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FUXIN[®]

FUXIN ELECTRICAL

Smart & Energy-saving Solenoid Valve Control Solutions

ZHEJIANG FUXIN ELECTRICAL TECHNOLOGY CO., LTD.

FUXIN[®]
FUXIN ELECTRICAL

Meet CE, CB, NSF, RoHS, WRAS International standards

Low-water Hammer Character

3.5Mpa water pressure resistant

POM, EPDM material

IP67 water-proof

7mm pulse power-saving

1,200,000+ cycles service life

Applicate to

Sensor Sanitary Ware

Intelligent Sanitary Ware

Intelligent Household Appliances

Irrigation

Company summary

Founded in 2001, Fuxin was mainly engaged in producing energy-saving type bi-stable pulse solenoid valves and accessories. The products are widely used in intelligent toilet automatic flushing control, induction sanitary ware, solar automatic water supply control, household appliances, washing equipment, food processing, garden irrigation, intelligent water meter and engineering water control system, etc.

Since founded, the company always adheres to the concept of "independent research and development, active innovation", to provide the users with high quality solenoid valve proposal and value-added services that meet customer demands to solve the technical problems encountered by the users in the use of solenoid valves. As the company grows, Fuxin invested 150 million Yuan in 2009 to build Industrial Park covering an area of 18,000m² in Jinlong Industrial Park of Tongliang District, Chongqing, and registered "Chongqing RongHuan Electric Appliance Co. Ltd." specialized in research and development, production, sales, and goods import and export trade of high and low voltage electrical appliances, measuring instruments, instruments, sanitary ware, software and electronic components, and pipe valves.

As a leading solenoid valve manufacturing enterprise, Fuxin always adheres to the technical concept of prominent performance and always takes providing the best solutions for the customers as its own duty. Now the company has laboratory, professional research and development teams composed of engineers and technicians, and a set of strict product development processes. Market research, conception, design, material selection, sample production and other links are all provided with professional designers for control and check. In the production process, the advanced, first-class testing equipment makes each Fuxin product have diamond-like quality, and solenoid valves have service life longer than 1 million times.

All the 22 years since the establishment, the company has passed ISO9001 international quality system certification, and the products have passed CE, ROHS, NSF, ASC, KTW, WRAS certifications. Monthly production capacity is more than 300,000 pieces. The company has successfully concluded strategic partnership with many domestic well-known sanitary ware enterprises such as Fujian Jomoo, Tangshan Huida, Xiamen Runner, and exported products to more than 20 countries and regions, including the United States, Canada,

Germany, Brazil, Russia, Argentina, Singapore, Hongkong, Taiwan.

Now Fuxin brand has become the first choice of many sanitary ware manufacturers both at home and abroad. Today, Fuxin is growing, and has become two main bodies - "Zhejiang Fuxin Electrical Technology Co., Ltd." and "Chongqing RongHuan Electric Appliance Co. Ltd.". Fuxin has injection molding workshop, machining workshop, punching workshop, polishing workshop, coil production line, solenoid valve production line, finished-product testing workshop, and constantly invests heavily in the introduction of CNC machining centers, large precision punching machine, vertical turntable injection molding machine, automatic film covering machine, automatic screw locking machine, automatic core screening machine, depth measurement instrument, automatic dispensing machine, advanced assembly line and other equipment. To ensure the product quality and improve product self detection ability, the company has established solenoid valve, intelligent gas meter and intelligent water meter laboratory, set up product testing center, introduced advanced product performance testing machine, product life test machine, imported oscillographic instrument, high and low temperature test equipment, salt spray test equipment, computer high power magnifier, taking the lead in the industry in the aspect of product testing.

Fuxin, carves out in hardship, develops in steady progress, takes the unity, hard work, exploitation and advancing as enterprise tenet in the fierce market competition, and takes the constant introduction of advanced technology, process improvement, development of new products as the development power to meet customer needs. With the objective policy of always taking providing the best solutions for the customers as its own duty", the company has gradually formed the enterprise core competitiveness of its own characteristics by comprehensively introducing scientific and modern management mode, which has laid a solid foundation for the company to become the industry pioneer. In line with the operating principle of "seeking brilliance with customers, developing together with partners", taking the interests of customers and employees as the root, taking the brand operation as the strategy, the company aims at making a contribution to the development of intelligent and energy-saving undertakings.

Leader of Pulse Solenoid Valve





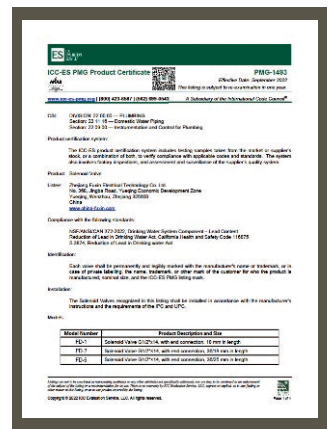
ZHEJIANG FUXIN ELECTRICAL TECHNOLOGY CO., LTD.

Honor

A symbol of excellence, a badge of pride,

A product of quality that cannot be denied.

A brand that is reliable, with never rust







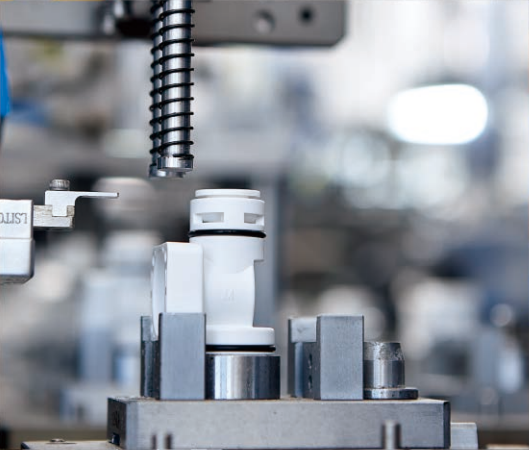
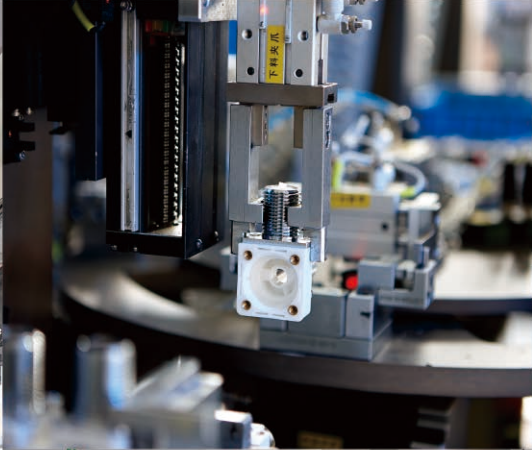
WE WILL SATISFY THE UNIQUE REQUIREMENTS BY CUSTOMER

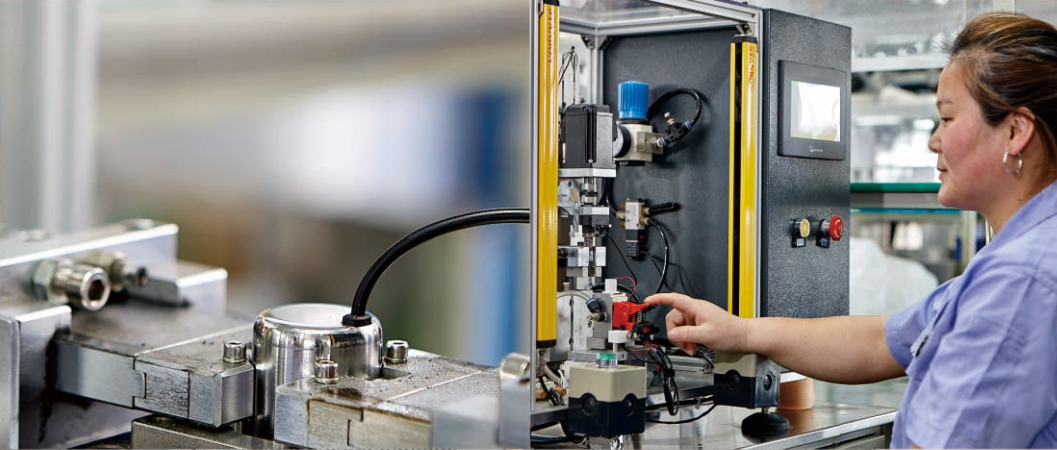
Fuxin is customer-oriented

All of our products, including standardized and customized products, are equipped with high sensitivity and efficient production processes to meet various product production requirements.

We offer multiple options for both bulk production and customization

Provide integrated solutions for customers to determine the level of integration.





PRODUCT CHARACTERISTICS, APPLICABLE STANDARDS



KTW W270 ACS

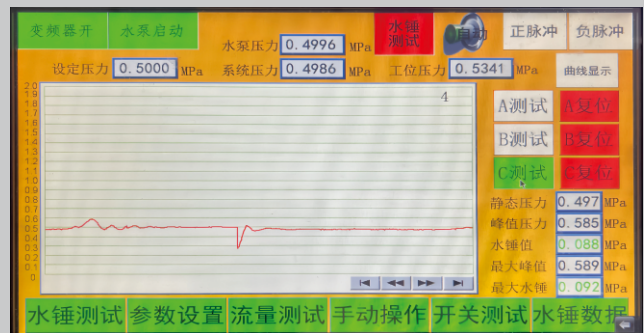


① ②

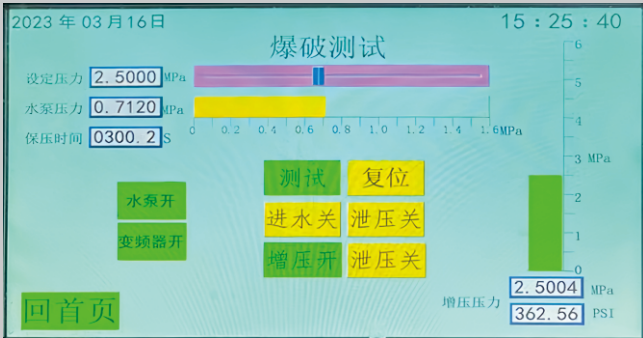
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④

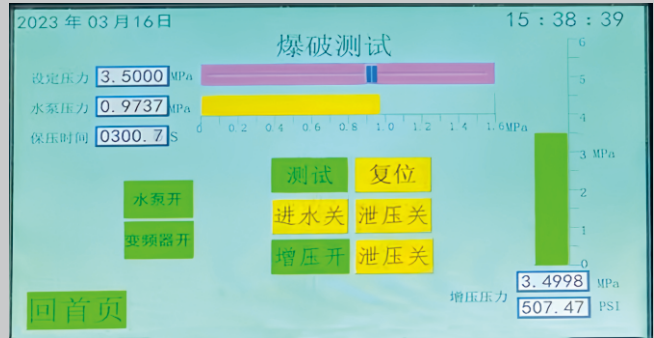
⑤



- ①. Meet GB/T41863-2022, GB/T34549-2017, GB25502-2017, GB25501-2019, GB/T267502011, CJ/T194-2014, QB/T5734-2022, QB/T5735-2022 and other national and industry standards.
- ②. Comply with GB/T25501-2019 Water efficiency limit value and water efficiency grade of water spout 1, 2, 3 level requirements, comply with GB 25502-2017 Water efficiency limit value and water efficiency grade of bidet 1, 2, 3 level requirements.
- ③. Meets international standards such as EN15091:2013 ,IEC60730:2000, NSF/ANSI/CAN 372-2022, NSF/ANSI/CAN 61-2022 and RoHS(EU).
- ④. Micro power consumption: the minimum working current of the solenoid valve can be as small as 120mA, the pulse width can be as small as 7ms.
- ⑤. Reduce water hammer: meet the requirements of international water impact value standard $\leq 0.3\text{MPa}$, domestic water impact value standard requirements $\leq 0.2\text{MPa}$.



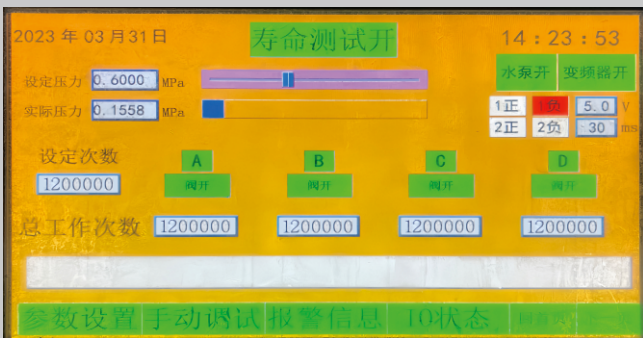
⑥



⑥

⑦

⑧



⑥. Withstand high water pressure: Domestic 2.5MPa; International 3.5MPa.

⑦. Ultra-long life: the solenoid valve can reach 1,200,000 times.

⑧. Waterproof: Waterproof grade up to IP67.

Sensor Faucet Solenoid Valve

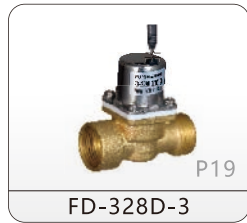
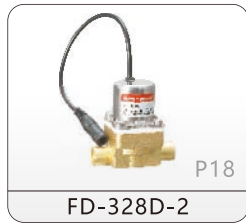
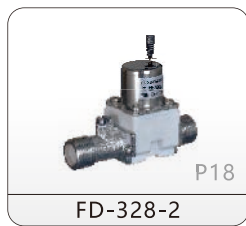


Sensor Cold & Hot Mixer Faucet Solenoid Valve

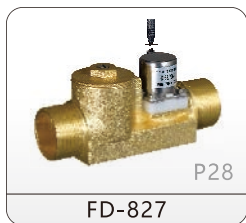
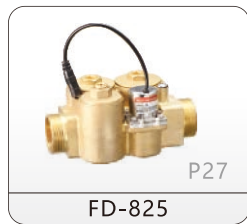
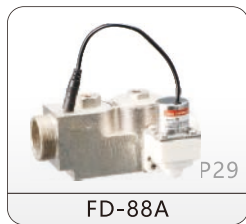
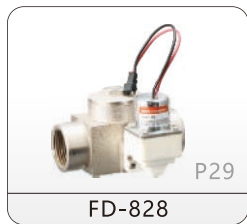


Sensor Urinals Solenoid Valve

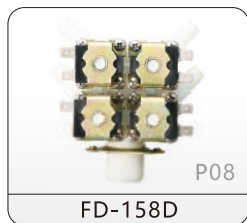
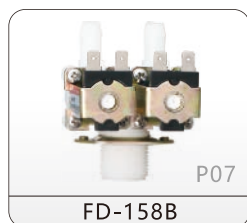
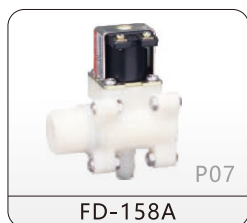
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 P01 FD-08A	 P01 FD-08A-2	 P01 FD-08A-4	 P02 FD-08A-5	 P02 FD-08A-6
 P03 FD-08E	 P03 FD-09A	 P13 FD-18A	 P13 FD-18A-2	 P14 FD-18E
 P14 FD-18G	 P14 FD-18G-2	 P14 FD-18H	 P15 FD-18K	 P15 FD-18PC
 P15 FD-18PD	 P16 FD-18ZD	 P05 FD-138D	 P05 FD-138D-2	 P05 FD-138E
 P09 FD-160AD	 P09 FD-160ASD	 P09 FD-160BC	 P10 FD-160BD	 P10 FD-160BSC
 P10 FD-160BSD	 P11 FD-160SZD	 P11 FD-160SPC	 P11 FD-160SPD	 P10 FD-160PC



WC Pan Solenoid Valve



Multi-way Solenoid Valve

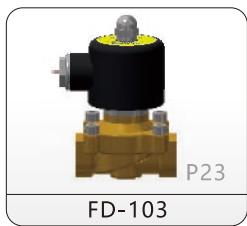


Shower Solenoid Valve /Irrigation Solenoid Valve

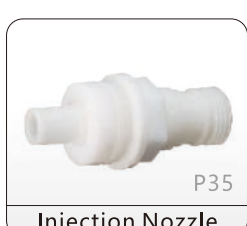
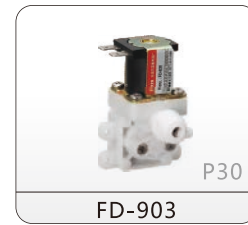
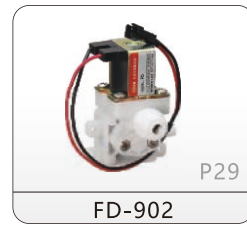
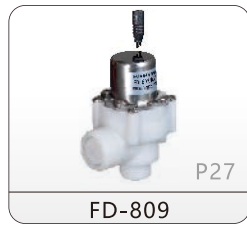
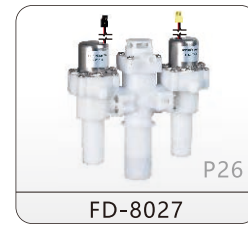
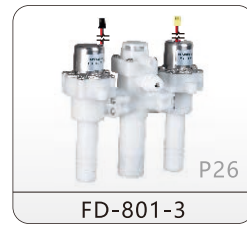
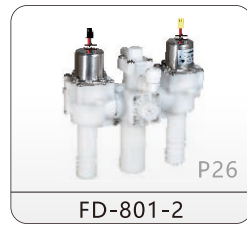
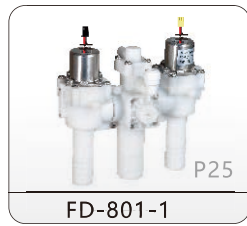
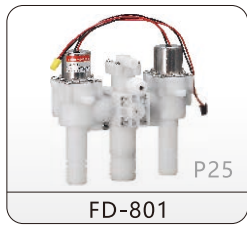


Universal Engineering Solenoid Valve

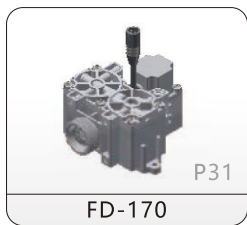
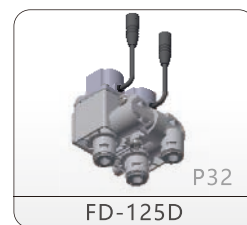
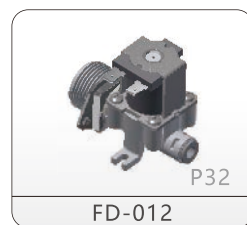
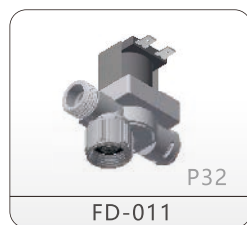
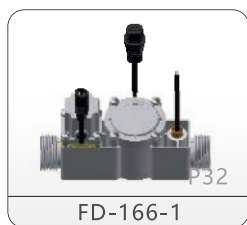




Smart Toilet Solenoid Valve



Solenoid Valve Series For Household Appliances



Solenoid Valve Coil Series



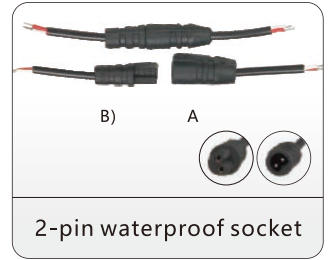
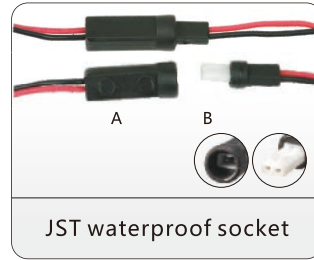
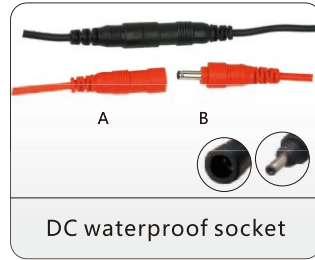
Filter Series



Control Valve Series



Water-proof socket

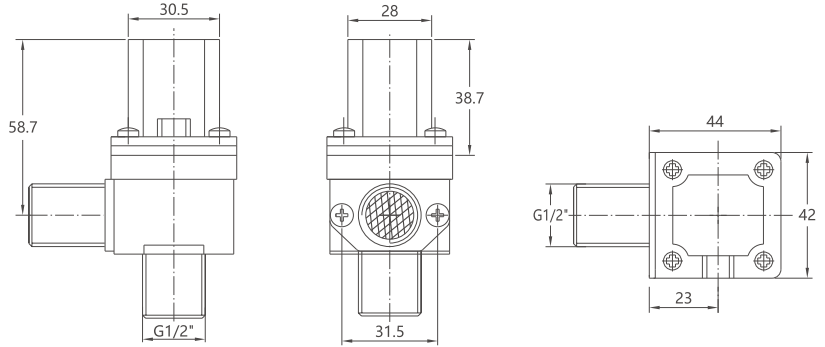




Model: FD-08A

Size of installation

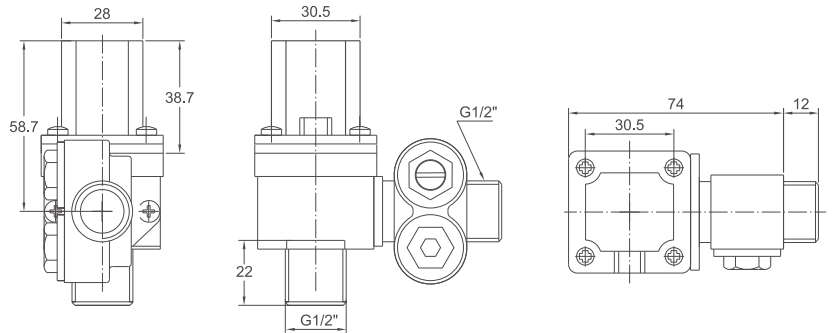
The technical parameters are detailed on page 39



Model: FD-08A-2

Size of installation

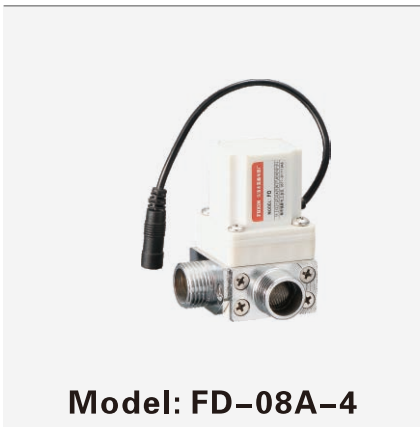
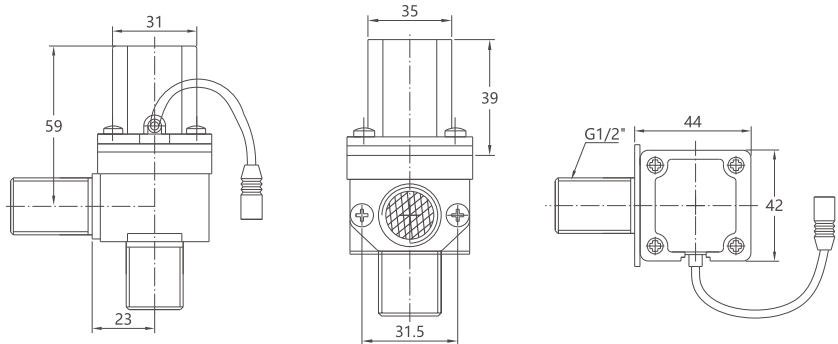
The technical parameters are detailed on page 39



Model: FD-08A-3

Size of installation

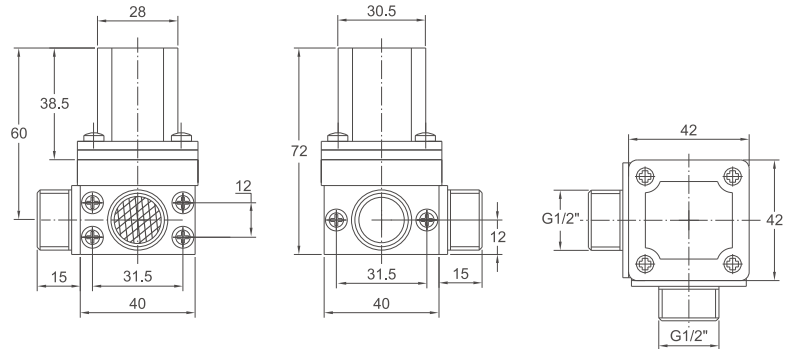
The technical parameters are detailed on page 39



Model: FD-08A-4

Size of installation

The technical parameters are detailed on page 39

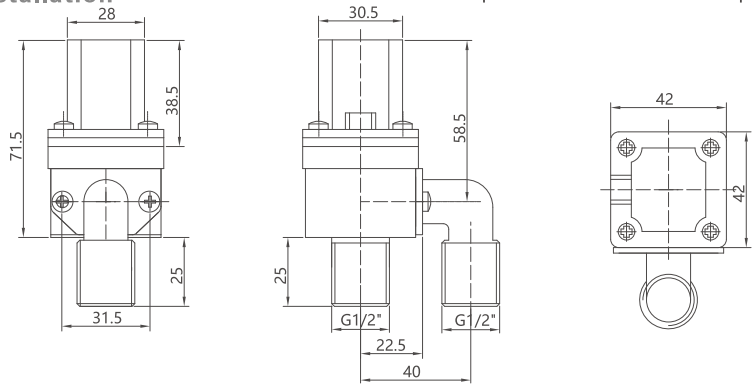




Model: FD-08A-5

Size of installation

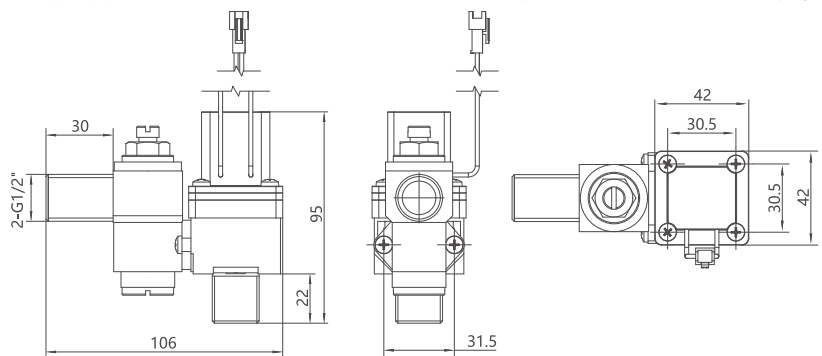
The technical parameters are detailed on page 39



Model: FD-08A-6

Size of installation

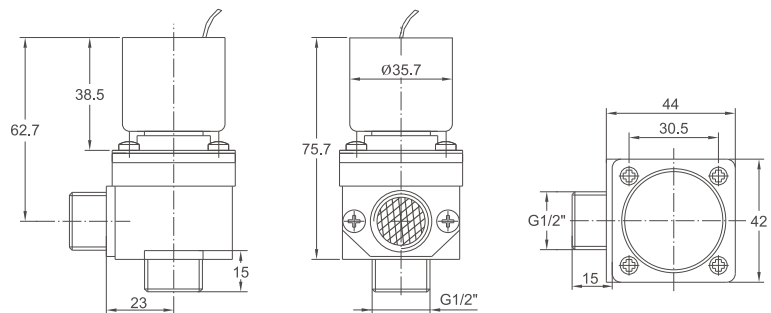
The technical parameters are detailed on page 39



Model: FD-08B

Size of installation

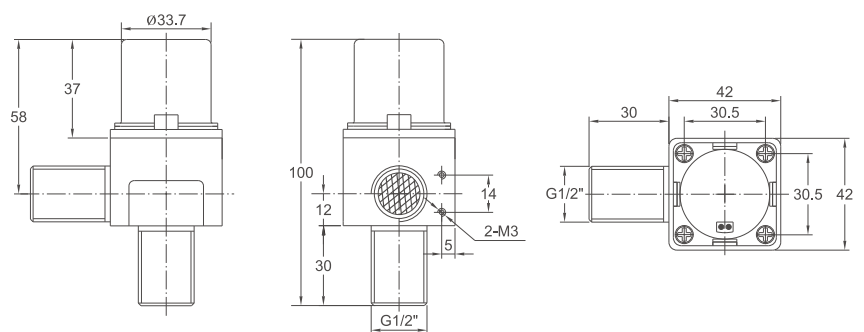
The technical parameters are detailed on page 43



Model: FD-08C

Size of installation

The technical parameters are detailed on page 41

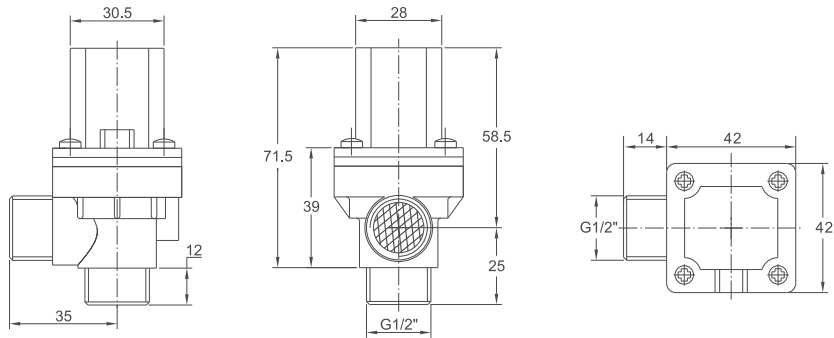




Model: FD-08E

Size of installation

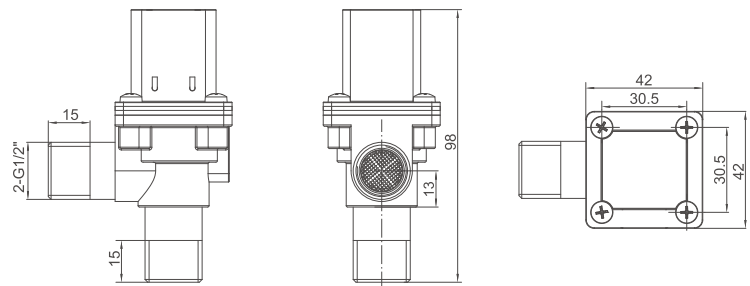
The technical parameters are detailed on page 39



Model: FD-08E-2

Size of installation

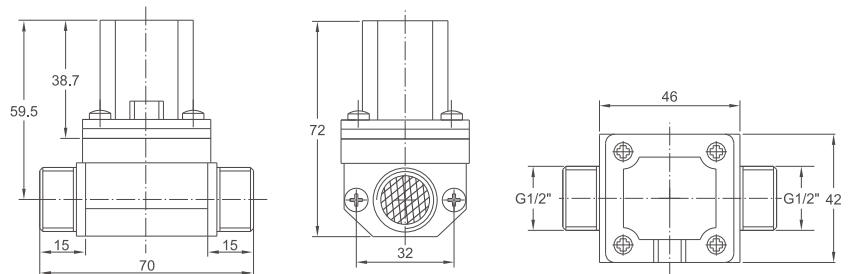
The technical parameters are detailed on page 39



Model: FD-09A

Size of installation

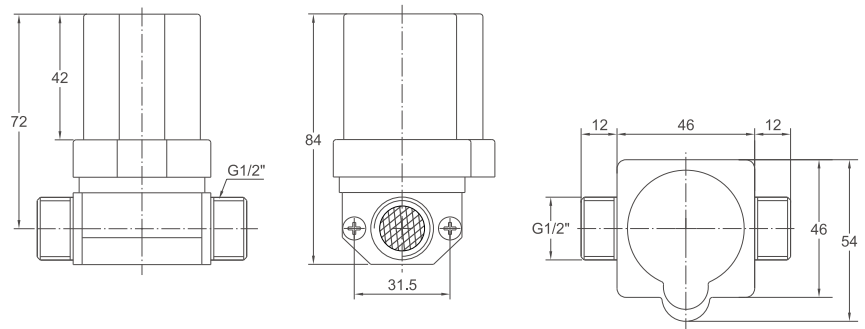
The technical parameters are detailed on page 39



Model: FD-09B

Size of installation

The technical parameters are detailed on page 43

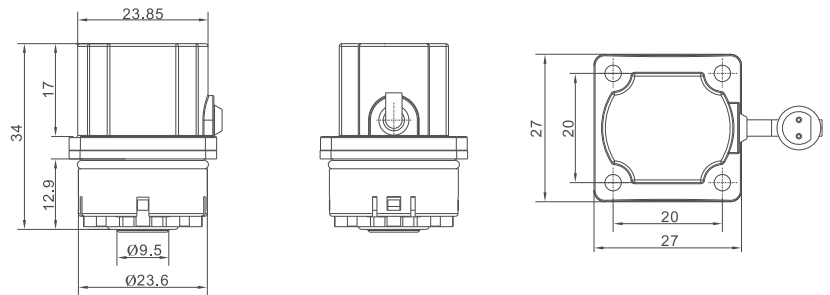




Model: FD-125

Size of installation

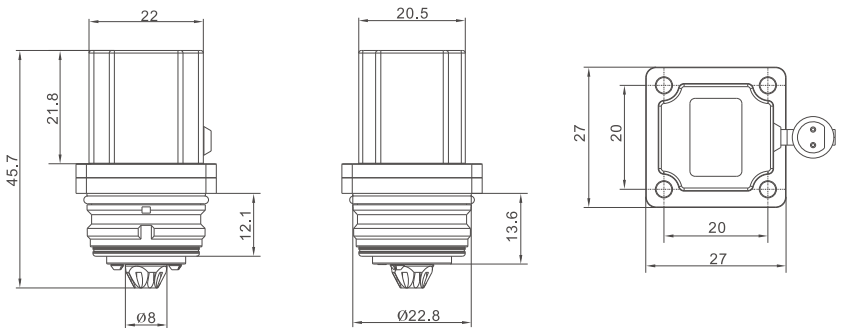
The technical parameters are detailed on page 46



Model: FD-125C

Size of installation

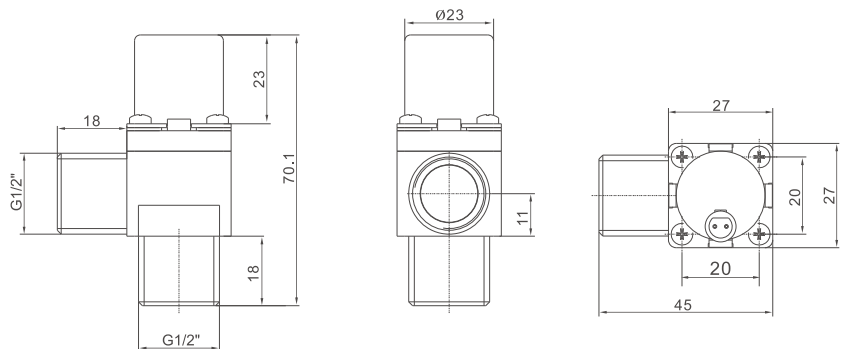
The technical parameters are detailed on page 45



Model: FD-138

Size of installation

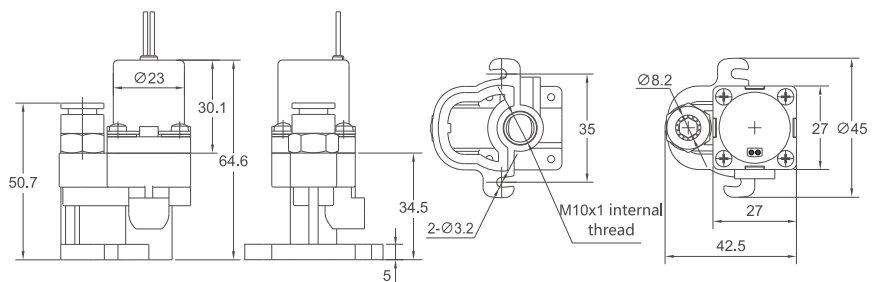
The technical parameters are detailed on page 42



Model: FD-138B

Size of installation

The technical parameters are detailed on page 42

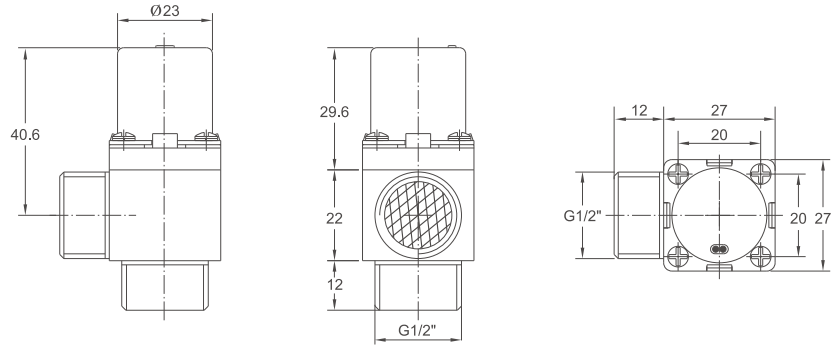




Model: FD-138C

Size of installation

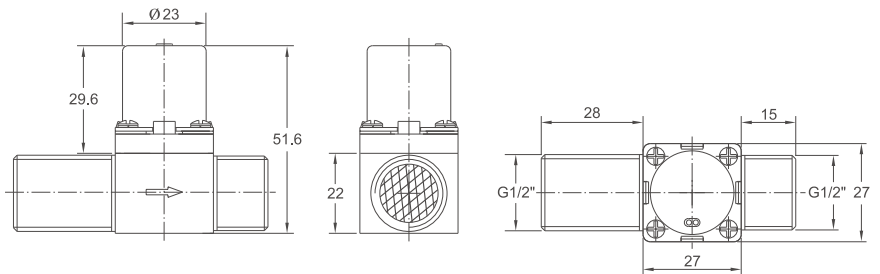
The technical parameters are detailed on page 42



Model: FD-138D

Size of installation

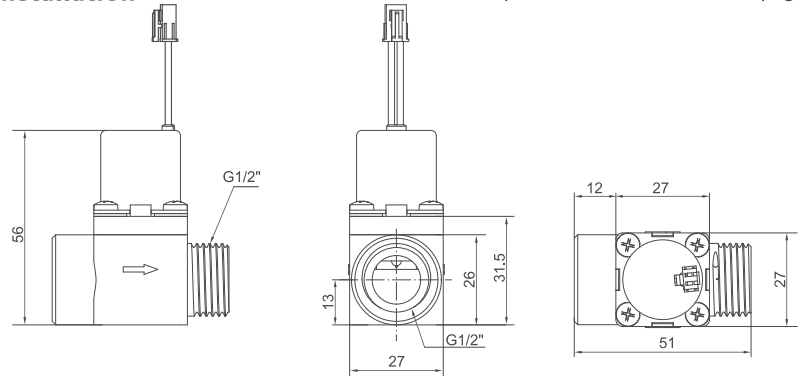
The technical parameters are detailed on page 42



Model: FD-138D-2

Size of installation

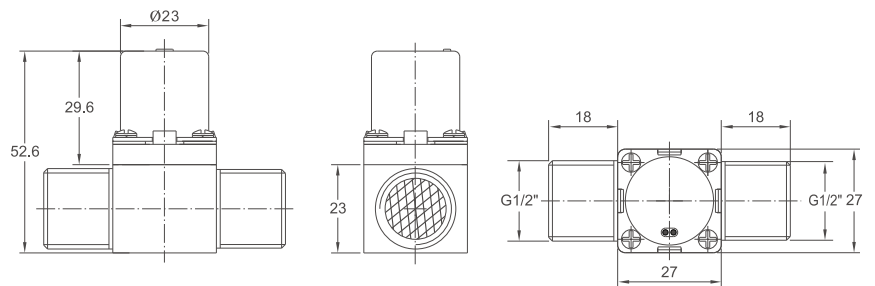
The technical parameters are detailed on page 42



Model: FD-138E

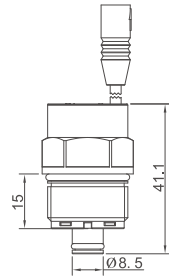
Size of installation

The technical parameters are detailed on page 42

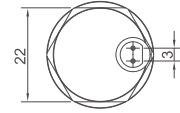
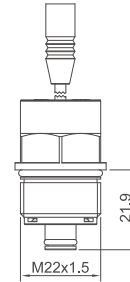




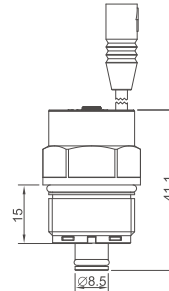
Size of installation



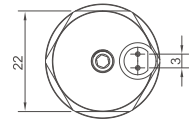
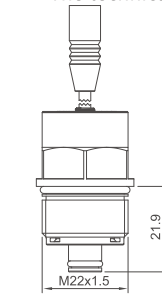
The technical parameters are detailed on page 47



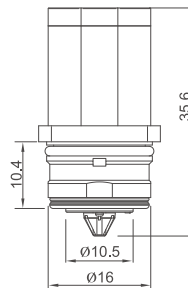
Size of installation



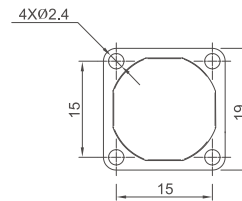
The technical parameters are detailed on page 47



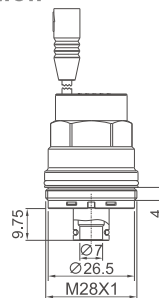
Size of installation



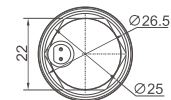
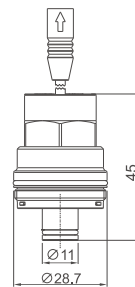
The technical parameters are detailed on page 47



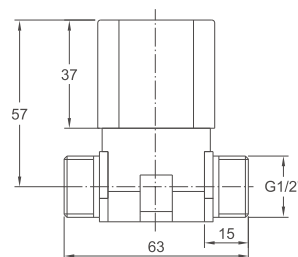
Size of installation



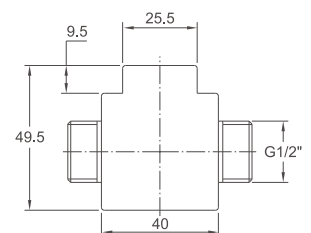
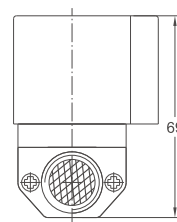
The technical parameters are detailed on page 47



Size of installation



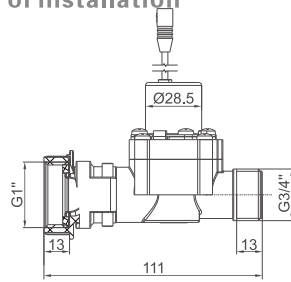
The technical parameters are detailed on page 44



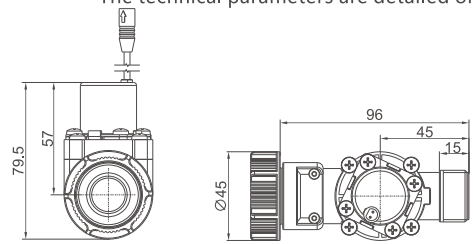


Model: FD-151

Size of installation

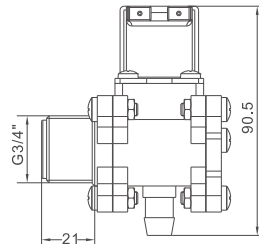


The technical parameters are detailed on page 58

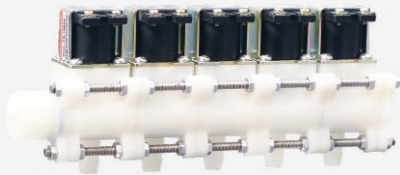
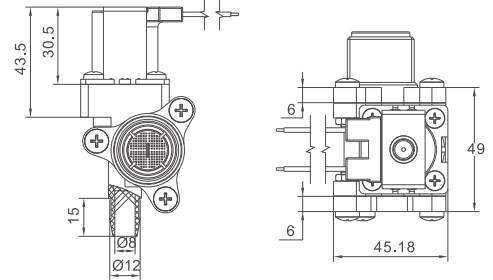


Model: FD-158A

Size of installation

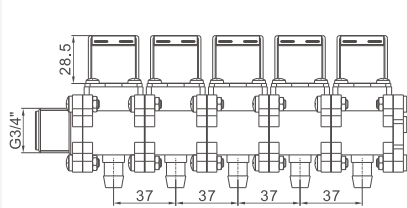


The technical parameters are detailed on page 57

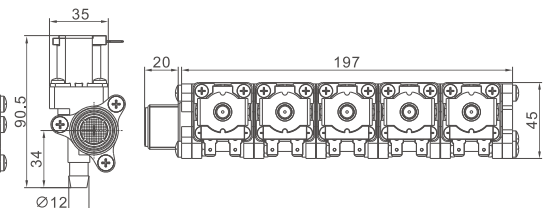


Model: FD-158A5

Size of installation

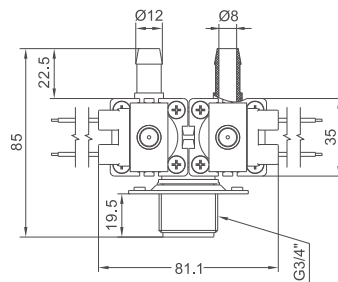


The technical parameters are detailed on page 57

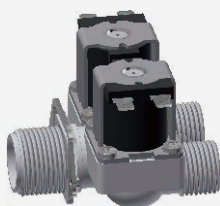
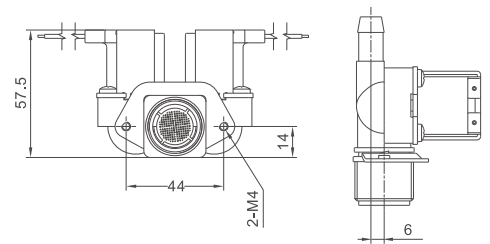


Model: FD-158B

Size of installation

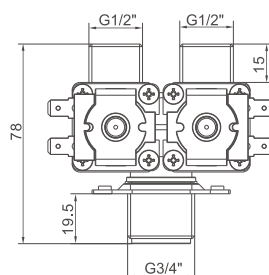


The technical parameters are detailed on page 57

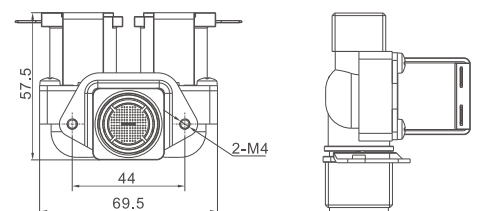


Model: FD-158B-2

Size of installation



The technical parameters are detailed on page 57

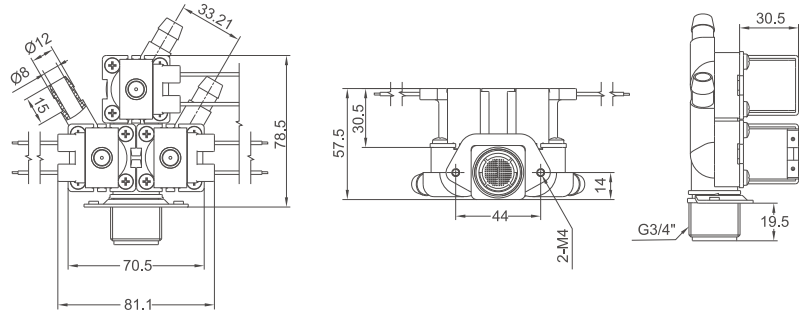




Model: FD-158C

Size of installation

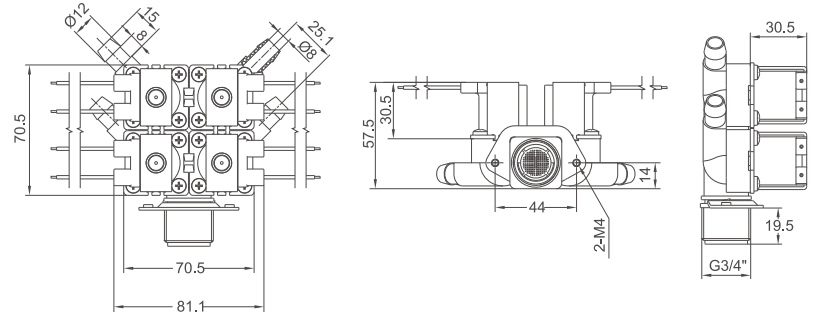
The technical parameters are detailed on page 57



Model: FD-158D

Size of installation

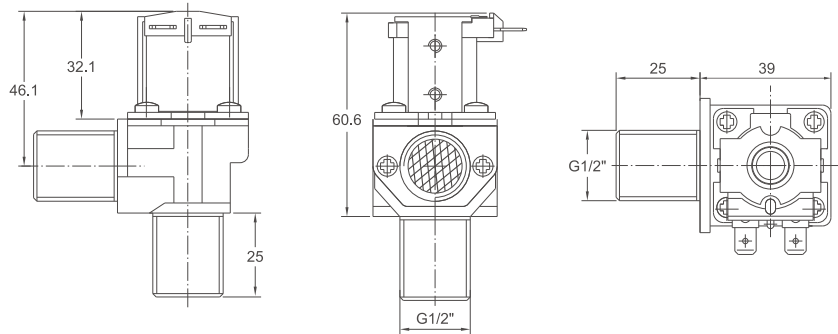
The technical parameters are detailed on page 57



Model: FD-16

Size of installation

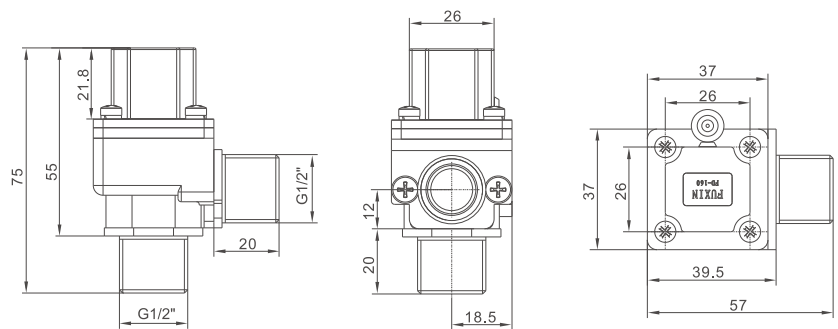
The technical parameters are detailed on page 44



Model: FD-160AC

Size of installation

The technical parameters are detailed on page 45

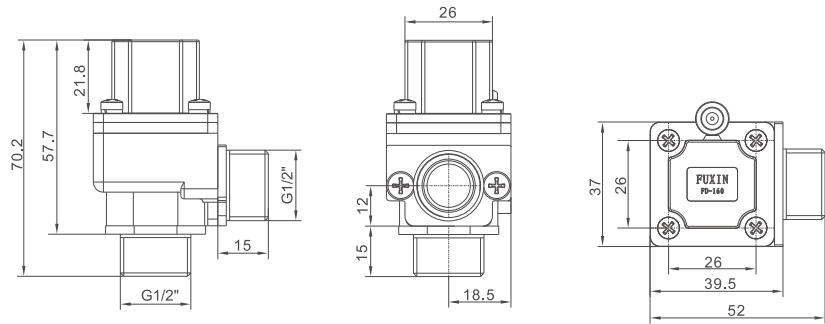




Model: FD-160AD

Size of installation

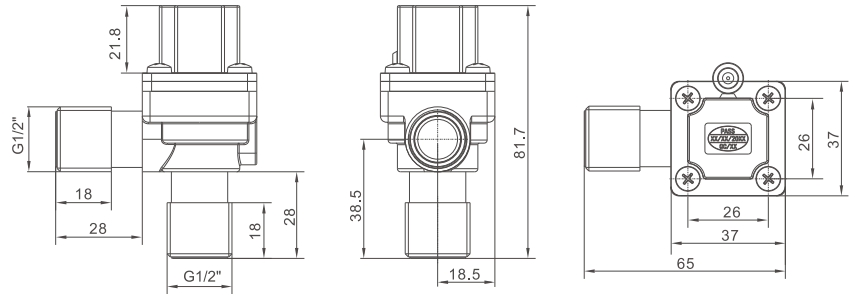
The technical parameters are detailed on page 45



Model: FD-160ASC

Size of installation

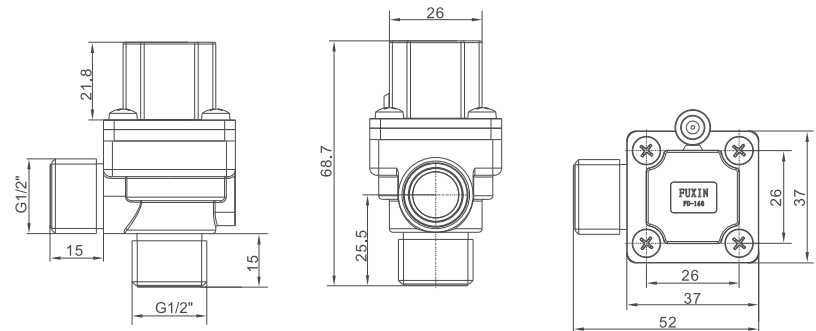
The technical parameters are detailed on page 45



Model: FD-160ASD

Size of installation

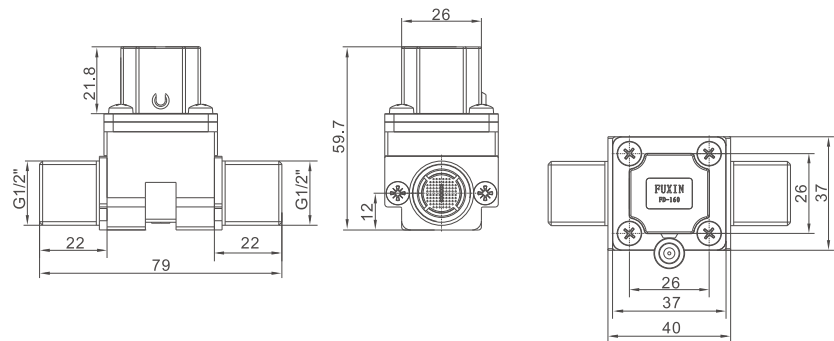
The technical parameters are detailed on page 45



Model: FD-160BC

Size of installation

The technical parameters are detailed on page 45

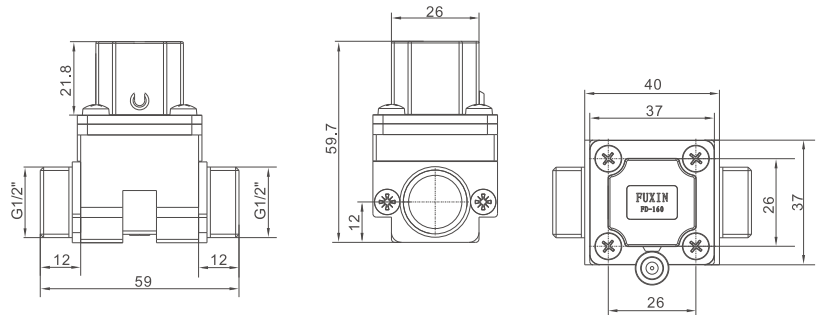




Model: FD-160BD

Size of installation

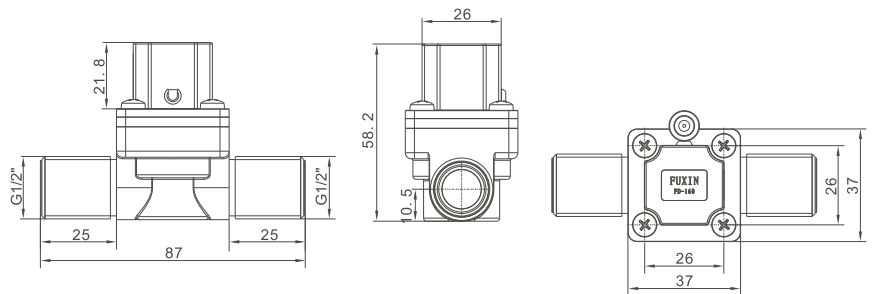
The technical parameters are detailed on page 45



Model: FD-160BSC

Size of installation

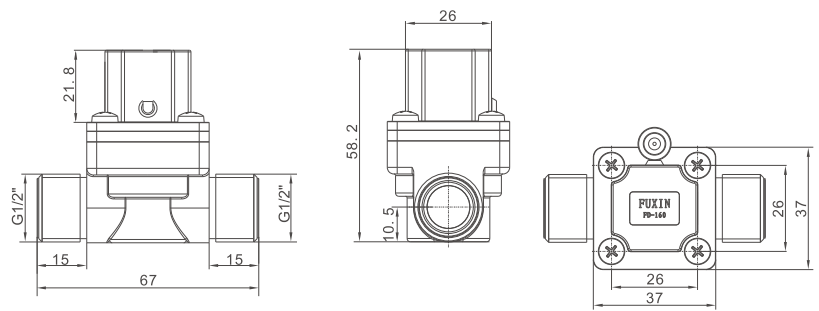
The technical parameters are detailed on page 45



Model: FD-160BSD

Size of installation

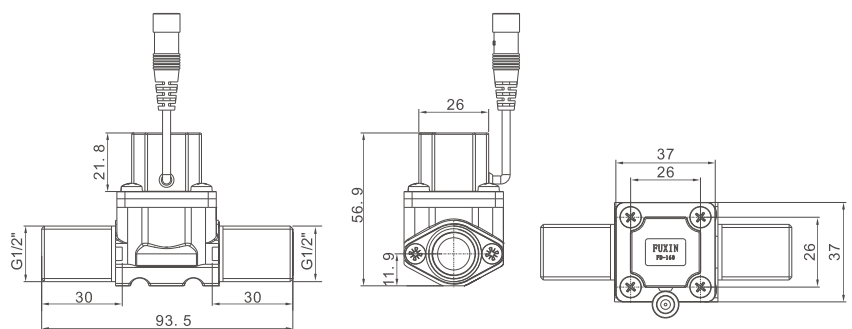
The technical parameters are detailed on page 45



Model: FD-160PC

Size of installation

The technical parameters are detailed on page 45

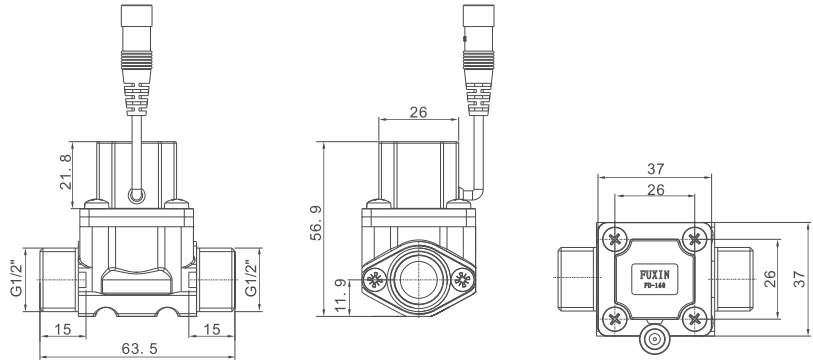




Model: FD-160PD

Size of installation

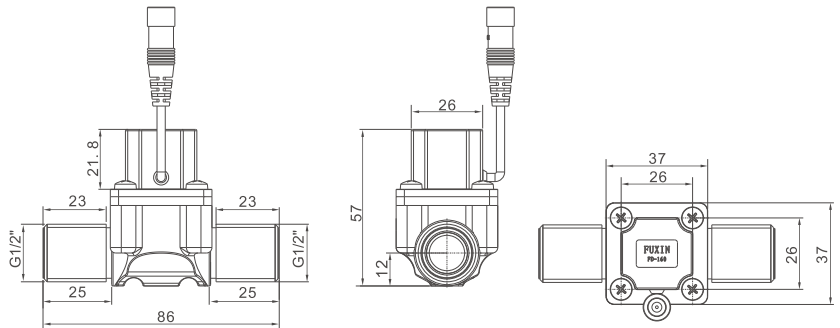
The technical parameters are detailed on page 45



Model: FD-160SPC

Size of installation

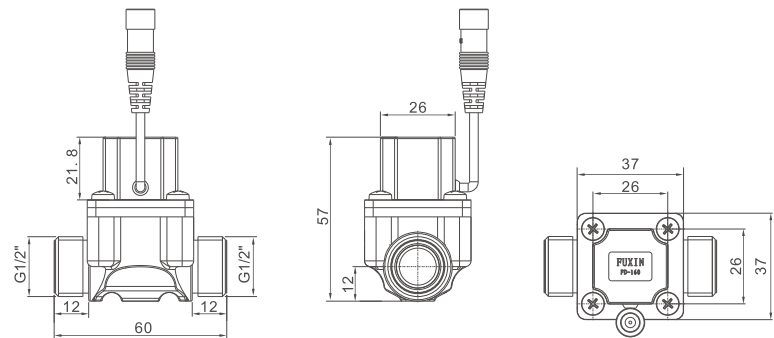
The technical parameters are detailed on page 45



Model: FD-160SPD

Size of installation

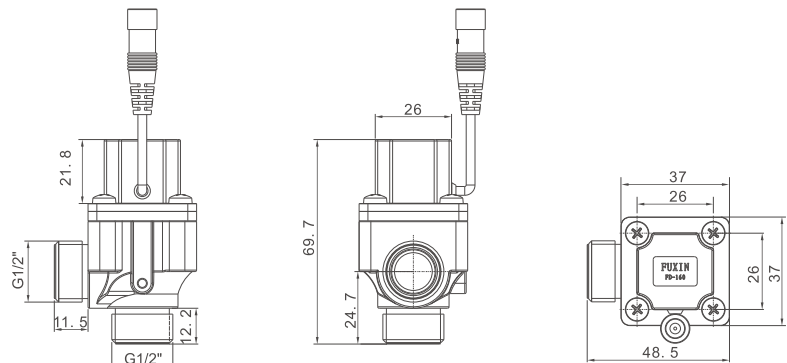
The technical parameters are detailed on page 45



Model: FD-160SZD

Size of installation

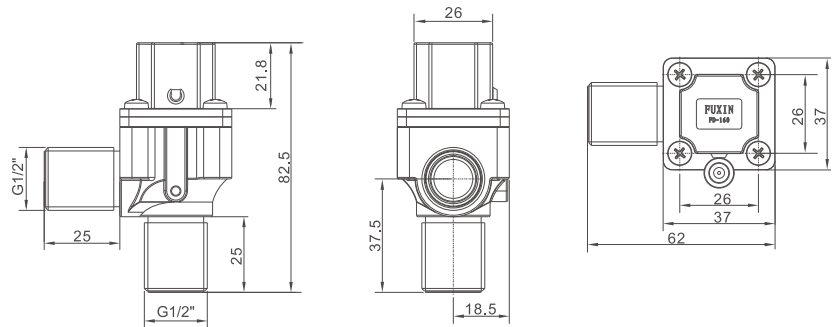
The technical parameters are detailed on page 45





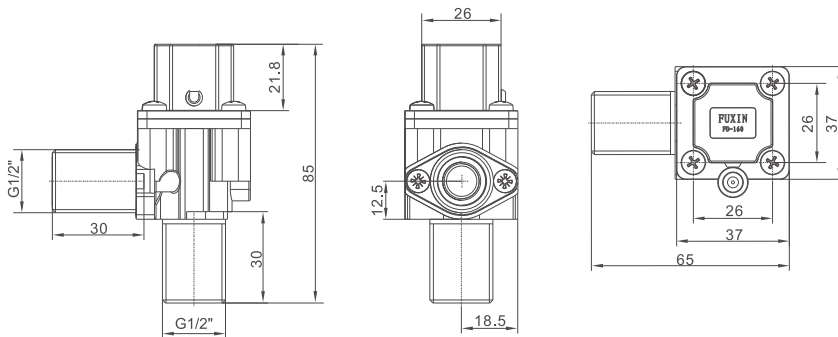
Size of installation

The technical parameters are detailed on page 45



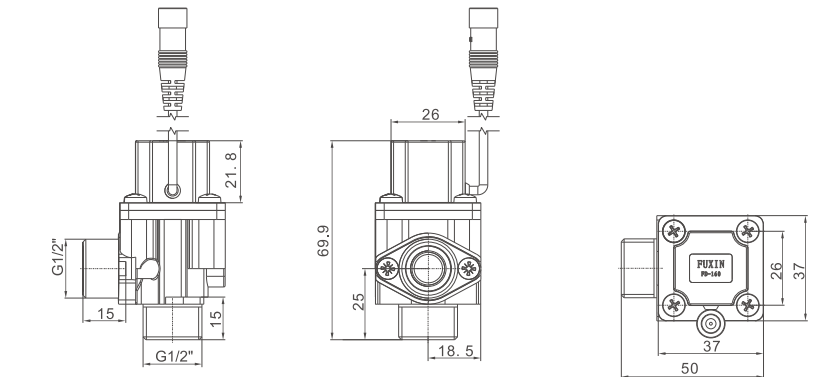
Size of installation

The technical parameters are detailed on page 45



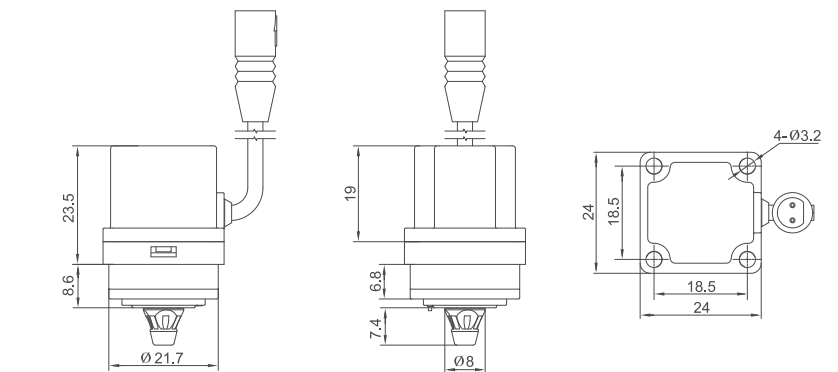
Size of installation

The technical parameters are detailed on page 45



Size of installation

The technical parameters are detailed on page 48

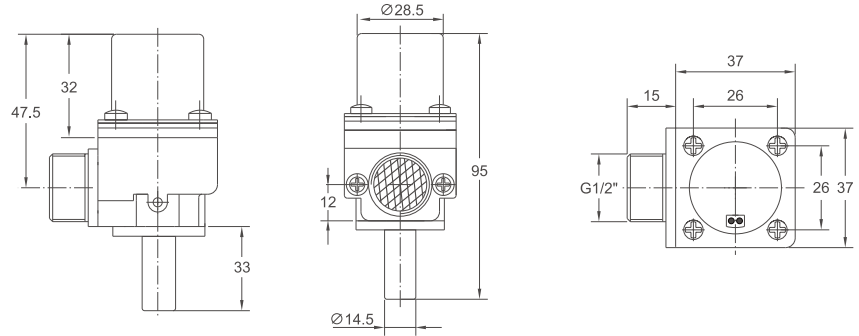




Model: FD-18A

Size of installation

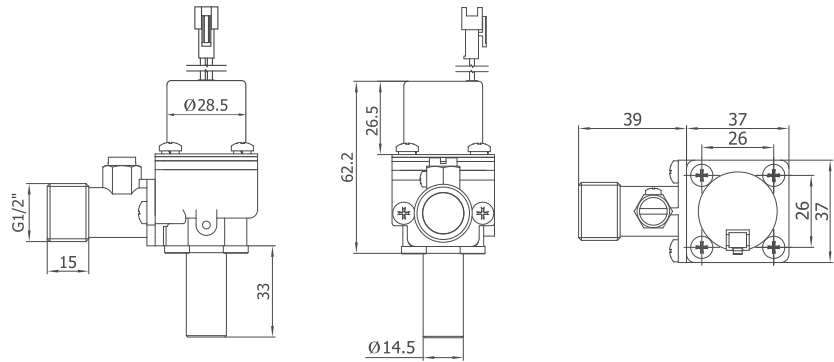
The technical parameters are detailed on page 40



Model: FD-18A-2

Size of installation

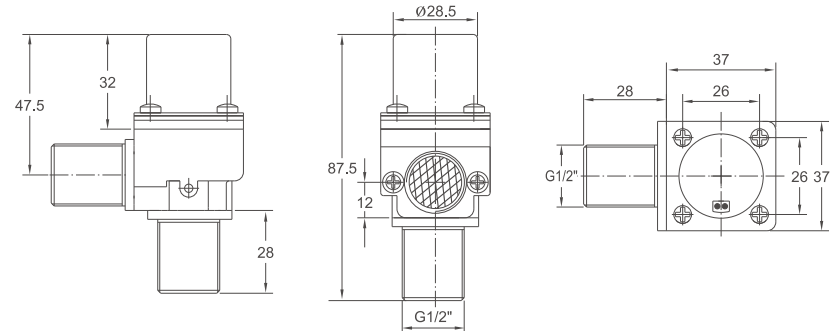
The technical parameters are detailed on page 40



Model: FD-18A-3

Size of installation

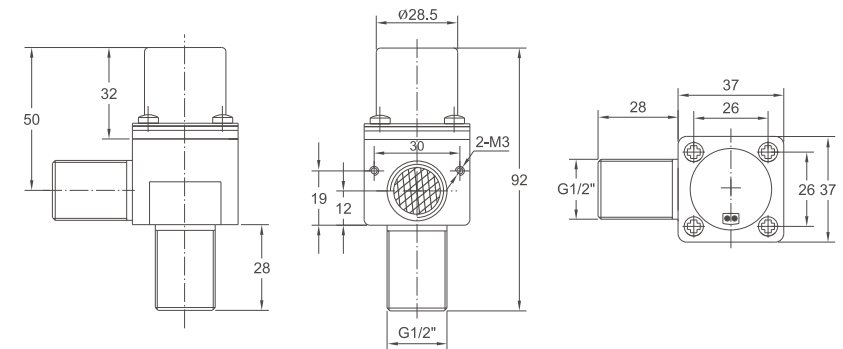
The technical parameters are detailed on page 40



Model: FD-18C

Size of installation

The technical parameters are detailed on page 40

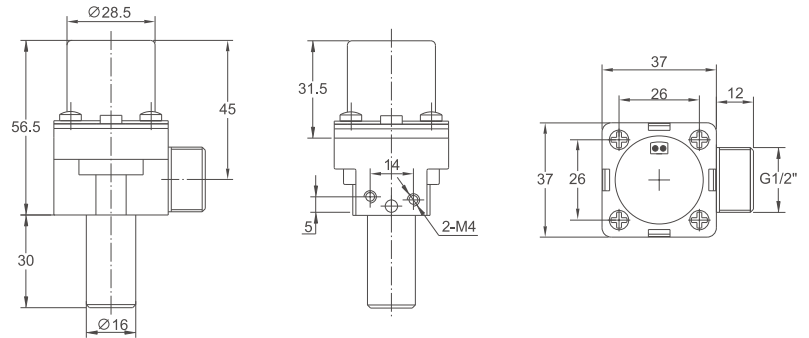




Model: FD-18E

Size of installation

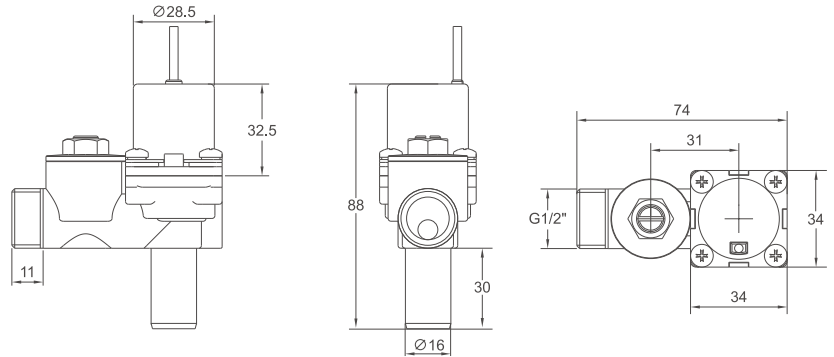
The technical parameters are detailed on page 40



Model: FD-18G

Size of installation

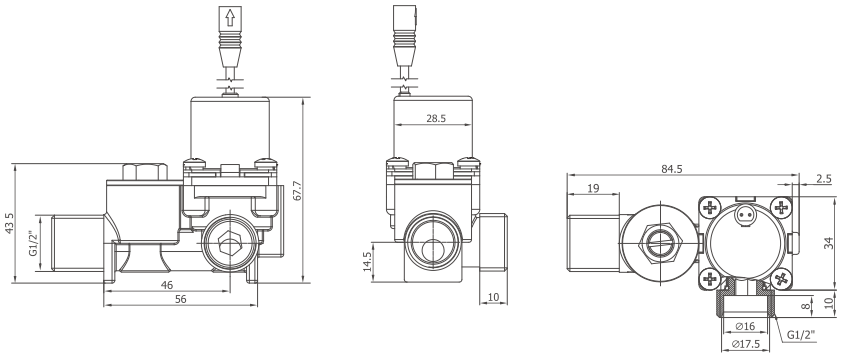
The technical parameters are detailed on page 40



Model: FD-18G-2

Size of installation

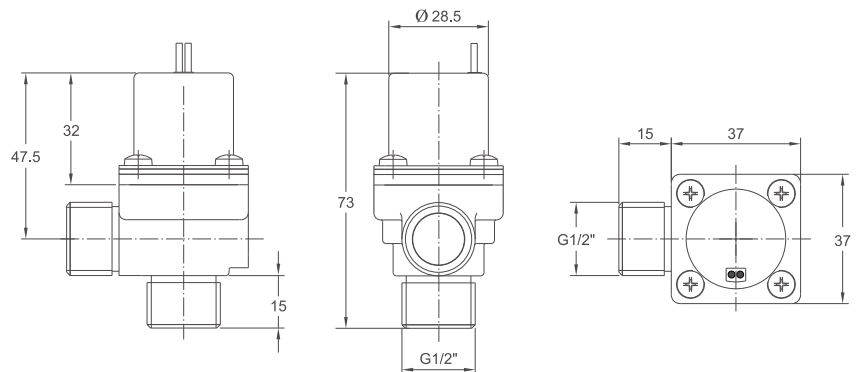
The technical parameters are detailed on page 40



Model: FD-18H

Size of installation

The technical parameters are detailed on page 40

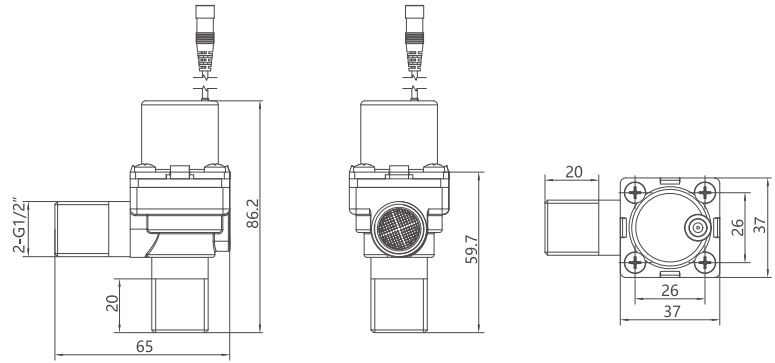




Model: FD-18H-2

Size of installation

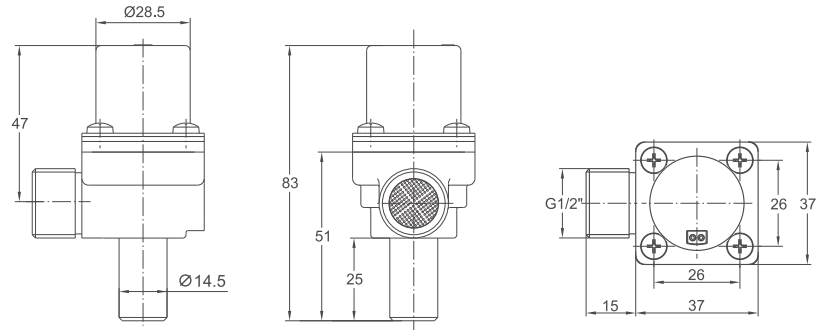
The technical parameters are detailed on page 40



Model: FD-18K

Size of installation

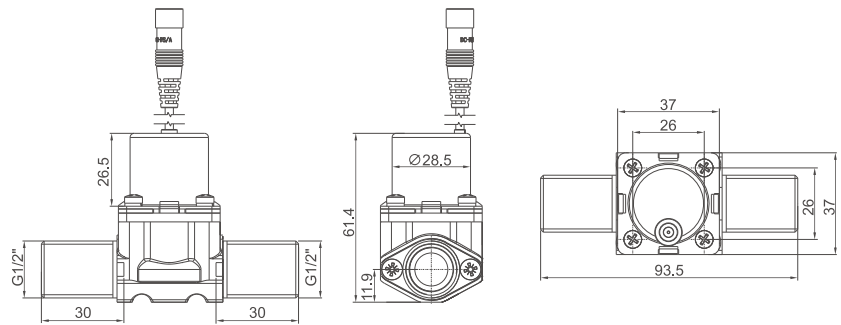
The technical parameters are detailed on page 40



Model: FD-18PC

Size of installation

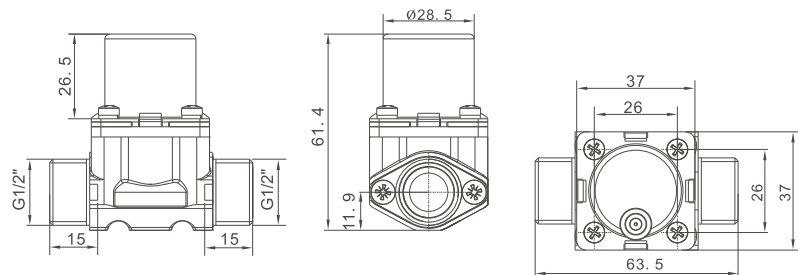
The technical parameters are detailed on page 51



Model: FD-18PD

Size of installation

The technical parameters are detailed on page 51

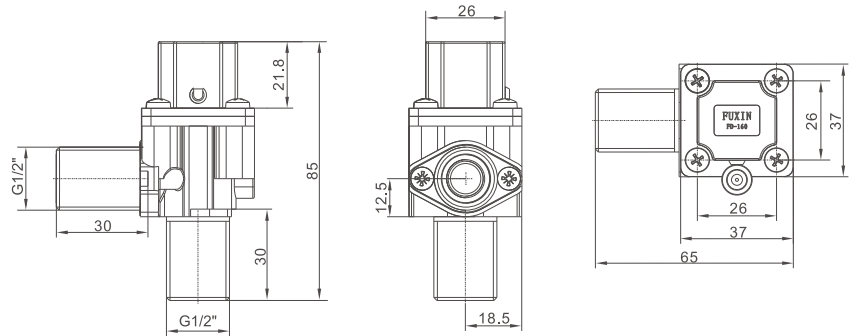




Model: FD-18ZC

Size of installation

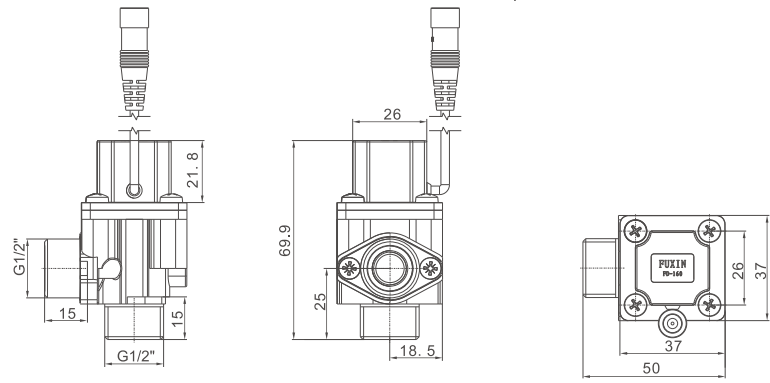
The technical parameters are detailed on page 40



Model: FD-18ZD

Size of installation

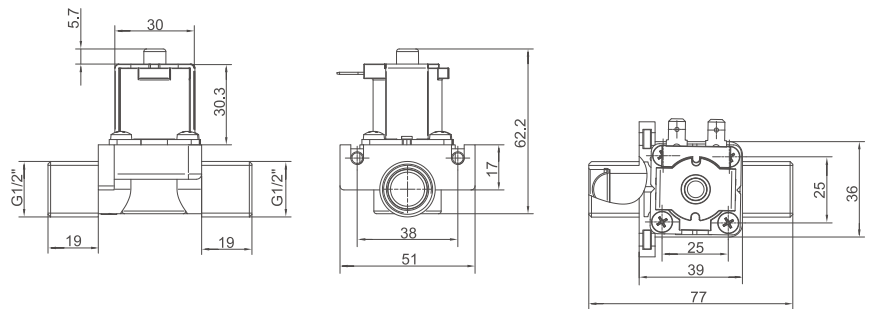
The technical parameters are detailed on page 40



Model: FD-201

Size of installation

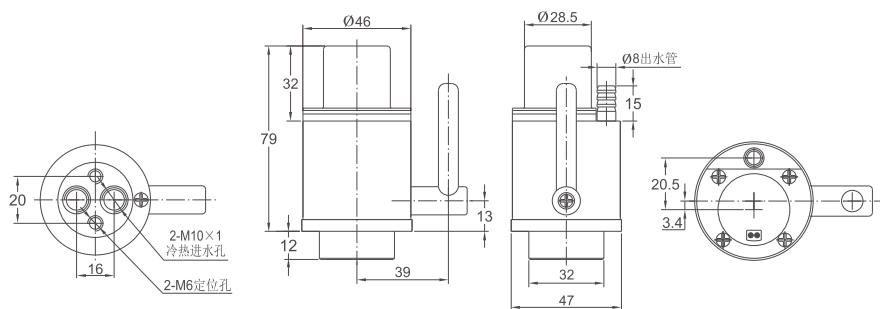
The technical parameters are detailed on page 44



Model: FD-228

Size of installation

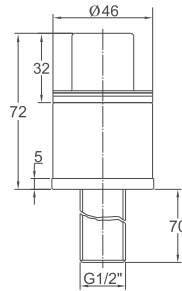
The technical parameters are detailed on page 40



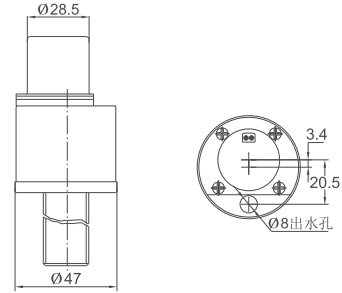


Model: FD-228-2

Size of installation

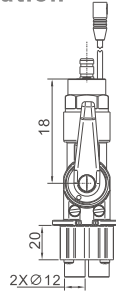


The technical parameters are detailed on page 40

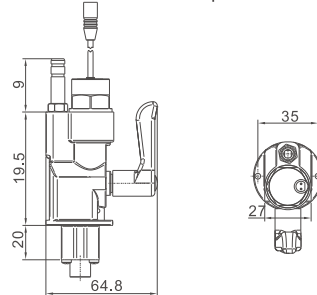


Model: FD-228M

Size of installation

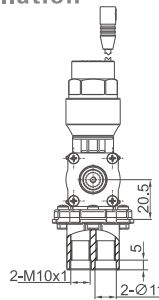


The technical parameters are detailed on page 47

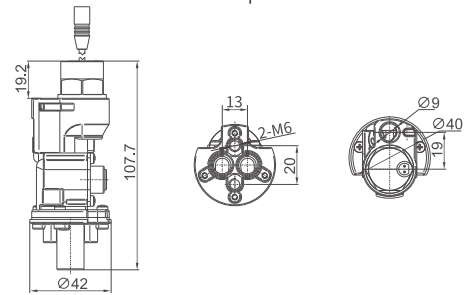


Model: FD-228S

Size of installation

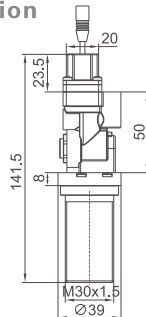


The technical parameters are detailed on page 47

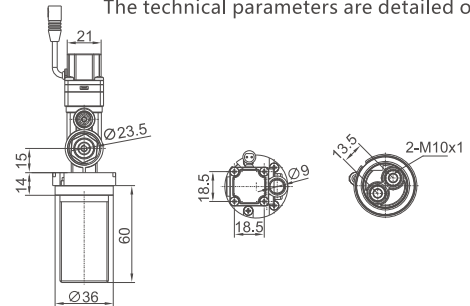


Model: FD-228S-2

Size of installation

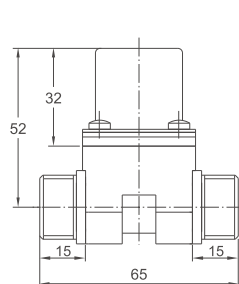


The technical parameters are detailed on page 49

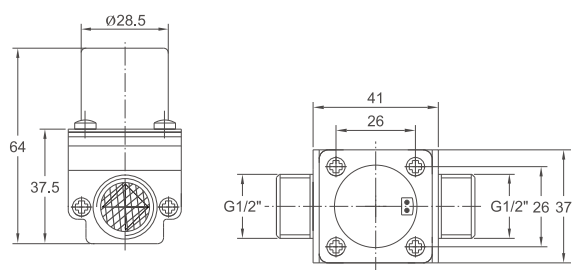


Model: FD-328

Size of installation



The technical parameters are detailed on page 51

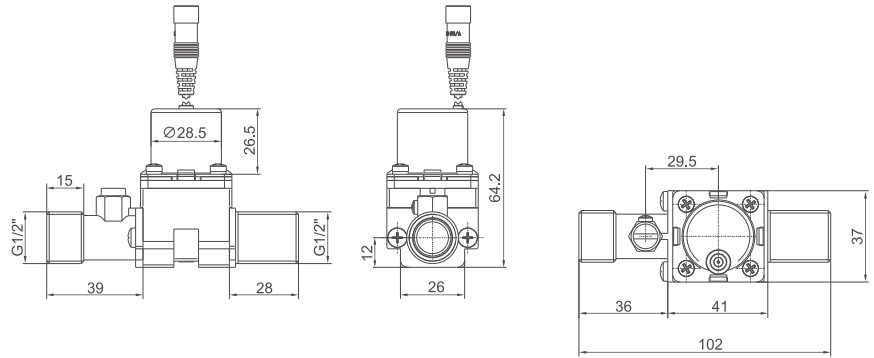




Model: FD-328-2

Size of installation

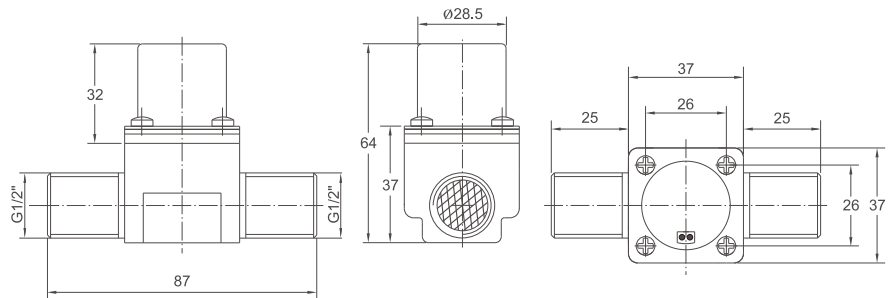
The technical parameters are detailed on page 51



Model: FD-328C

Size of installation

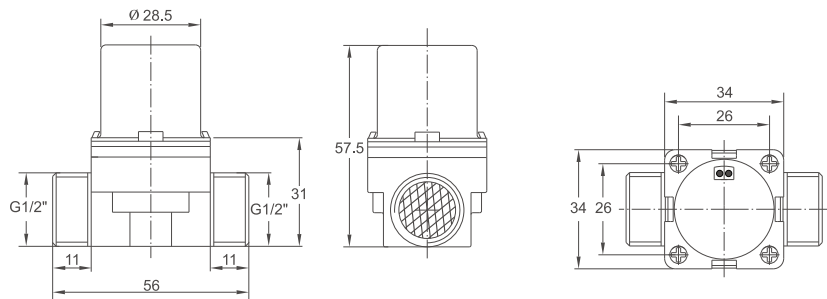
The technical parameters are detailed on page 51



Model: FD-328D

Size of installation

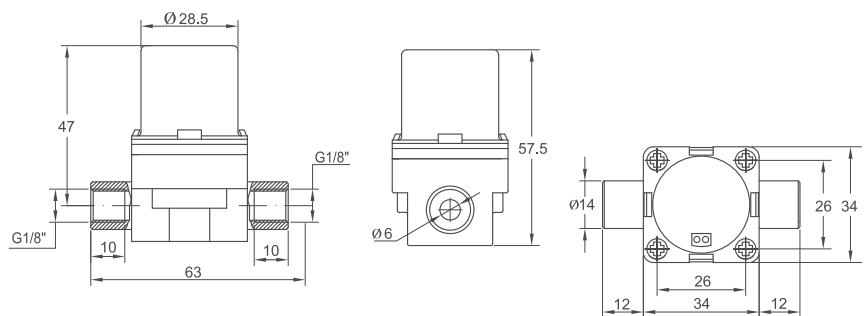
The technical parameters are detailed on page 51



Model: FD-328D-2

Size of installation

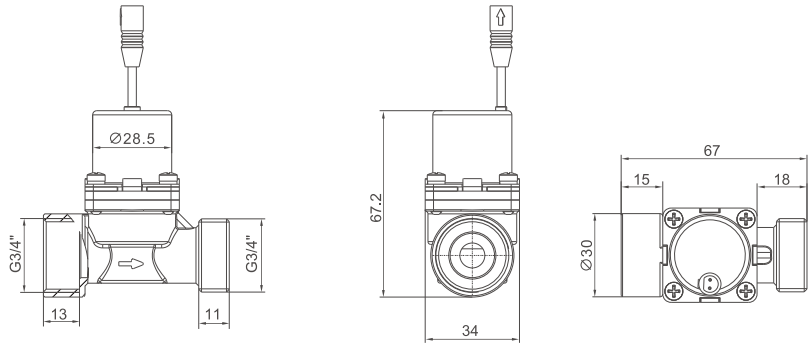
The technical parameters are detailed on page 51





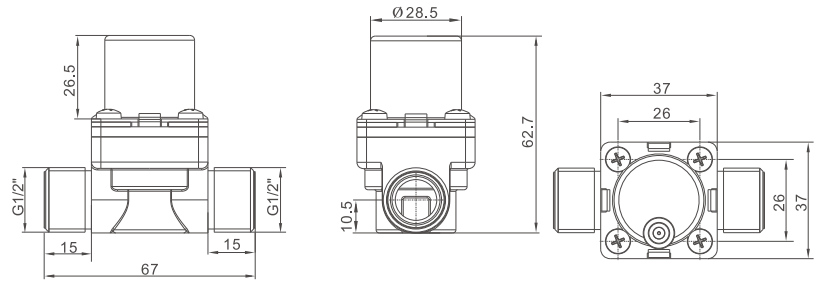
Size of installation

The technical parameters are detailed on page 51



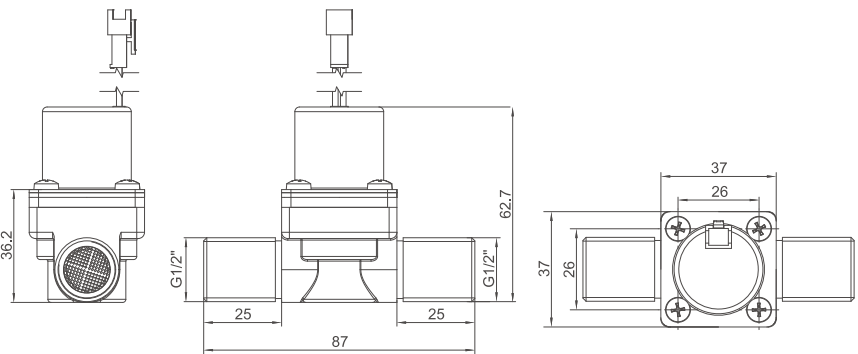
Size of installation

The technical parameters are detailed on page 51



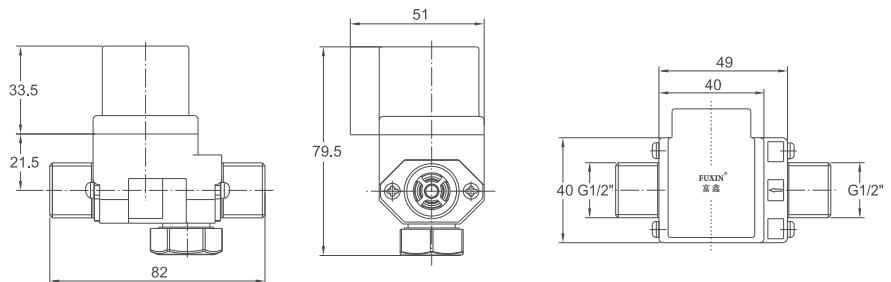
Size of installation

The technical parameters are detailed on page 51



Size of installation

The technical parameters are detailed on page 44

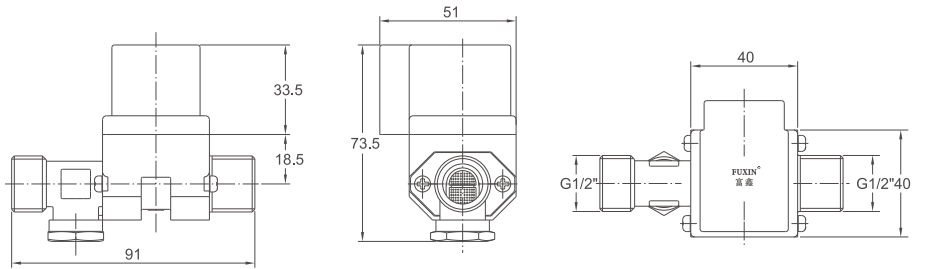




Model: FD-2

Size of installation

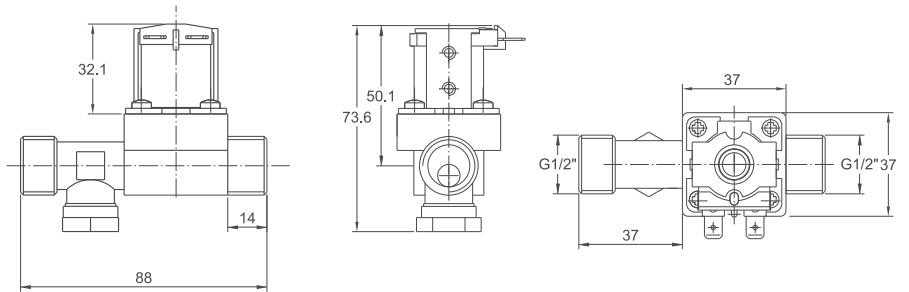
The technical parameters are detailed on page 44



Model: FD-4

Size of installation

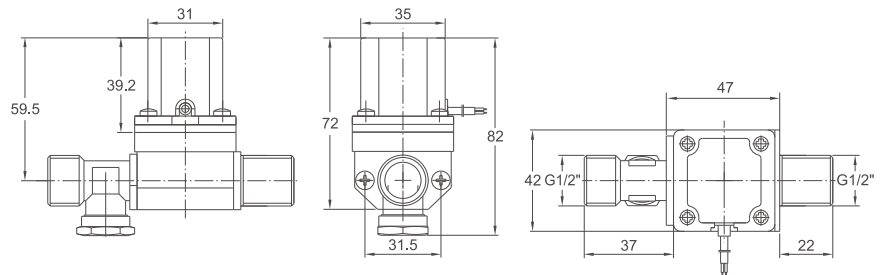
The technical parameters are detailed on page 44



Model: FD-5

Size of installation

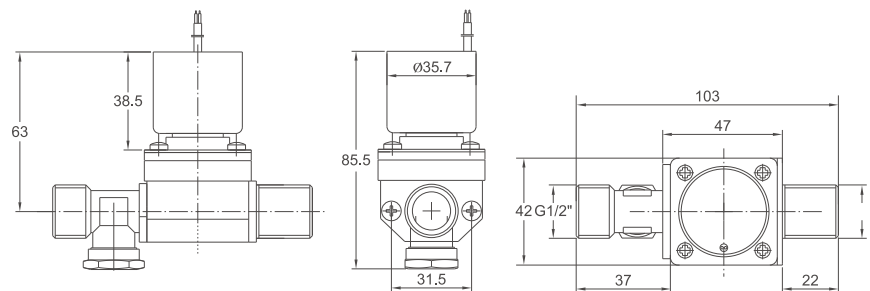
The technical parameters are detailed on page 39



Model: FD-7

Size of installation

The technical parameters are detailed on page 43

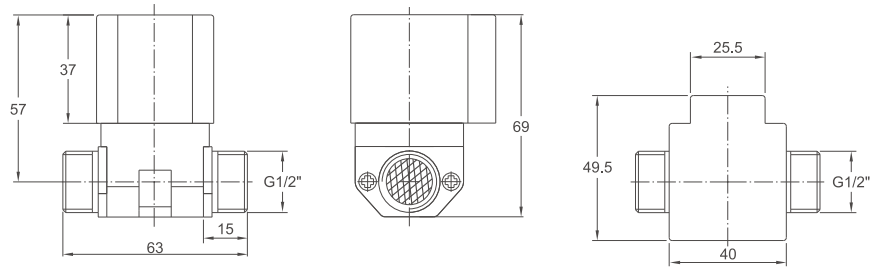




Model: FD-8

Size of installation

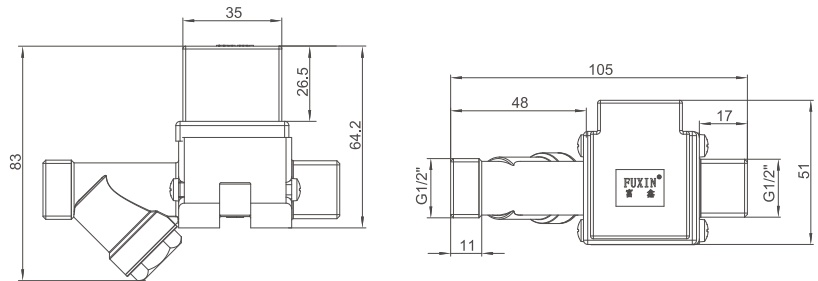
The technical parameters are detailed on page 44



Model: FD-9

Size of installation

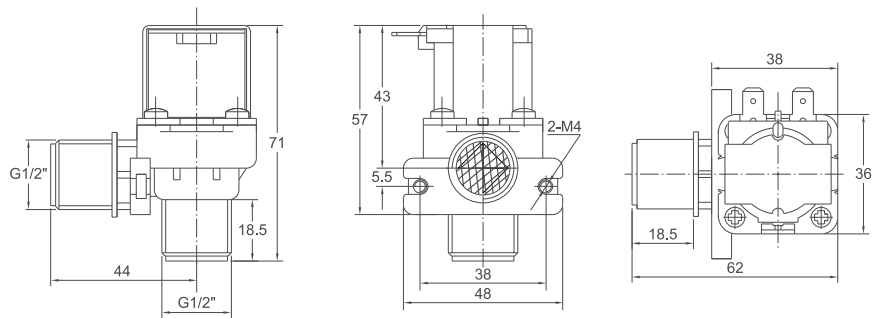
The technical parameters are detailed on page 44



Model: FD-01

Size of installation

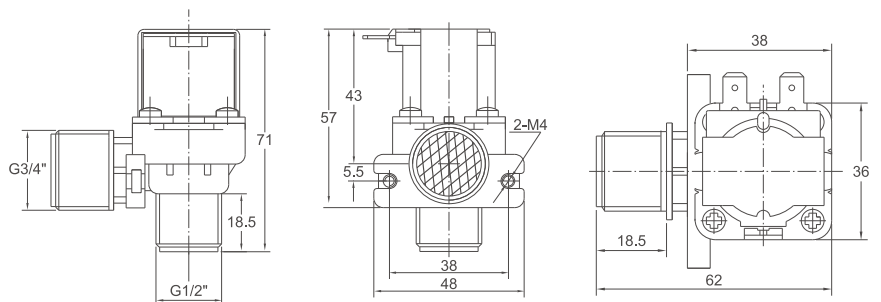
The technical parameters are detailed on page 44



Model: FD-02

Size of installation

The technical parameters are detailed on page 44

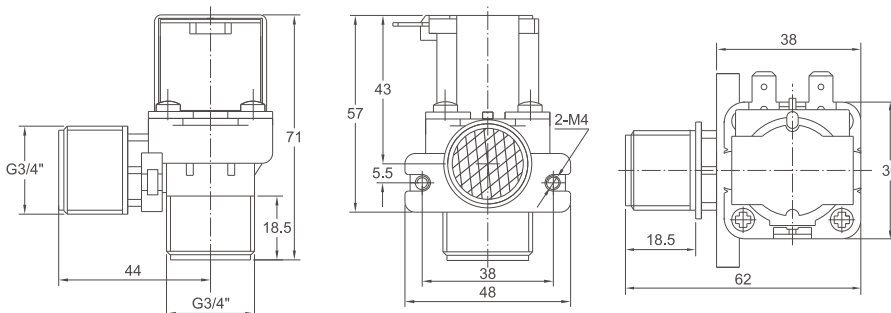




Model: FD-03

Size of installation

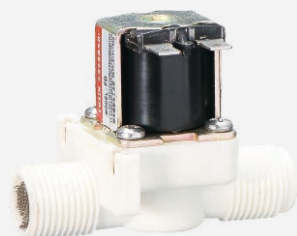
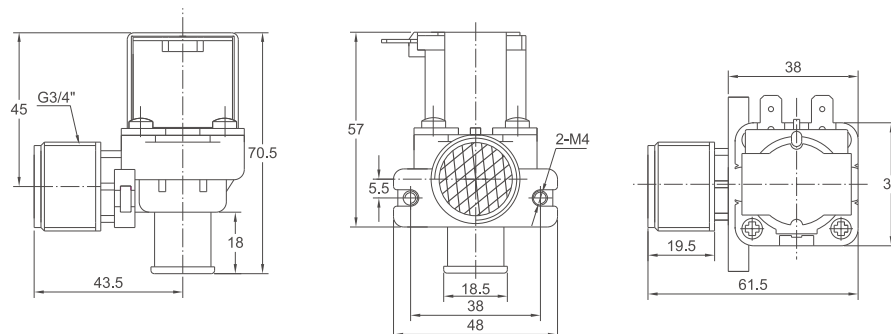
The technical parameters are detailed on page 44



Model: FD-04

Size of installation

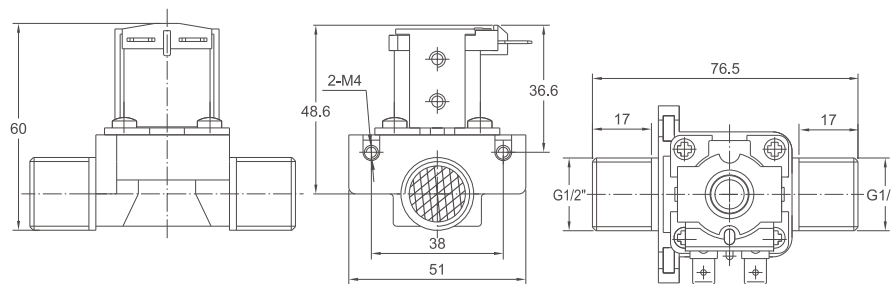
The technical parameters are detailed on page 44



Model: FD-05

Size of installation

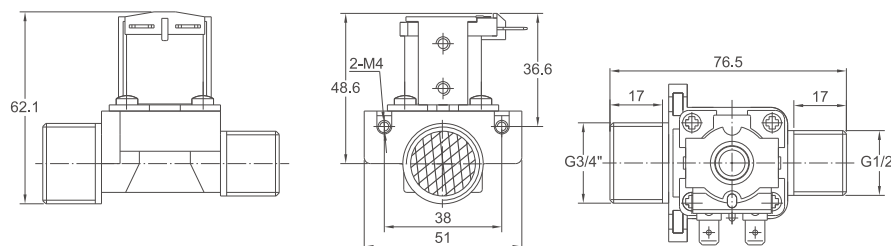
The technical parameters are detailed on page 44



Model: FD-06

Size of installation

The technical parameters are detailed on page 44

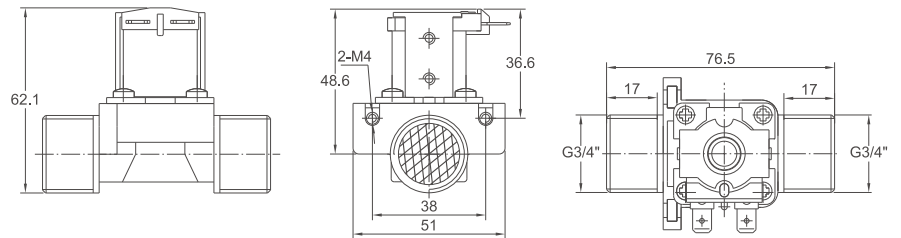




Model: FD-07

Size of installation

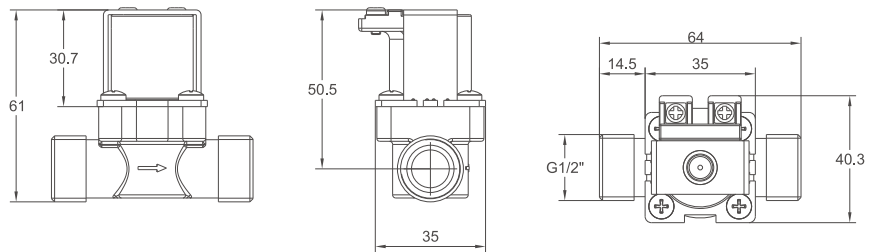
The technical parameters are detailed on page 44



Model: FD-101

Size of installation

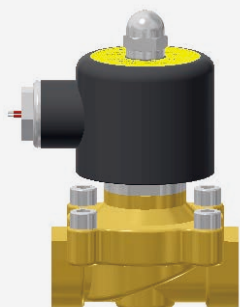
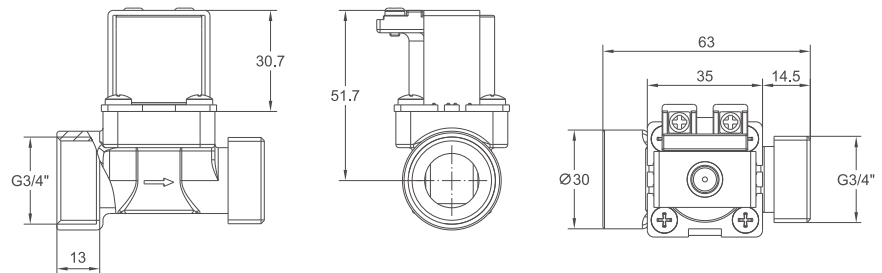
The technical parameters are detailed on page 44



Model: FD-102

Size of installation

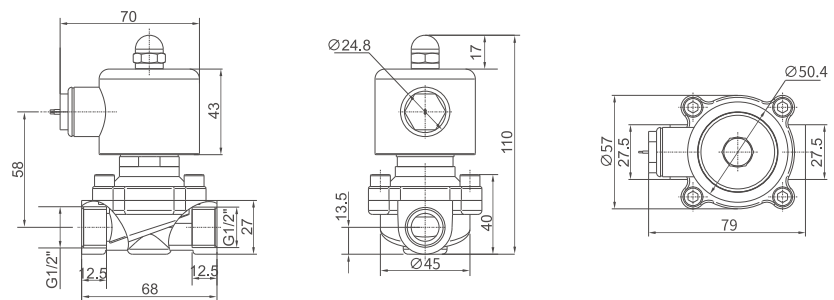
The technical parameters are detailed on page 44



Model: FD-103

Size of installation

The technical parameters are detailed on page 59



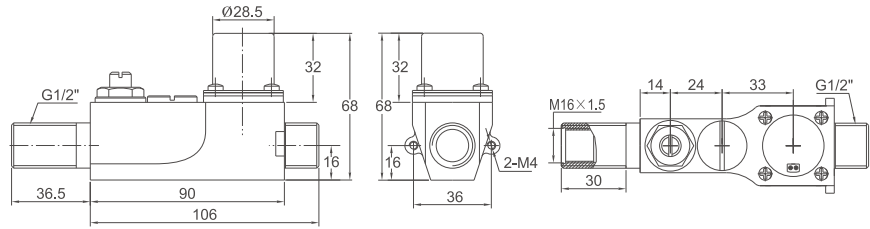
Note: FD-103 engineering valve series with G3/4", G1", G1.5", G2" pipe connection sizes



Model: FD-628-3

Size of installation

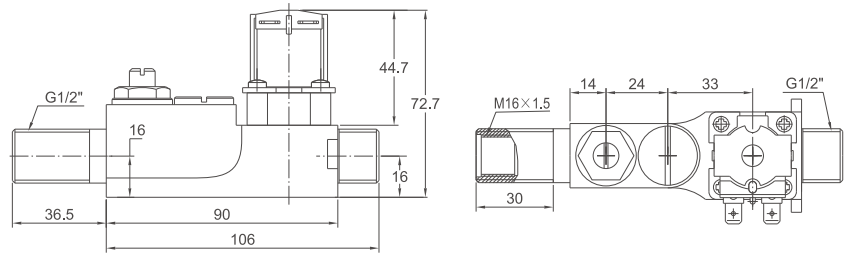
The technical parameters are detailed on page 40



Model: FD-628-4

Size of installation

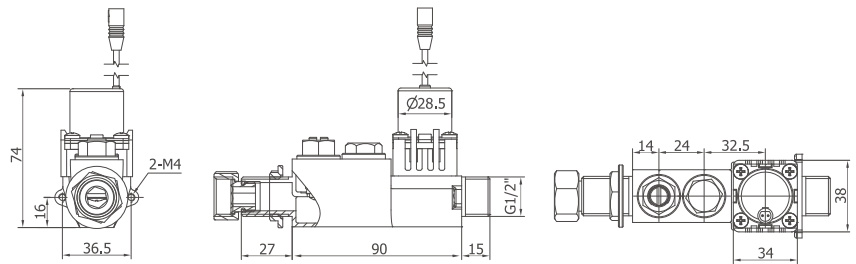
The technical parameters are detailed on page 44



Model: FD-628-6

Size of installation

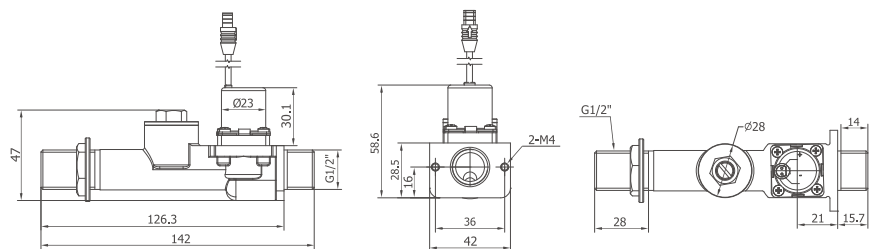
The technical parameters are detailed on page 40



Model: FD-628-7

Size of installation

The technical parameters are detailed on page 50

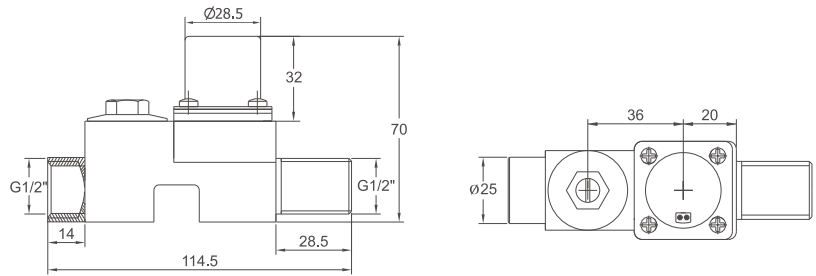




Model: FD-688

Size of installation

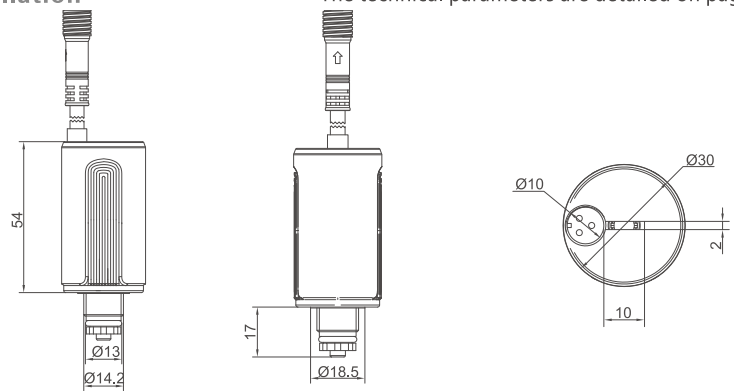
The technical parameters are detailed on page 40



Model: FD-702

Size of installation

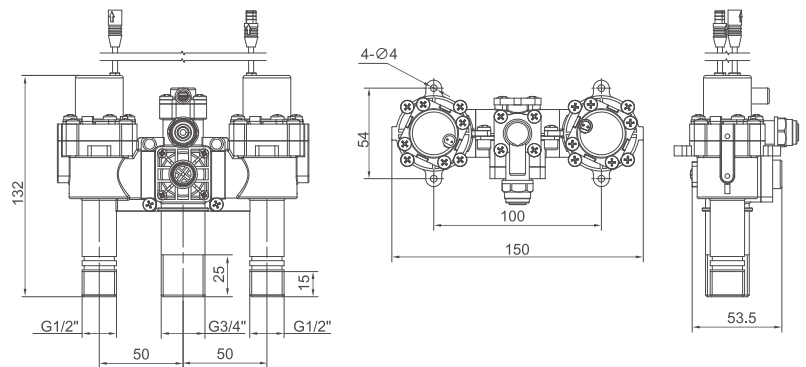
The technical parameters are detailed on page 60



Model: FD-801

Size of installation

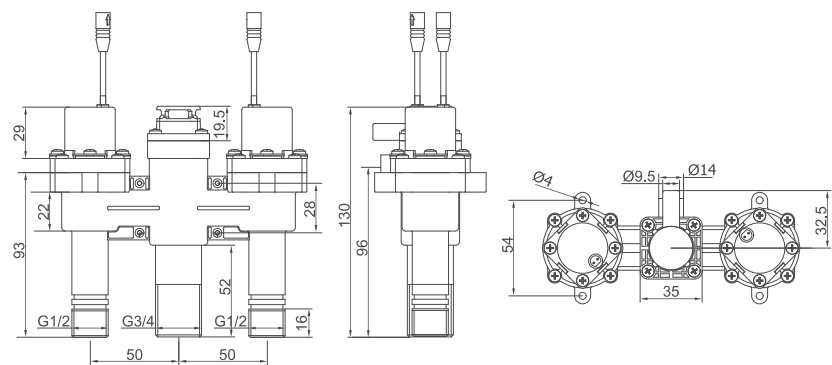
The technical parameters are detailed on page 58

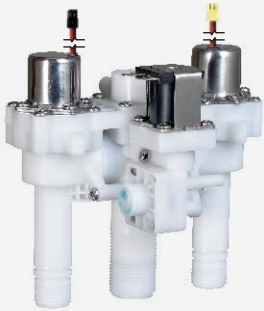


Model: FD-801-1

Size of installation

The technical parameters are detailed on page 58

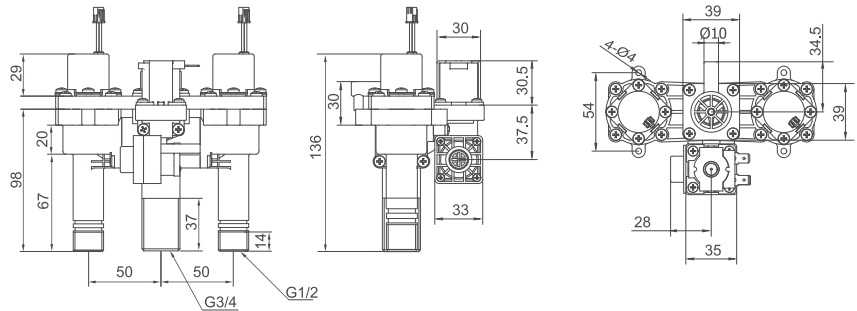




Model: FD-801-2

Size of installation

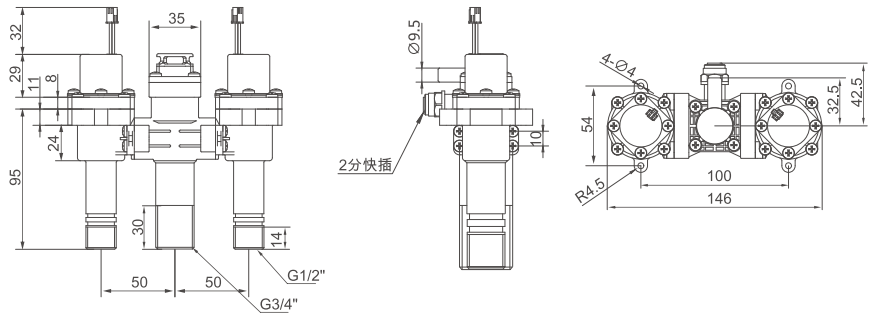
The technical parameters are detailed on page 58



Model: FD-801-3

Size of installation

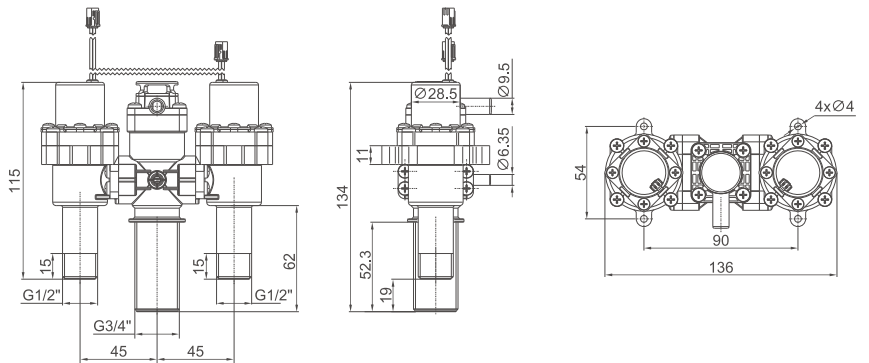
The technical parameters are detailed on page 58



Model: FD-8027

Size of installation

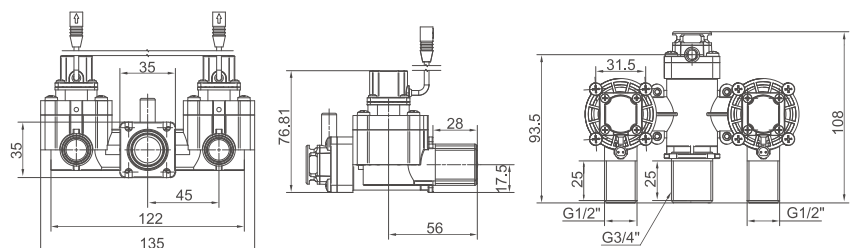
The technical parameters are detailed on page 58



Model: FD-8028

Size of installation

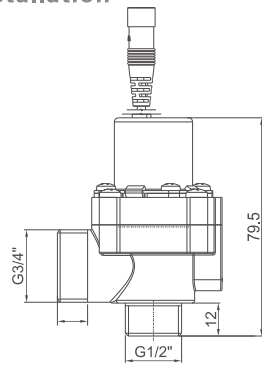
The technical parameters are detailed on page 58



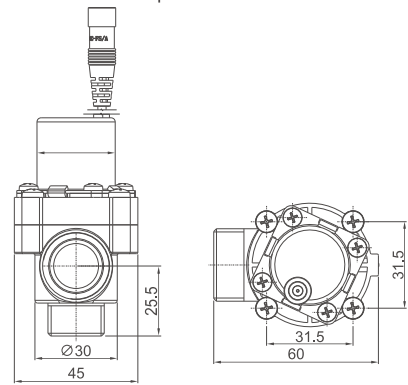


Model: FD-809

Size of installation

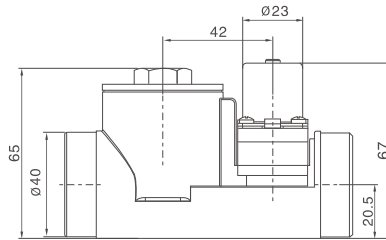


The technical parameters are detailed on page 58

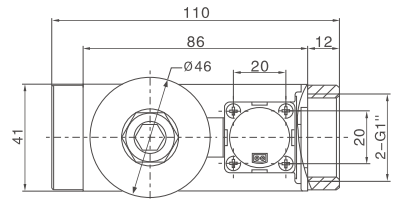


Model: FD-819

Size of installation

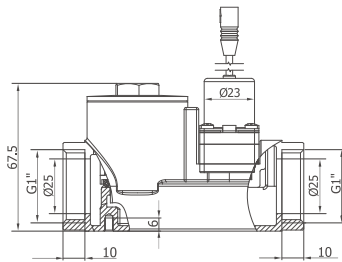


The technical parameters are detailed on page 52

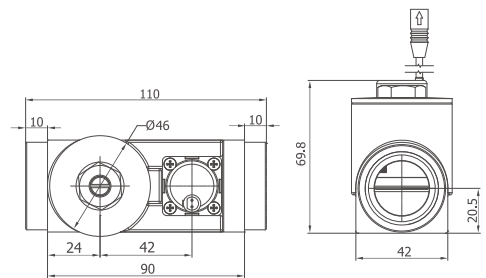


Model: FD-823

Size of installation

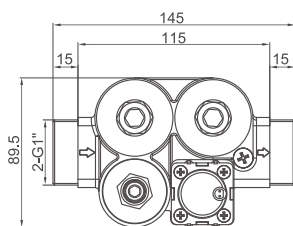


The technical parameters are detailed on page 52

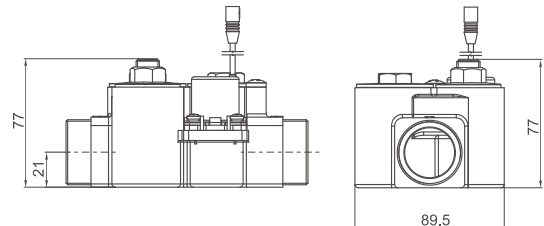


Model: FD-825

Size of installation



The technical parameters are detailed on page 54

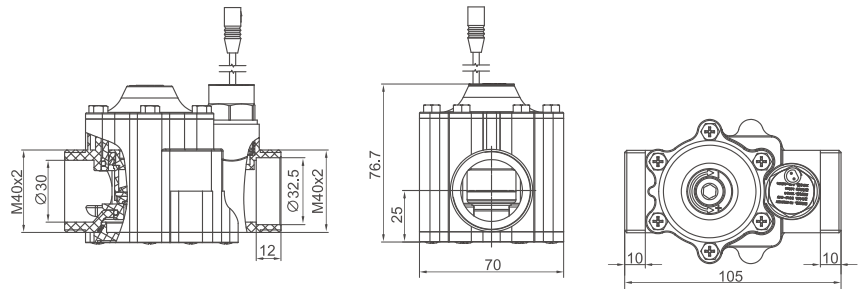




Model: FD-826

Size of installation

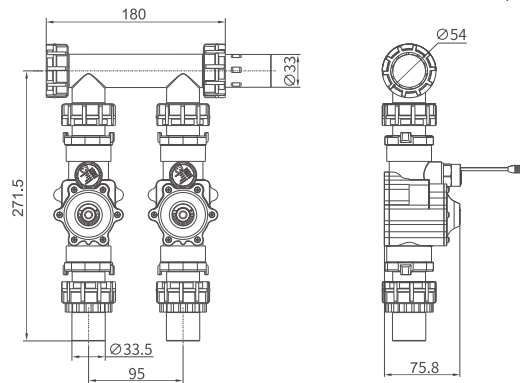
The technical parameters are detailed on page 55



Model: FD-826-2

Size of installation

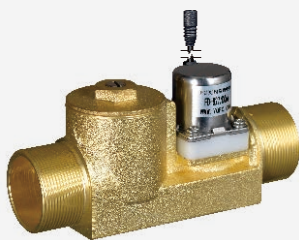
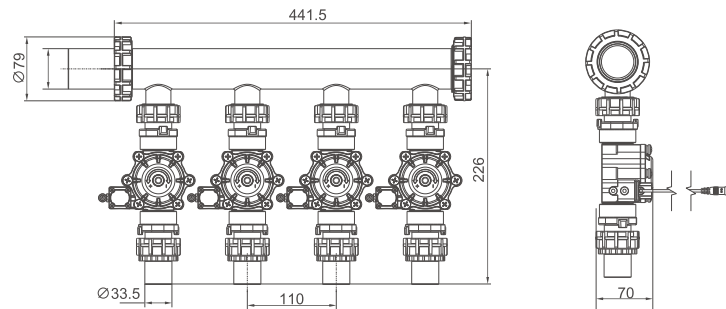
The technical parameters are detailed on page 55



Model: FD-9022-4

Size of installation

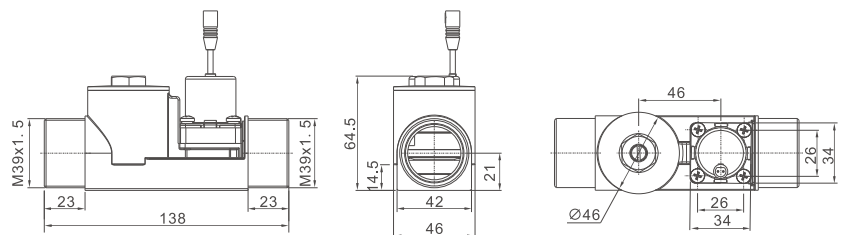
The technical parameters are detailed on page 55



Model: FD-827

Size of installation

The technical parameters are detailed on page 52

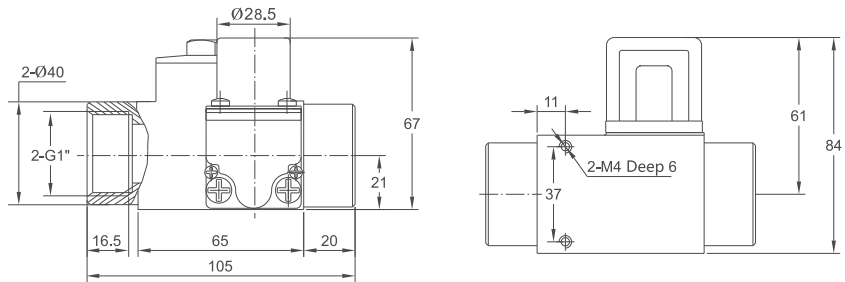




Model: FD-828

Size of installation

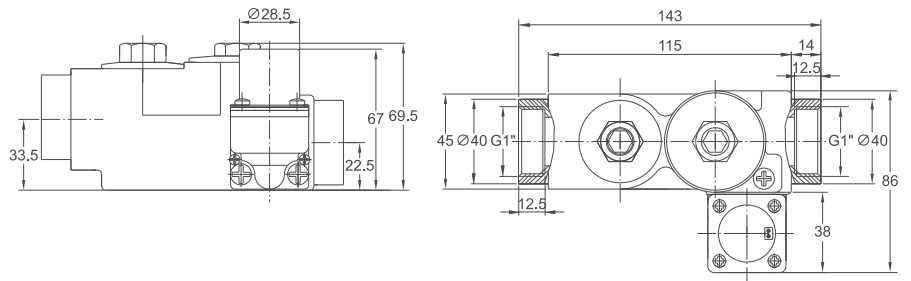
The technical parameters are detailed on page 53



Model: FD-88A

Size of installation

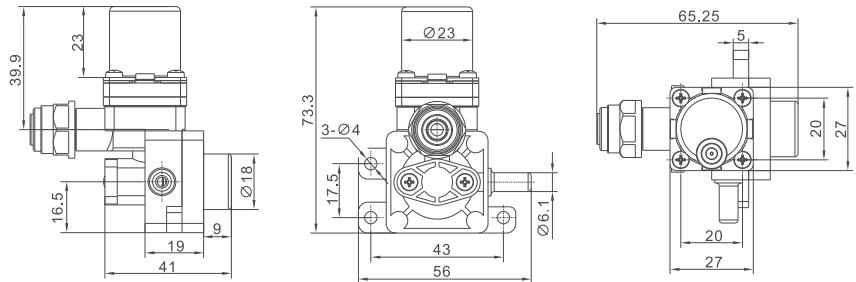
The technical parameters are detailed on page 54



Model: FD-901

Size of installation

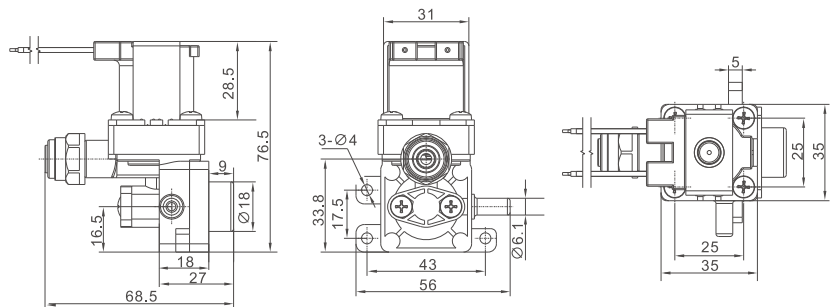
The technical parameters are detailed on page 61



Model: FD-902

Size of installation

The technical parameters are detailed on page 61

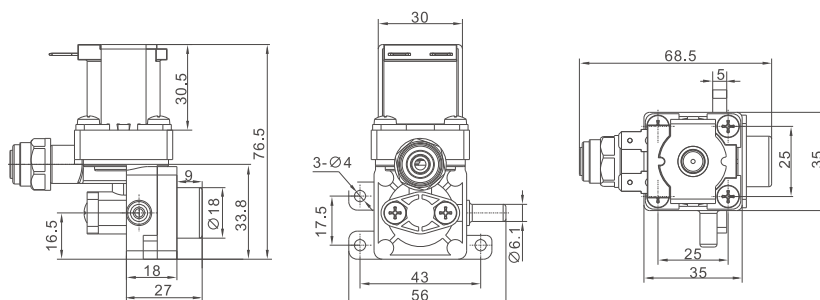




Model: FD-903

Size of installation

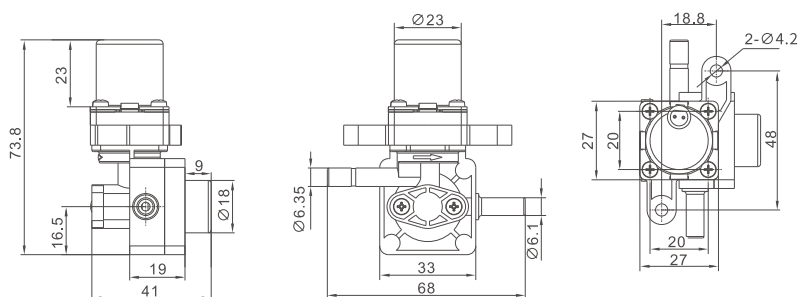
The technical parameters are detailed on page 61



Model: FD-904

Size of installation

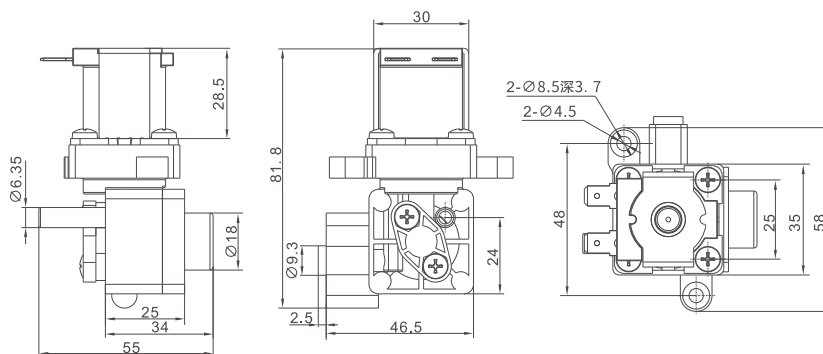
The technical parameters are detailed on page 61



Model: FD-905

Size of installation

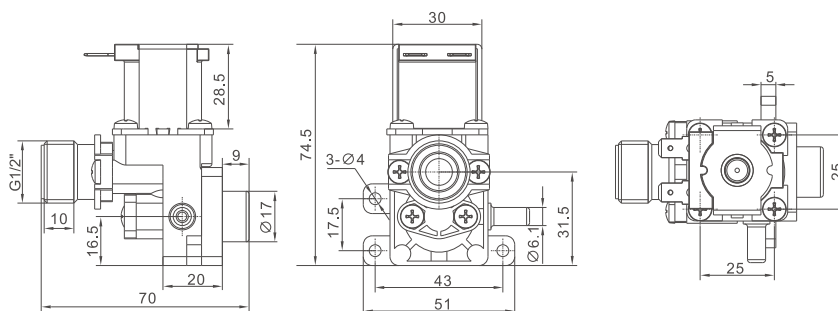
The technical parameters are detailed on page 61



Model: FD-906

Size of installation

The technical parameters are detailed on page 61

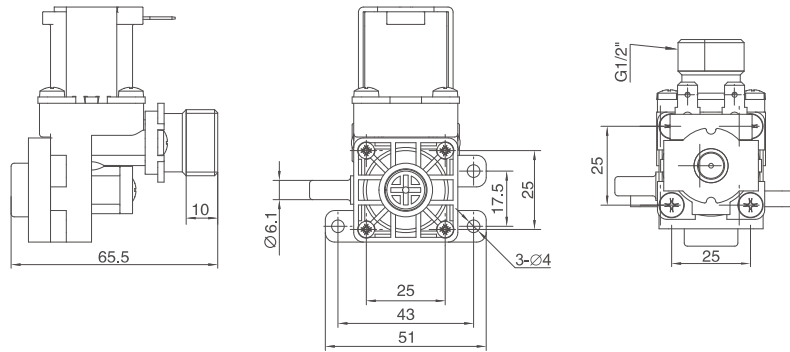




Model: FD-906B-2

Size of installation

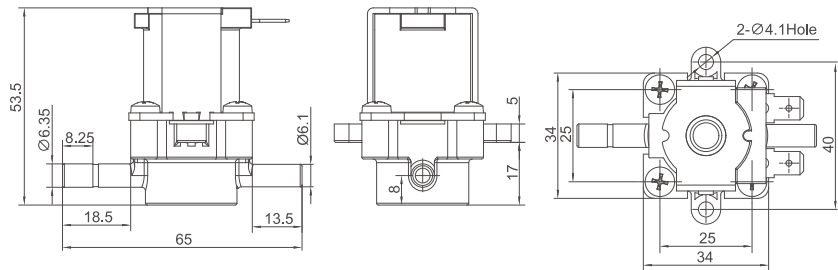
The technical parameters are detailed on page 61



Model: FD-907

Size of installation

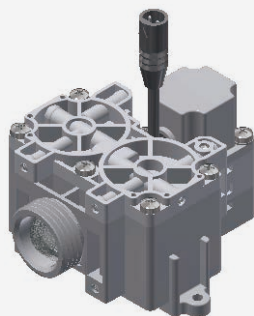
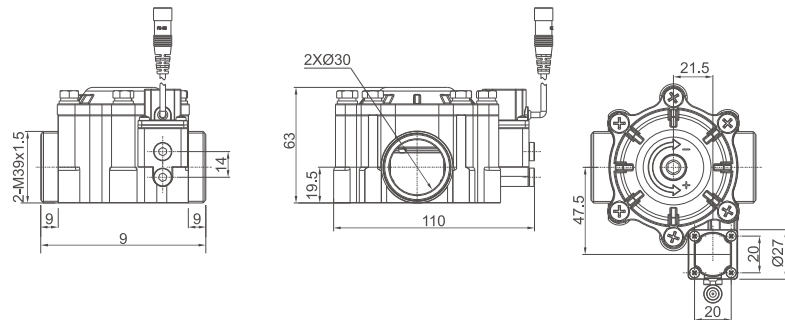
The technical parameters are detailed on page 61



Model: FD-9022

Size of installation

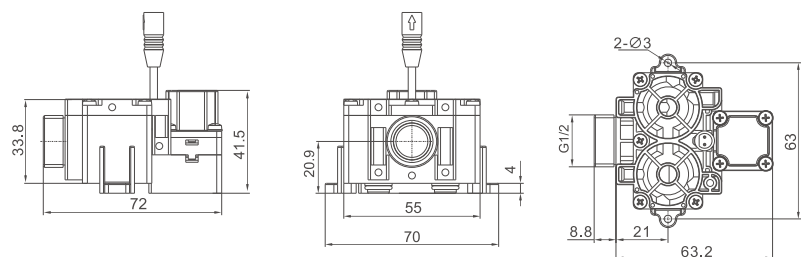
The technical parameters are detailed on page 56

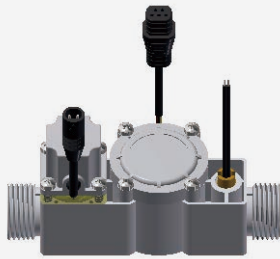


Model: FD-170

Size of installation

The technical parameters are detailed on page 62

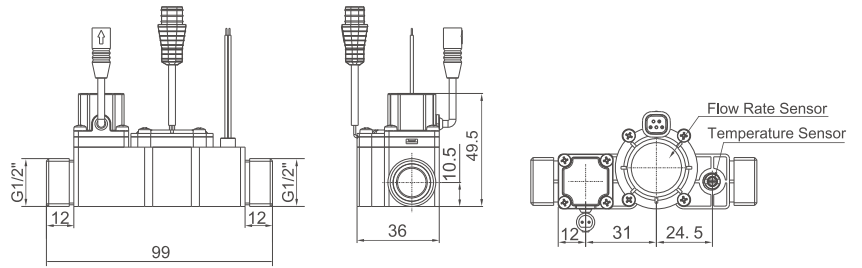




Model: FD-166-1

Size of installation

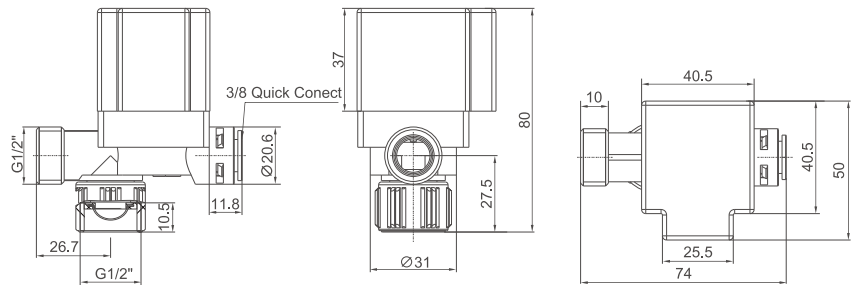
The technical parameters are detailed on page 48



Model: FD-011

Size of installation

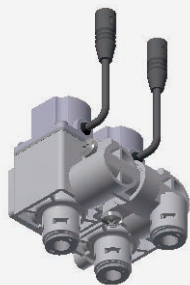
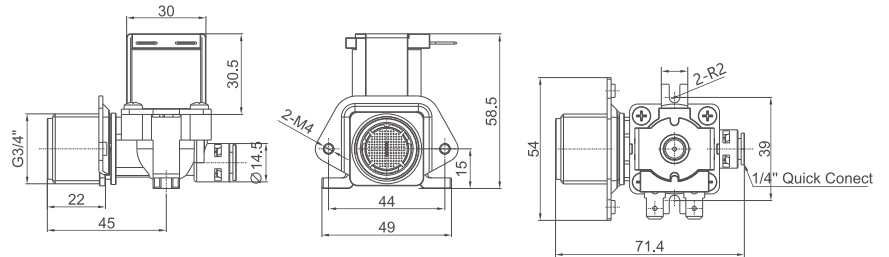
The technical parameters are detailed on page 44



Model: FD-012

Size of installation

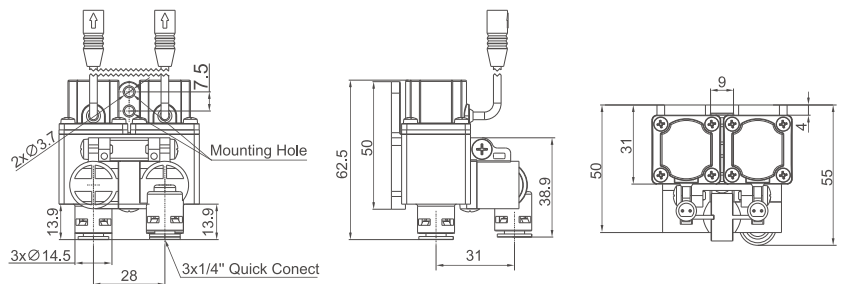
The technical parameters are detailed on page 44



Model: FD-125D

Size of installation

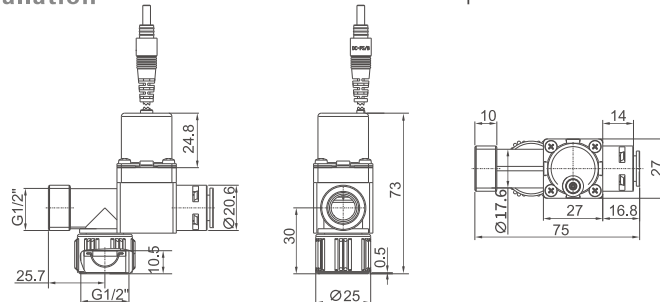
The technical parameters are detailed on page 46



Model: FD-138E-4

Size of installation

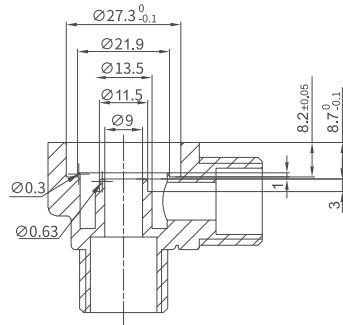
The technical parameters are detailed on page 42



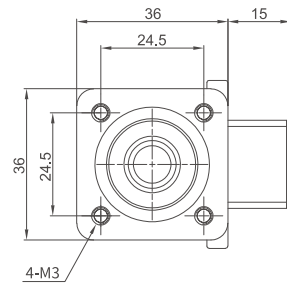


FD-01 Coil

Size of installation

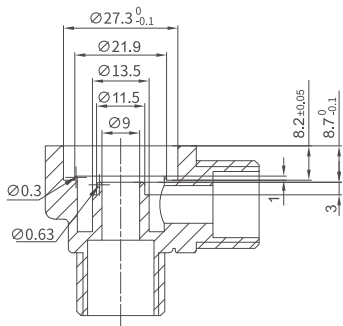


The technical parameters are detailed on page 44

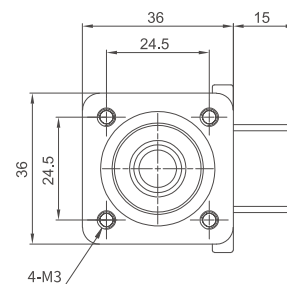


FD-01 Coil

Size of installation

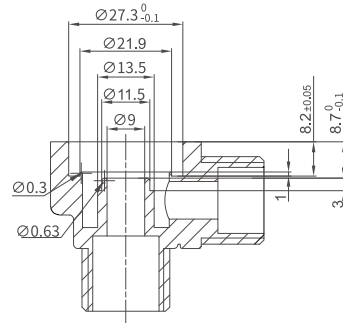


The technical parameters are detailed on page 44

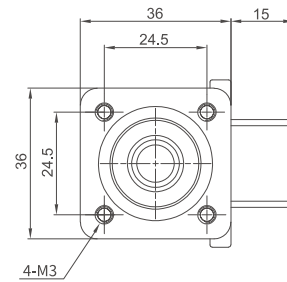


FD-01 Coil

Size of installation

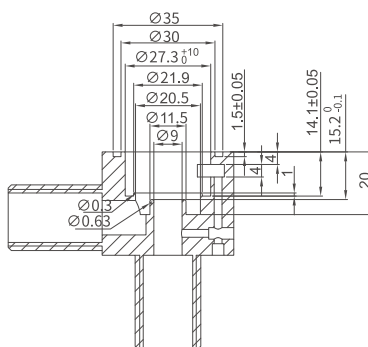


The technical parameters are detailed on page 44

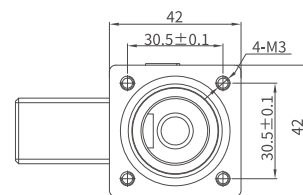


FD-08C Coil

Size of installation



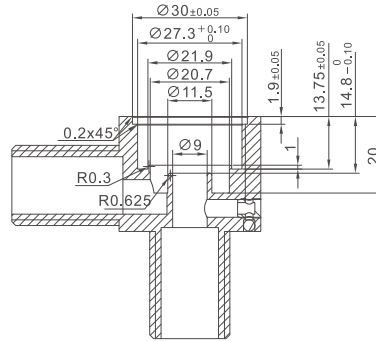
The technical parameters are detailed on page 41



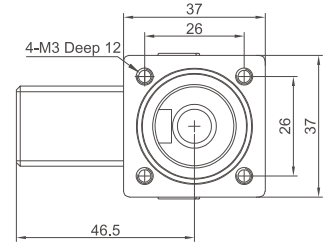


FD-18A-3 Coil

Size of installtion

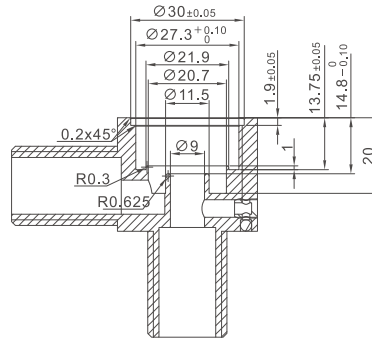


The technical parameters are detailed on page 40

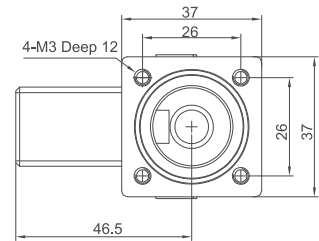


FD-18A Coil

Size of installtion

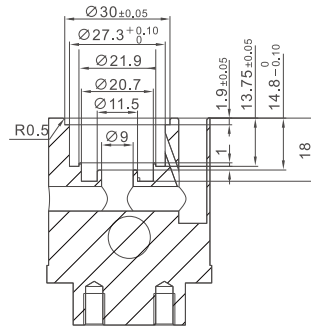


The technical parameters are detailed on page 40

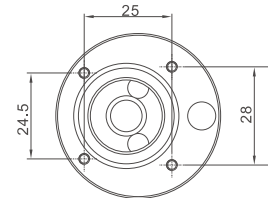


FD-228 Coil

Size of installtion

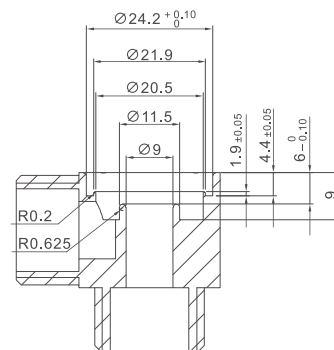


The technical parameters are detailed on page 40

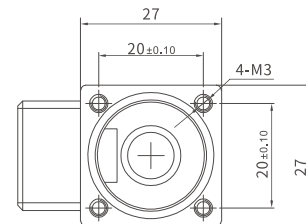


FD-138 Coil

Size of installtion



The technical parameters are detailed on page 42

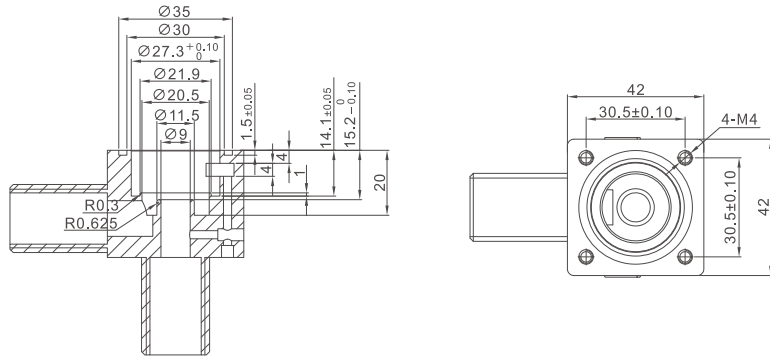




FD-08A Coil

Size of installtion

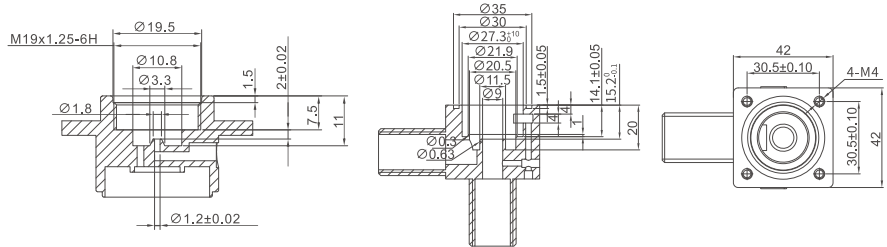
The technical parameters are detailed on page 39



FD-08B Coil

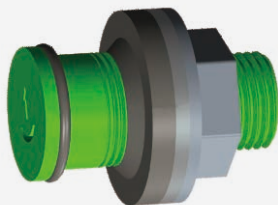
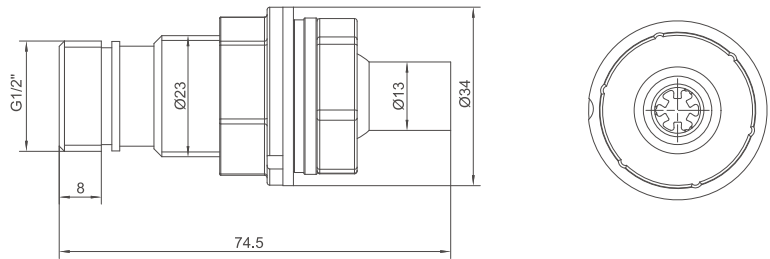
Size of installtion

The technical parameters are detailed on page 43



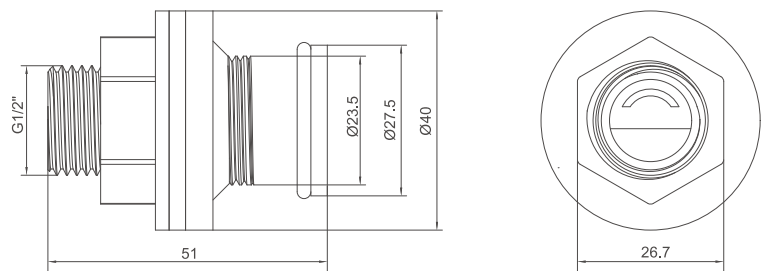
Spray Nozzle

Size of installtion



Spray Nozzle

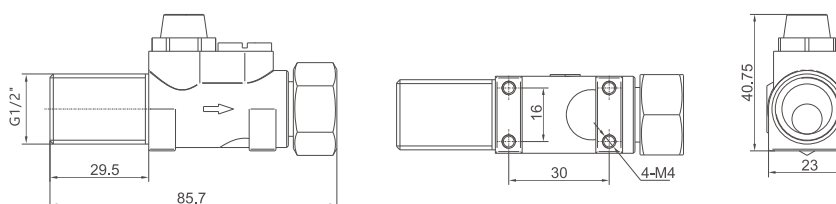
Size of installtion





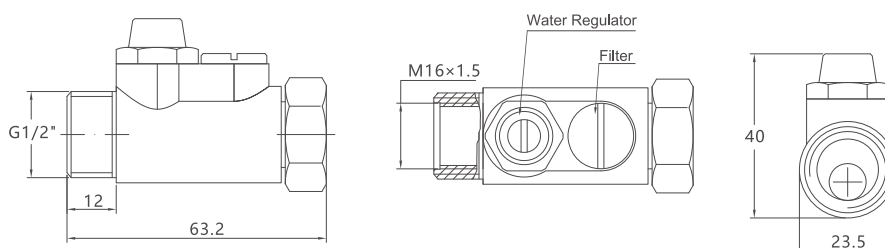
New Flow Valve

Size of installtion



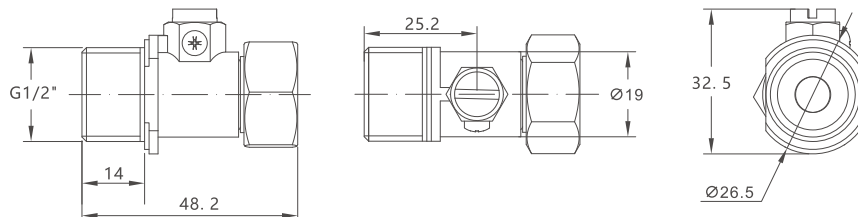
Short Flow Valve

Size of installtion



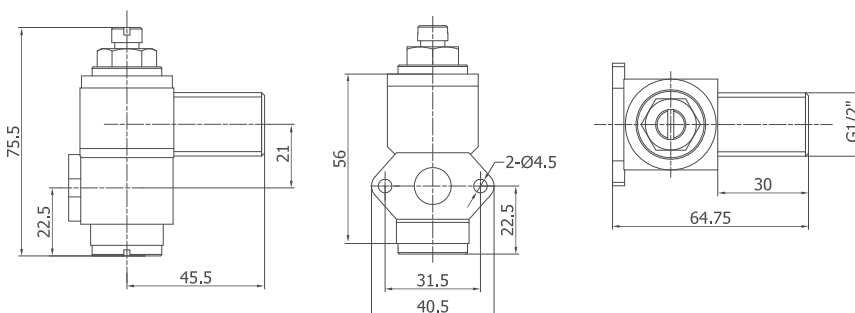
Globe Valve

Size of installtion



90 Degree Flow Adjust Valve

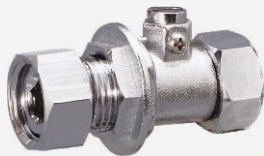
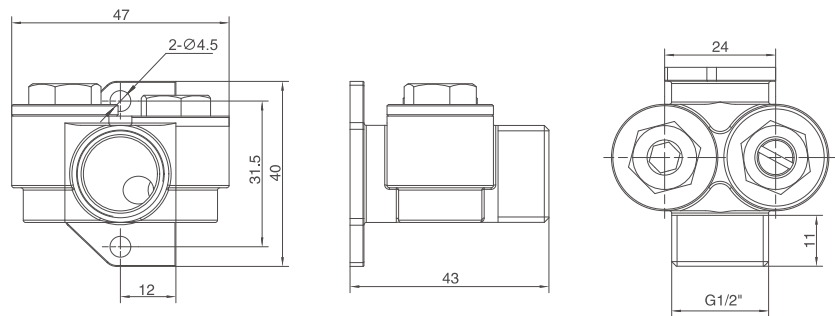
Size of installtion





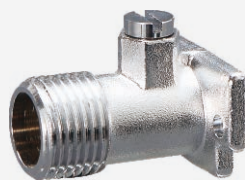
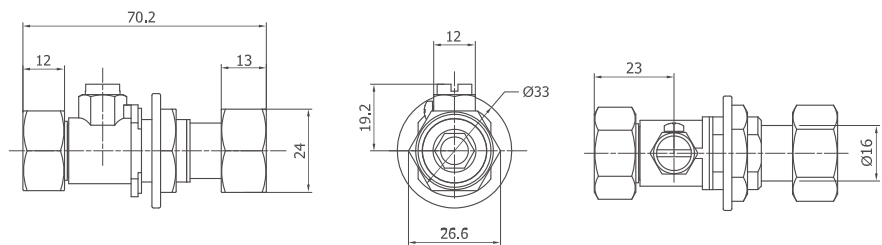
Inlet adjust filter

Size of installtion



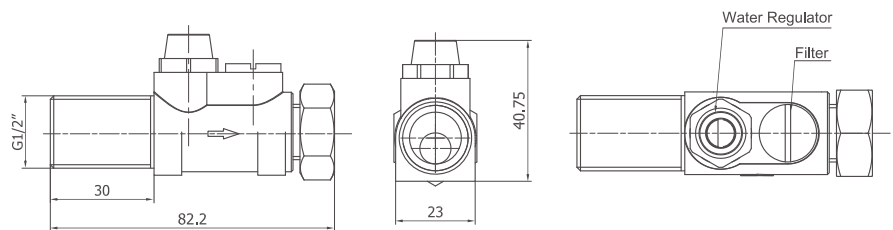
Globe Valve

Size of installtion



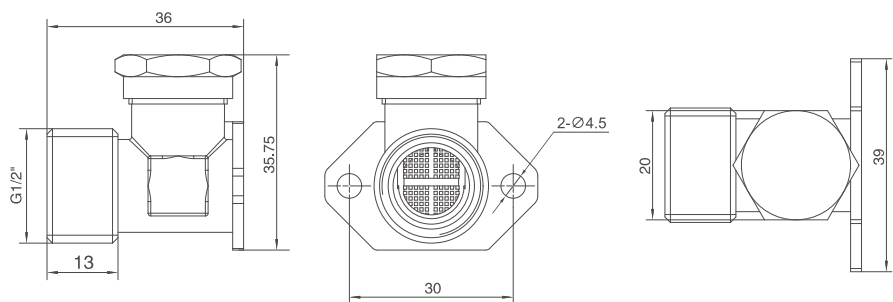
Inlet Globe Valve

Size of installtion



Long Filter

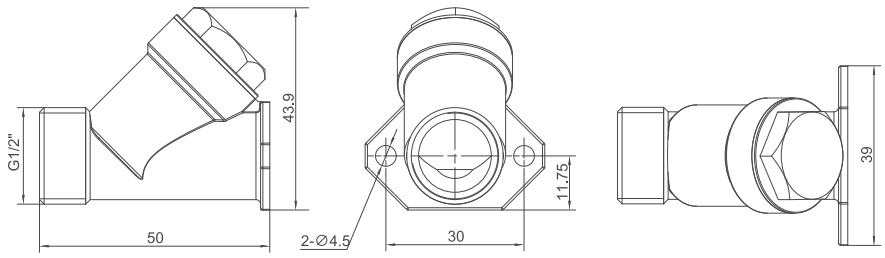
Size of installtion





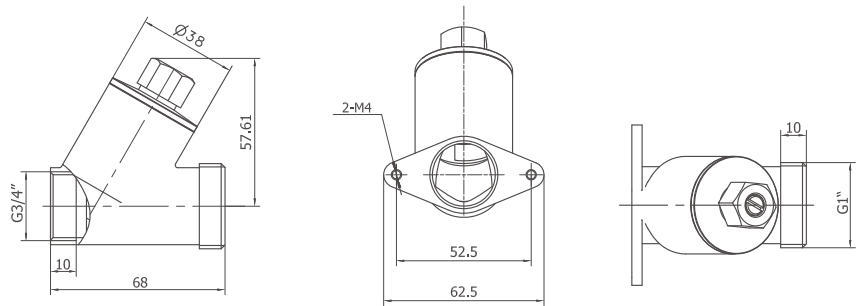
Inlet Filter

Size of installtion



WC Pan Filter

Size of installtion



Inlet/outlet Joint



Accessories



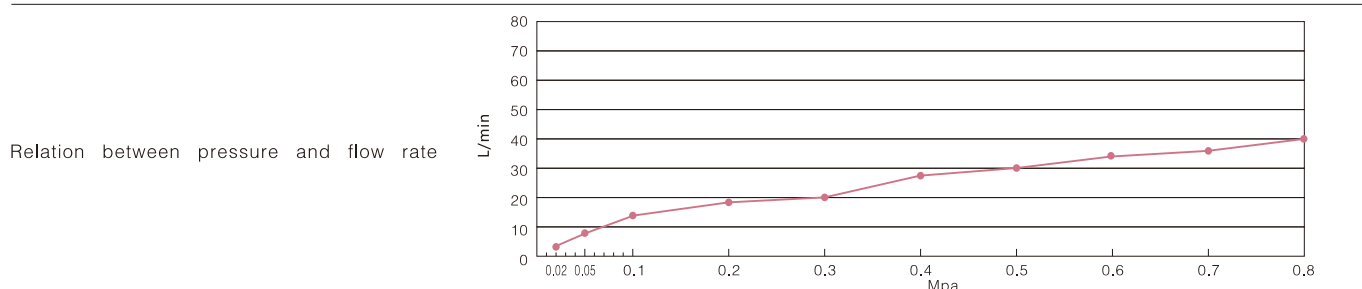
FD-08A/08A-2/08A-3/08A-4/08A-5/08A-6/08E/09A/5

Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	DC12V	DC24V
Coil resistance	16Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	250mA	300mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)	
Pulse width	≥30ms		
Operating pressure	0.02Mpa-0.8Mpa(2.9psi- 116psi)		
Media temperature	1°C-75°C		
Responding time	open≤0.15s close≤0.5s		
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)		

NOTE:3V and 9V can be customized



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	3	9	14	18	20	27	30	34	36	40

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

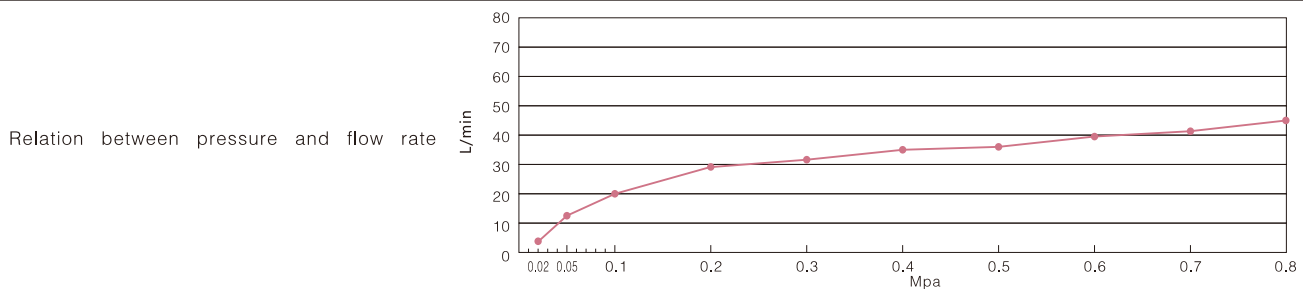
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-18A/18A-2/18A-3/18C/18E/18G/18G-2/18H/18H-2/18K/18ZC/18ZD/228/228-2/628-3/628-6/688 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	17.5Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	228mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥ 30ms				
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤0.5s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				

NOTE:3V and 9V can be customized



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	3	12	20	29	32	35	37	39	42	45

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

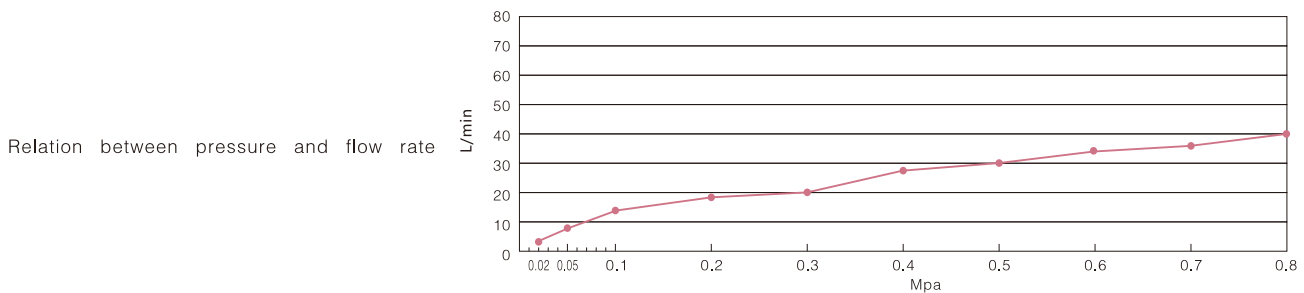
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-08C Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	DC12V	DC24V
Coil resistance	14Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	286mA	300mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)	
Pulse width	≥ 30ms		
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)		
Media temperature	1°C-75°C		
Responding time	open≤0.15s close≤0.5s		
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)		



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	3	9	14	18	20	27	30	34	36	40

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.02mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.03MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.03MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.03MPa

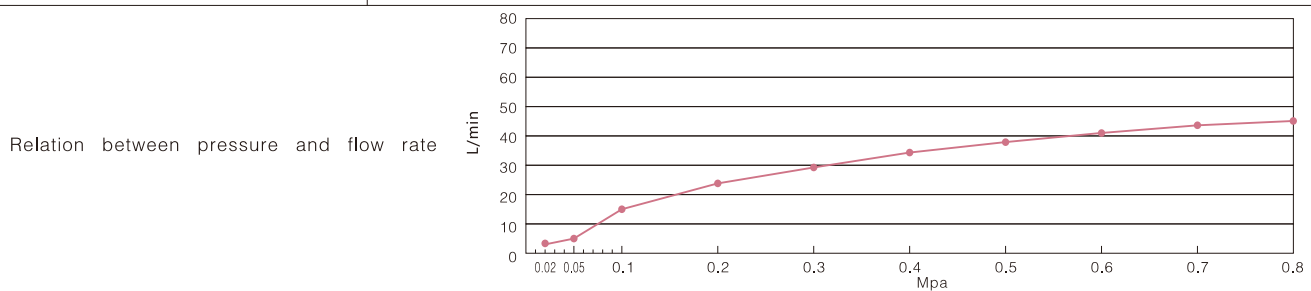
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-138/138B/138C/138D/138D-2/138E/138E-4/138K Technical Feature & Parameter

• **Instruction**

Rated voltage	DC6V	DC12V	DC24V
Coil resistance	11Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	363mA	300mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)	
Pulse width	≥ 30ms		
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)		
Media temperature	1°C-75°C		
Responding time	open≤0.15s close≤0.5s		
Service life	≥ 500,000 cycles (CJ/T 194-2014,GB/T41863-2022)		
NOTE:3V and 9V can be customized			



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	1.5	5	15	24	29	34	38	41	43	45

• **Performance test**

The strength test		Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	Static pressure 1.6MPa 0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

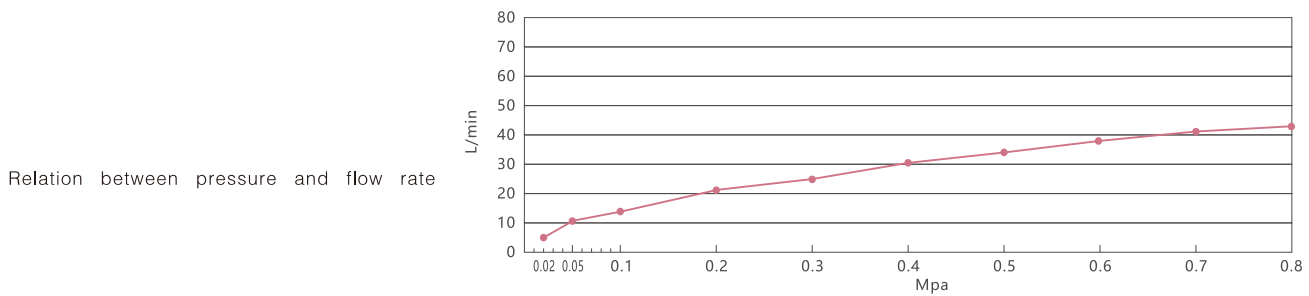
• **Requirements of working environment**

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-08B/09B/7 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	DC12V	DC24V	AC220V
Coil resistance	12Ω ± 0.5Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)	4750Ω ± 250Ω (20°C)
Min Current	375mA	270mA	166mA	18mA
Switch mode	AC and DC continuous (normal closed type)			
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)			
Media temperature	1°C-75°C			
Responding time	open≤0.15s close≤0.5s			
Service life	≥ 1200,000 cycles (CJ/T 194-2014,GB/T41863-2022)			



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	5.3	10.4	14.8	21.5	26.6	31	34.7	38.4	41.2	43.4

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage V*0.85	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water Pressure 0.03 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

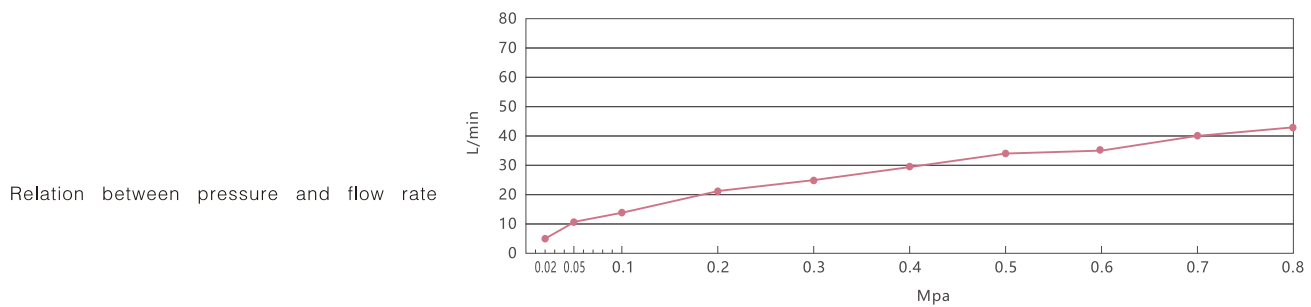
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-01/02/03/04/05/06/07/011/012/1/2/4/8/9/14/16/101/102/201/628-4

Technical Feature & Parameter

• Instruction

Rated voltage	AC12V	DC12V	AC24V	DC24V	AC110V	AC220V
Coil resistance	25Ω ± 2Ω (20°C)	36Ω ± 2Ω (20°C)	75Ω ± 5Ω (20°C)	130Ω ± 5Ω (20°C)	1.7KΩ ± 0.1KΩ	4.75KΩ ± 0.25KΩ (20°C)
Min Current	320mA	300mA	166mA	166mA	36mA	18mA
Switch mode	AC and DC continuous (normal closed type)					
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)					
Media temperature	1°C-75°C					
Responding time	open ≤ 0.15s close ≤ 0.5s					
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)					



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	5.3	10.4	14.6	20.7	25.6	29.7	33.4	36.6	40	43

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage V*0.85	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water Pressure 0.8 mpa, solenoid valve can start and close normally			
Low water pressure startup and closing	At water Pressure 0.03 mpa, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

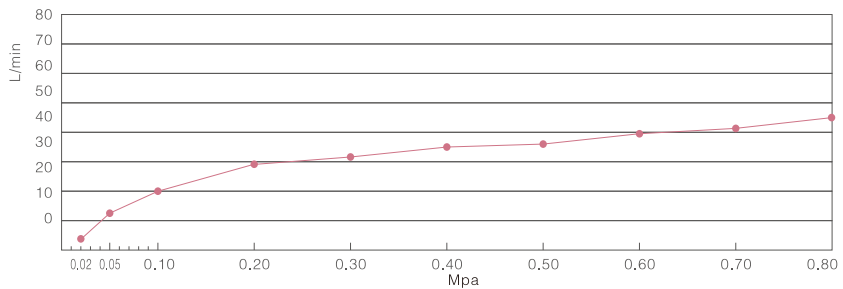
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-160AC/160ASC/160ZC/160SZC/160AD/160ASD/160BC/160BSC/160BD/160BSD/160ZD/160SZD/160PC/160SPC/160PD/160SPD/125C Technical Feature & Parameter

• Instruction

Rated voltage	DC3V	DC6V	DC12V	DC24V
Coil resistance	6 Ω ± 0.5 Ω (20°C)	15.5 Ω ± 2 Ω (20°C)	36 Ω ± 2 Ω (20°C)	130 Ω ± 5 Ω (20°C)
Min Current	45mA	290mA	300mA	166mA
Switch mode	DC pulse(latching type)			
Pulse width	20-40ms			
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)			
Media temperature	1°C-75°C			
Responding time	open≤0.3s close≤1s			
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)			

Relation between pressure and flow rate



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	0.5	9.7	16.3	23.5	28.2	32	35.6	38.9	42	44.9

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 20ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.03Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

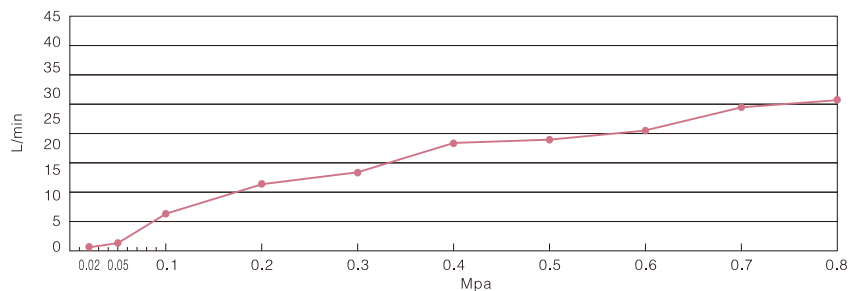
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-125/125D Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	15Ω ± 0.5Ω (20°C)
Min Current	300mA
Switch mode	DC pulse(latching type)
Pulse width	≥ 20ms
Operating pressure	0.2Mpa-0.8Mpa(2.9psi-116psi)
Media temperature	1°C-75°C
Responding time	open ≤ 0.15s close ≤ 2s
Service life	≥ 500,000 cycles (CJ/T 194-2014, GB/T 41863-2022)

Relation between pressure and flow rate



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	0.5	2	7	12	18	21	24	26	29	31

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure		
No-load test	Voltage 3.6V, Pulse width 20ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

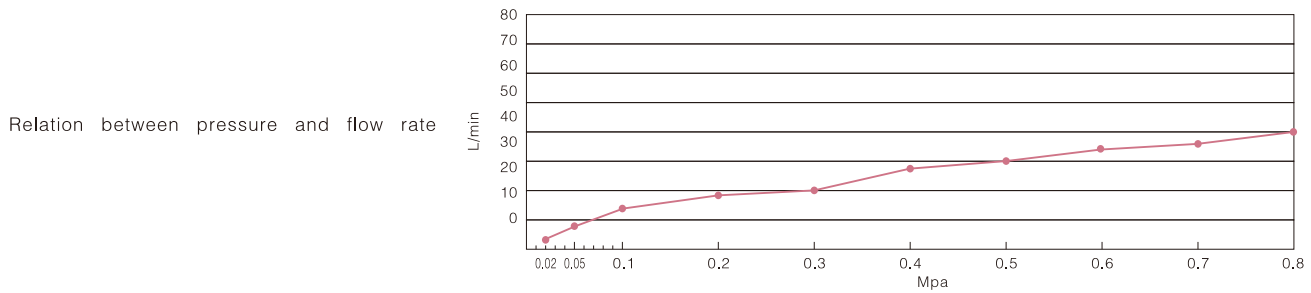
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-139B/139-6/139-7/228M/228S Technical Feature & Parameter

• **Instruction**

Rated voltage	DC3V	DC6V
Coil resistance	9.5Ω ± 0.5Ω (20°C)	25Ω ± 1Ω (20°C)
Min Current	180mA	
Switch mode	DC pulse(latching type)	
Pulse width	≥ 20ms	
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)	
Media temperature	1°C-75°C	
Responding time	open≤0.15s close≤0.5s	
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)	



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	0.5	2	6	10	12	15	17	20	22	23

• **Performance test**

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 10ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.03Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.03Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.03MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.03MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.03MPa

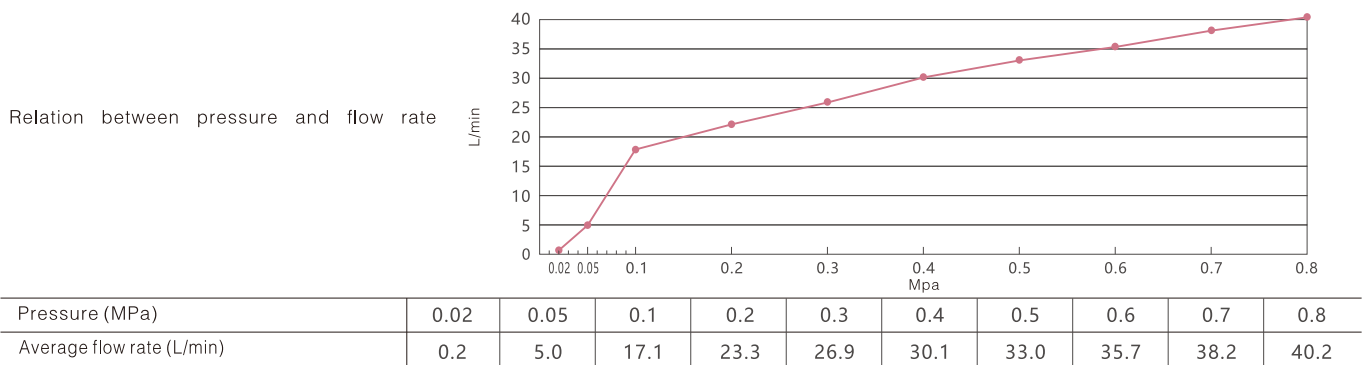
• **Requirements of working environment**

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-166/166-1 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	12Ω ± 0.5Ω (20°C)
Min Current	333mA
Switch mode	DC pulse(latching type)
Pulse width	10ms-30ms
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)
Media temperature	1°C-75°C
Responding time	open≤0.15s close≤1s
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)



• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 10ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.05Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.03Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.03MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.03MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.03MPa

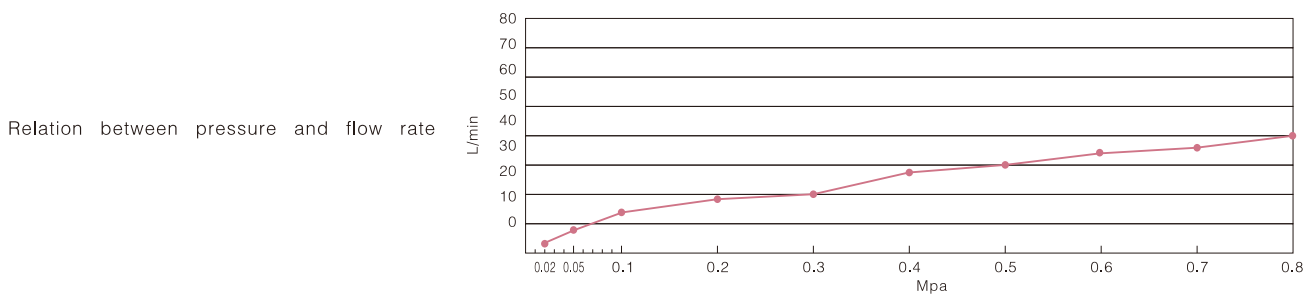
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	Horizontally mounted, coil head up
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-228S-2 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	12Ω ± 0.5Ω(20℃)
Min Current	333mA
Switch mode	DC pulse(latching type)
Pulse width	10ms-30ms
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)
Media temperature	1℃-75℃
Responding time	open≤0.15s close≤1s
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	0.5	2	6	10	12	15	17	20	22	23

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 10ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.03Mpa, voltage DC4.5V, pulse width 10ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.03Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.03MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.03MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.03MPa

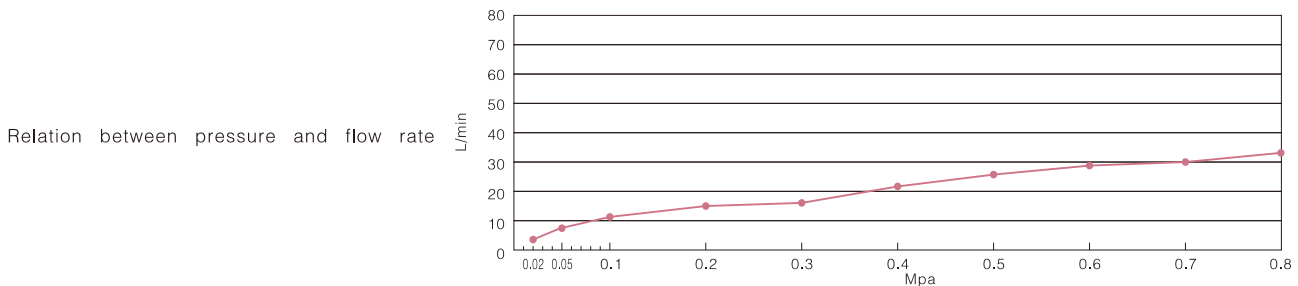
• Requirements of working environment

Temp of working environment	1℃~+60℃	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80℃(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-628-7 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	11Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	363mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥30ms				
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤0.5s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	2.5	7	11	15	17	22	26	28	30	32

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

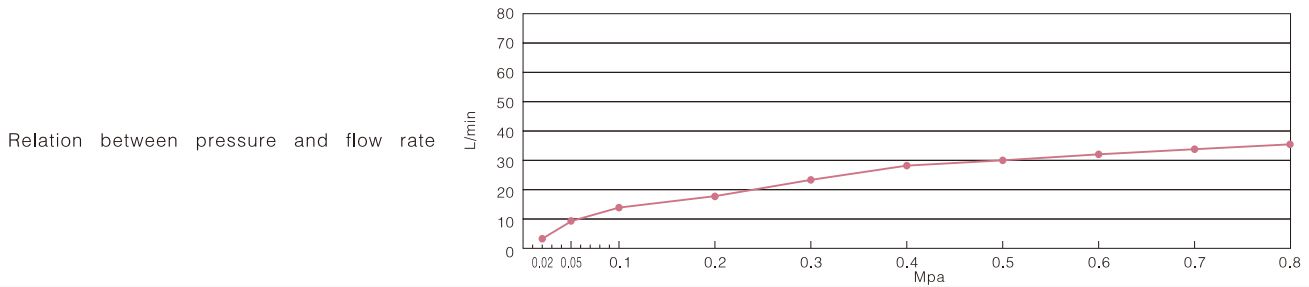
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-328/328-2/328C/328D/328D-2/328D-3/328H/328H-2/18PC/18PD

Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	17.5Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	228mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥30ms				
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤0.5s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	3	9	14	18	23	27	30	32	34	36

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

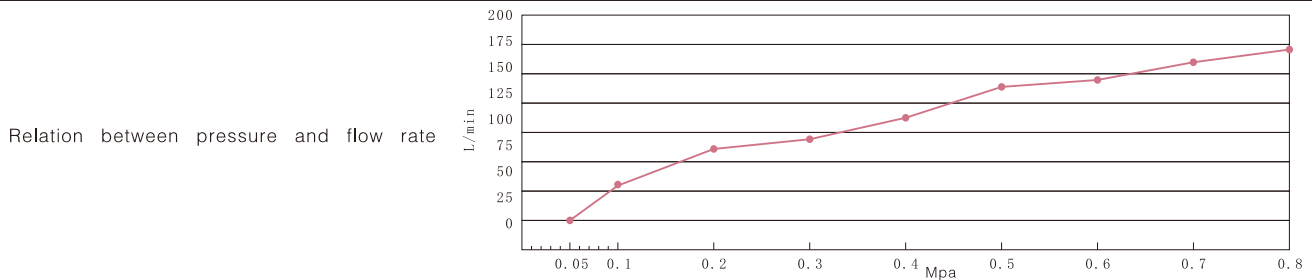
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-819/823/827 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	11Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	363mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥ 30ms				
Operating pressure	0.05Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤2s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				



Pressure (MPa)	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	25	52	74	96	120	135	148	160	173

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.05Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.05 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.05Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

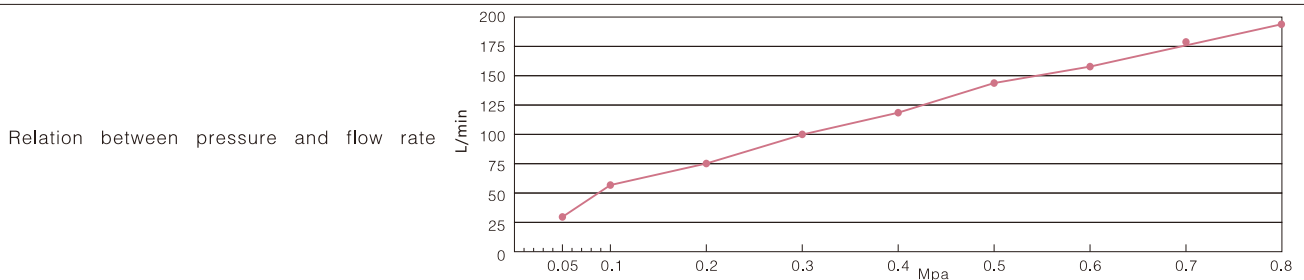
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)	Water pressure	0.2Mpa
Storage humidity	25%~95%RH(No condensation state)		

FD-828 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	17.5Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	228mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥ 30ms				
Operating pressure	0.05Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤2s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				

NOTE:3V and 9V can be customized



Pressure (MPa)	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	30	55	75	100	120	145	160	178	190

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally		
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally		
Low water pressure startup and closing	At water pressure 0.05Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally		
	Water Pressure 0.05 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally		
Leakage upon high water pressure	1.2Mpa zero leakage		
Leakage upon low water pressure	0.05Mpa leakage ≤0.1mL/min		
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown		
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ		
Sealing test	Air	High pressure	0.6MPa
		Low pressure	0.02MPa
	Cold water	High pressure	1.2MPa
		Low pressure	0.02MPa
	Hot water	High pressure	0.8MPa
		Low pressure	0.02MPa

• Requirements of working environment

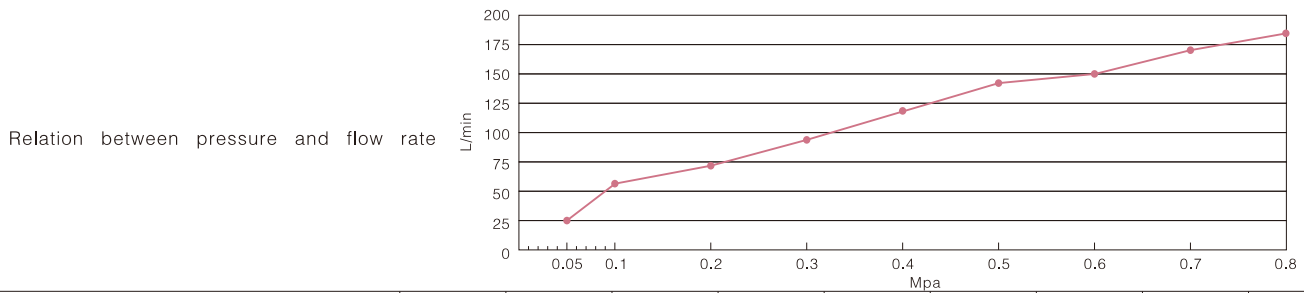
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)	Water pressure	0.2Mpa
Storage humidity	25%~95%RH(No condensation state)		

FD-88A/825 Series Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	AC12V	DC12V	AC24V	DC24V
Coil resistance	17.5Ω ± 0.5Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	40Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)
Min Current	228mA	480mA	300mA	250mA	166mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Pulse width	≥ 30ms				
Operating pressure	0.05Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤2s				
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)				

NOTE:3V and 9V can be customized



Pressure (MPa)	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	25	55	72	95	115	135	150	165	180

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.05Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.05 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.05Mpa leakage ≤0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

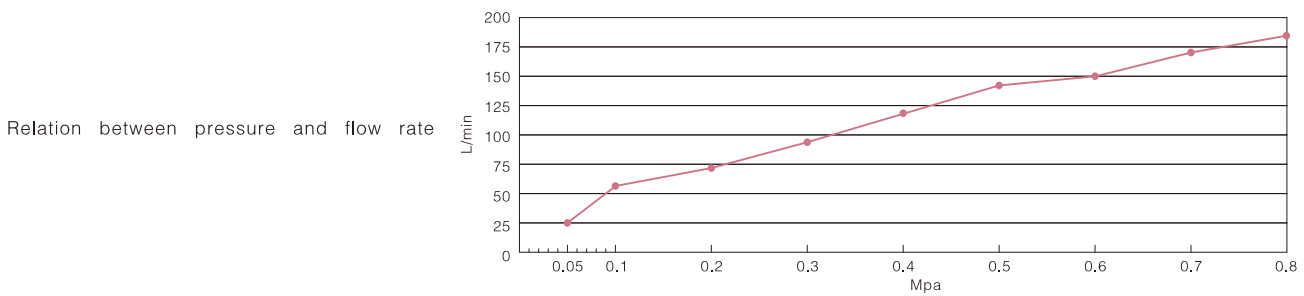
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)	Water pressure	0.2Mpa
Storage humidity	25%~95%RH(No condensation state)		

FD-826/826-2/826-4 Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	25Ω ± 0.5Ω (20°C)
Min Current	160mA
Switch mode	DC pulse
Pulse width	≥ 10ms
Operating pressure	0.05Mpa-0.8Mpa(2.9psi-116psi)
Media temperature	1°C-75°C
Responding time	open ≤ 0.15s close ≤ 2s
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)



Pressure (MPa)	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	25	55	72	95	115	135	150	165	180

• Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 3.6V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.05Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.05Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

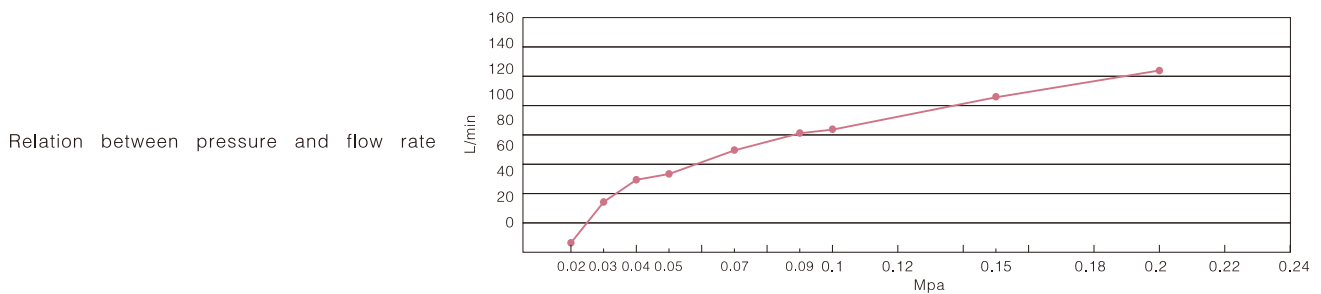
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)	Water pressure	0.2Mpa
Storage humidity	25%~95%RH(No condensation state)		

FD-9022/9022-4 Series Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	15Ω ± 0.5Ω (20°C)
Min Current	300mA
Switch mode	DC pulse(latching type)
Pulse width	20ms
Operating pressure	0.05Mpa-0.8Mpa
Media temperature	1°C-75°C
Responding time	open≤0.5s close≤2s
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)



Pressure (MPa)	0.02	0.03	0.04	0.05	0.07	0.09	0.1	0.15	0.2
Average flow rate (L/min)	5.4	37.7	50.9	58.3	70.3	80.9	85.6	106.8	124.2

• Performance test

The strength test	Static pressure 1.2MPa	Withstand voltage pressure	3.5Mpa/1min	
No-load test	Voltage 3.6V, Pulse width 20ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 20ms, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.05Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

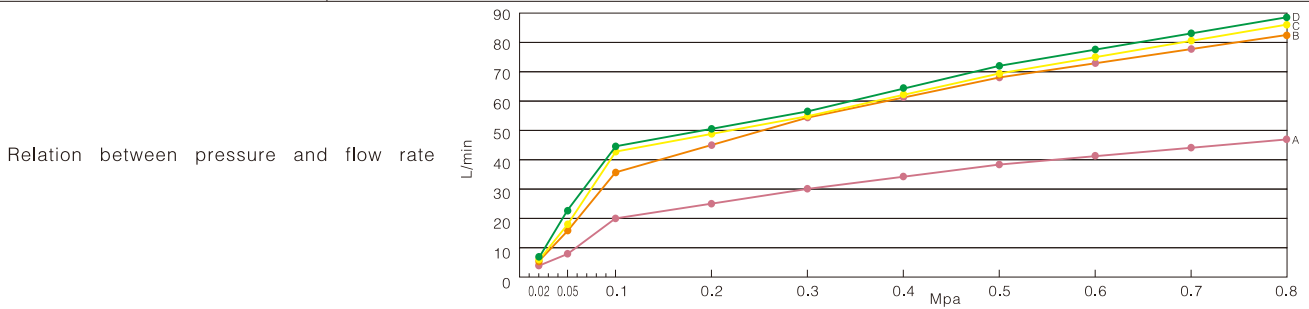
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-158A/158A5/158B/158B-2/158C/158D Technical Feature & Parameter

• **Instruction**

Rated voltage	AC12V	DC12V	AC24V	DC24V	AC110V	AC220V
Coil resistance	25Ω ± 2Ω (20°C)	36Ω ± 2Ω (20°C)	75Ω ± 5Ω (20°C)	130Ω ± 5Ω (20°C)	1.7KΩ ± 0.1KΩ	4.75KΩ ± 0.25KΩ (20°C)
Min Current	320mA	300mA	166mA	166mA	36mA	18mA
Switch mode	AC and DC continuous (normal closed type)					
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)					
Media temperature	1°C-75°C					
Responding time	open ≤ 0.15s close ≤ 0.5s					
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)					



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
158A Average flow rate (L/min)	3.2	9	20	25	30	34	38	41	43	46
158B Average flow rate (L/min)	5.76	16.2	36	45	54	61.2	68.4	72.5	78	82.8
158C Average flow rate (L/min)	6.72	18.9	42	48.6	55.2	62.5	69.8	75	81	86.6
158D Average flow rate (L/min)	7.68	21.6	43	49.5	56	63.2	70.5	77	81.5	88

• **Performance test**

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage V*0.9	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage V*0.9, the solenoid valve can be started and closed normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage V*0.9, the solenoid valve can be started and closed normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• **Requirements of working environment**

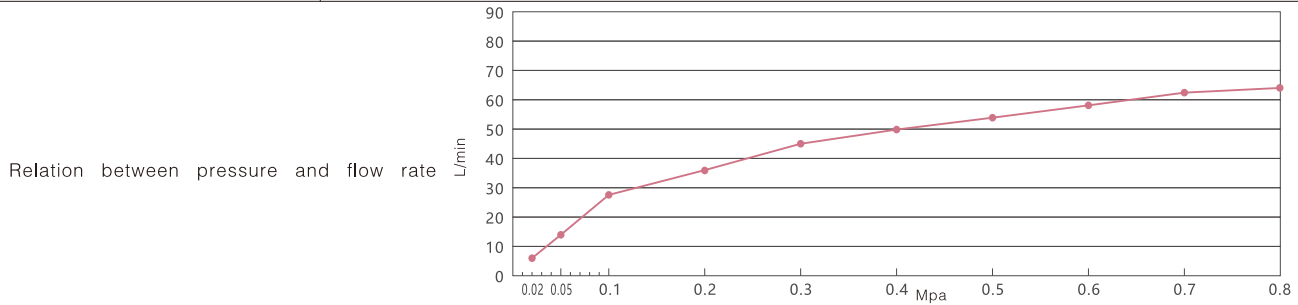
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-151/801/801-1/801-2/801-3/805/805-2/809/8027/8028

Technical Feature & Parameter

• Instruction

Rated voltage	DC6V	DC12V	AC12V	DC24V	AC24V
Coil resistance	17.5Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	17.5Ω ± 0.5Ω (20°C)	130Ω ± 5Ω (20°C)	36Ω ± 2Ω (20°C)
Min Current	250mA	300mA	320mA	166mA	250mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)			
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤0.5s				
Service life	≥500,000 cycles (CB/T 34549-2017, QB/T5735-2022)				



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	6	14	28	36	45	50	54	58	62	64

• Performance test

The strength test	Withstand voltage pressure	3.5Mpa/1min	Withstand voltage pressure	3.5Mpa/1min
Models	801-1, 805, 805-2		801-2, 801-3, 8027, 8028	
No-load test	Voltage V*0.9	Permissible limiting voltage		V*1.15
High water pressure startup and closing	At water pressure 0.8Mpa, voltage V*0.9, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage V*0.9, the solenoid valve can be started and closed normally			
	Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

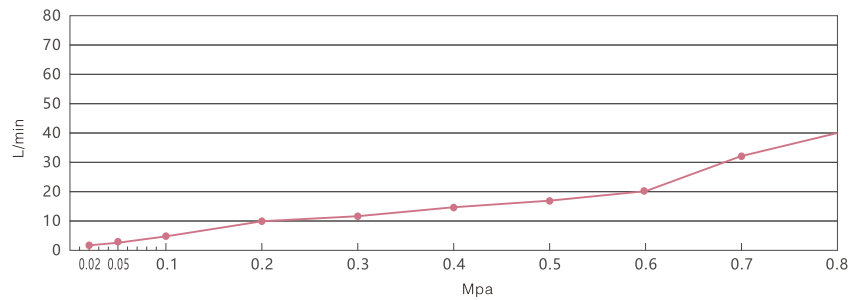
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-103 Series Technical Feature & Parameter

• Instruction

Rated voltage	DC24V	AC220V
Coil resistance	12Ω ± 0.5Ω (20°C)	12Ω ± 0.5Ω (20°C)
Min Current	333mA	
Switch mode	AC and DC continuous (normal closed type)	
Job stress	0-0.7Mpa	
Fluid temperature	-5°C-80°C	
Working hours	Within 1 hour	
Service life	Valve body for life	

Relation between pressure and flow rate



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7
Average flow rate (L/min)	0.5	2	6	10	12	15	17	20	22

• Supplementary statement

Nozzle aperture	½ "4 minutes
Flow aperture	16mm
Fluid temperature	-5°C-80°C
Job stress	0~1.0Mpa
Type of fluid	Water, gas (non-corrosive)
Working hours	Within 1 hour
Coil power	AC-220V-15W,DC24V-30W
Gross weight of product	0.63kg

FD-702 Series Technical Feature & Parameter

• Instruction

Rated voltage	DC12~24V	AC24V
Coil resistance	5Ω ±0.5Ω (20°C)	58Ω ± 2Ω (20°C)
Min Current	2000mA	372mA
Switch mode	DC pulse(latching type)	AC and DC continuous (normal closed type)
Pulse width	≥ 30ms	
Operating pressure	0.02Mpa~0.8Mpa(2.9psi~ 116psi)	
Media temperature	1°C~75°C	
Responding time	open≤0.15s close≤1s	
Service life	≥ 1,200,000 cycles (CJ/T 194-2014,GB/T41863-2022)	

•Performance test

The strength test	Static pressure 1.6MPa	Withstand voltage pressure	1.2Mpa/5min	
No-load test	Voltage 10.2V, Pulse width 30ms	Permissible limiting voltage	V*1.15	
	AC/DC continuous V * 0.85			
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC10.8V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.03Mpa, voltage DC10.8V, pulse width 30ms, the solenoid valve can be started and closed normally			
	Water Pressure 0.03 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.03Mpa leakage ≤0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

•Requirements of working environment

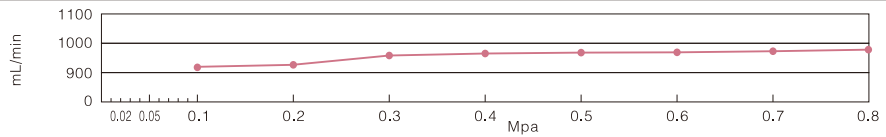
Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-901/902/903/904/905/906/906B-2/907 Technical Feature & Parameter

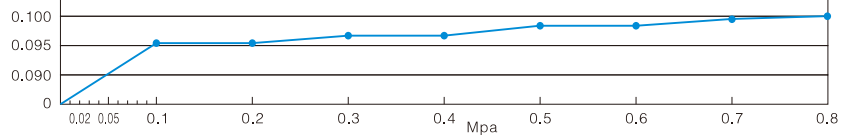
• Instruction

Rated voltage	DC6V	DC12V	DC24V	AC110V	AC220V
Coil resistance	11Ω ± 0.5Ω (20°C)	36Ω ± 2Ω (20°C)	130Ω ± 5Ω (20°C)	1.7Ω ± 0.1Ω (20°C)	4.75Ω ± 0.25Ω (20°C)
Min Current	363mA	320mA	166mA	36mA	18mA
Switch mode	DC pulse(latching type)		AC and DC continuous (normal closed type)		
Pulse width	≥30ms				
Operating pressure	0.02Mpa-0.8Mpa(2.9psi-116psi)				
Media temperature	1°C-75°C				
Responding time	open≤0.15s close≤0.5s				
Service life	≥1,200,000 cycles (CB/T 34549-2017, QB/T 5735-2022)				

Relation between pressure and flow rate



Relation between inlet pressure and outlet pressure



inlet pressure(MPa)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
outlet pressure (MPa)	0.096	0.096	0.097	0.097	0.098	0.098	0.099	0.10
Average(mL/min)	920	938	957	966	970	976	980	985

• Performance test

The strength test	Static pressure 1.2MPa	Withstand voltage pressure	2.0Mpa/1min	
No-load test	Voltage V * 0.9s	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water pressure 0.8Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally Water Pressure 0.8 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Low water pressure startup and closing	At water pressure 0.02Mpa, voltage DC4.5V, pulse width 30ms, the solenoid valve can be started and closed normally Water Pressure 0.02 mpa, continuous voltage V * 0.9, solenoid valve can start and close normally			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.02Mpa leakage ≤0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 1500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥100MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

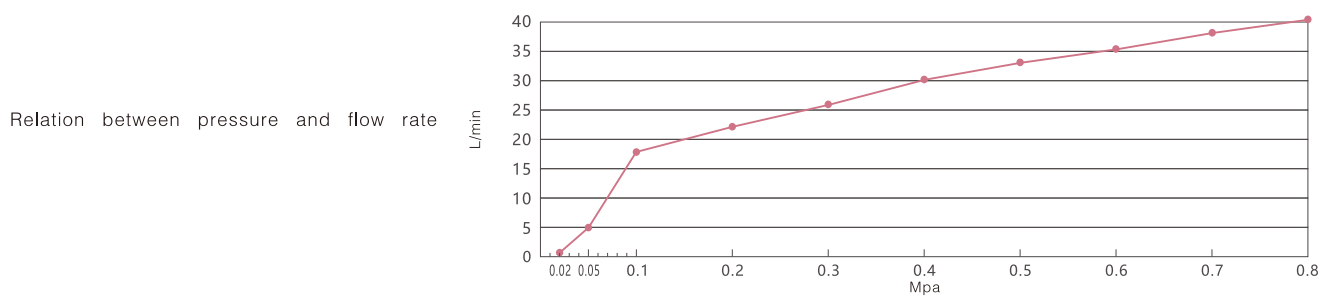
• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

FD-170 Series Technical Feature & Parameter

• Instruction

Rated voltage	DC6V
Coil resistance	12Ω ± 0.5Ω (20°C)
Min Current	333mA
Switch mode	DC pulse(latching type)
Pulse width	≥ 20ms
Operating pressure	0.05Mpa–0.8Mpa(2.9psi–116psi)
Media temperature	1°C–75°C
Responding time	The switching time is ≤ 1s
Service life	≥ 1,200,000 cycles (CJ/T 194–2014,GB/T41863–2022)



Pressure (MPa)	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Average flow rate (L/min)	0.2	5.0	17.1	23.3	26.9	30.1	33.0	35.7	38.2	40.2

• Performance test

The strength test	Static pressure 1.2MPa	Withstand voltage pressure	3.5Mpa/1min	
No-load test	Voltage 4V, Pulse width 10ms	Permissible limiting voltage	V*1.15	
High water pressure startup and closing	At water Pressure 0.8 mpa, voltage DC4.5 V, pulse width 10ms, solenoid valve can be normal switching			
Low water pressure startup and closing	At water Pressure 0.02 mpa, voltage DC4.5 V, pulse width 10ms, solenoid valve can be normal switching			
Leakage upon high water pressure	1.2Mpa zero leakage			
Leakage upon low water pressure	0.05Mpa leakage ≤ 0.1mL/min			
Electric strength	Among the conductive part, mounting hole and nonconductive metal, it can withstand 500V/50Hz, leakage current 0.75mA for 1min without the breakdown			
Insulation resistance	The resistance between the charged part and nonconductive metallic part tested by the megohmmeter of 500V ≥ 20MΩ			
Sealing test	Static pressure	Air	High pressure	0.6MPa
			Low pressure	0.02MPa
		Cold water	High pressure	1.2MPa
			Low pressure	0.02MPa
		Hot water	High pressure	0.8MPa
			Low pressure	0.02MPa

• Requirements of working environment

Temp of working environment	1°C~+60°C	Permissible limiting pressure (water pressure)	≤ 1.2Mpa
Humidity of working environment	35%~90%RH(No condensation state)	Mounting direction	It is mounted in vertical direction, the inclination doesn't exceed 15 degrees
Storage temp	-5~+80°C(No freezing state)		
Storage humidity	25%~95%RH(No condensation state)		

