it out, wipe off the surface water droplets.	The insulation resistance should be greater than 5MΩ
Immersion insulation	After soaking in water with a temperature of 20℃±10℃ and a depth of 10cm for 8 hours, take it out and wipe off the surface water droplets.	The insulation resistance should be above 2 MΩ
Heat resistance	Place it at 85℃ for 48h, and after taking it out, place it at room temperature and humidity for 1h.	Electrical performance meets requirements
Cold tolerance test	Place it in an environment of -20℃±2℃ for 48h, and place it at room temperature and humidity for 2h after the end.	Electrical performance meets requirements
Condensation test	Place it in a low temperature tank at -20℃ for 16 hours, and immediately put it in a mist environment at 20℃after taking it out.	The insulation resistance should be above 2MΩ
Freezing performance	When the water inlet valve is filled with water, seal the water inlet and outlet. After placing it at -10° C for 24 hours, apply 110% of the rated voltage, and return to normal temperature after 2 hours of power on.	Meet the requirements of operating pressure, water pressure resistance, flow rate and electrical strength

Salt spray test	Place the water inlet valve and its metal parts in the salt spray box for 48 hours, (the concentration of the salt solution is (5±0.1)%, the pH value of the salt solution before atomization is 6.5~7.2, the work of the experimental equipment)The temperature in the experimental space is 35±2℃)	The iron core has no rust, and other parts have no rust that affects the use
Vibration resistance	Vibrate on a vibrating table with an amplitude of 3mm and a frequency of 20-60Hz for 20 minutes each in front and back, left and right, and up and down.	Meet the requirements of operating voltage, electrical strength, insulation resistance and water tightness.
Water hammer (quick breaking time)	Keep the hydrodynamic pressure at 0.15Mpa, cut off the power after a period of action, measure the water-off time, test the water-off time, take the maximum value, and measure three times.	Within 1s
Abnormal restraint endurance	Forcibly lock the iron core, apply 1.15 times the rated voltage and continuously energize (above 4H). When the temperature of each part reaches a certain level, there should be no obvious melting and deformation.	Meet the requirements of operating voltage, electrical strength, insulation resistance and water tightness.
Thermal shock	Place it in an environment of 65±3℃ for 1h, and then put it in an environment of -20±3℃ for 1h. This is a cycle, and the cycle is continued for 50 times. After the end, it is placed at room temperature and humidity for 2 hours.	Electrical performance meets requirements
Temperature cycle	The following shows a temperature cycle, repeating 10 cycles, and the measurement is performed in a high humidity environment. 	Insulation resistance is greater than 2MΩ
Detergent resistant	Place it in a detergent (Omo Detergent) solution with a concentration of 0.3% at 65° C±3° C for 48 hours, and place it at room temperature and humidity for 1 hour after the end.	Voltage fluctuation, insulation resistance, withstand voltage, inter-turn withstand voltage, and sealing performance meet the requirements

- Storage and transportation

  The components should be stored in a warehouse with good ventilation, no corrosive gas, and no rain or snow.
  The components should be protected from shock, vibration and direct rain and snow during transportation.
  Meet the requirements of the longest storage time, re-inspection and restricted use.
- other requirements

  In addition to meeting the above requirements, the inlet valve also needs to meet the requirements of the whole machine and the actual use environment.
  Including but not limited to voltage fluctuations, installation environment of the whole machine, etc.
  Coil bobbin, plastic encapsulation resin flame retardant, UL94V-0 or above, glow wire at 750℃.



Ø20.7±0.2
G1/2
20
19
250# 6.3±0.1*0.8±0.05
25
D
46.5
≤86
25
38
15±0.3
≤60
标签
D-D
标记
处数
更改文件名
签字
日期
图样标记
重量
比例
POM