

Highlights

- Suitable for Li-ion battery power supply
- Built-in working condition indicator
- Low electromagnetic interference
- 3.2-6V wide voltage power supply
- Long service life under max load
- Driven by BLDC motor
- Industrial-grade reliability
- Good air tightness
- Multiple self-protection
- Compact size

Applications

- Gas sampling
- Medical equipment
- Analytical instruments
- Portable device

12K hours
lifetime test

PERFORMANCE DATA

Model	Voltage (V DC)	Max. Load Current (mA)	Max. Peak Flow rate (L/min)	Max. Average Flow rate (L/min)	Max. Vacuum (-kPa)	Max. Pressure (kPa)
Material Option A	Diaphragm:EPDM Valves:EPDM Pump Head: Fiber reinforced PA6					
D15S	5	≤280	≥0.4	≥0.4	≥18	≥22
	Note: The rated voltage of the product is 5V, and the load current is measured under the rated voltage. The product can work in the input voltage range of 3.2V to 6V.					
Material Option B	Diaphragm:FKM Valves:FKM Pump Head: Fiber reinforced PA6					

CONFIGURATION OPTIONS

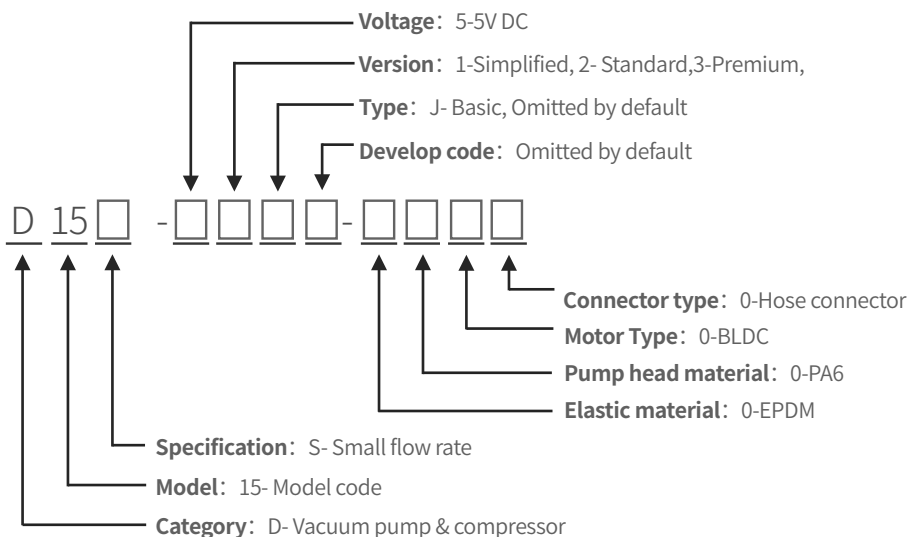
Material Options

Pump Head	Fiber reinforced PA6
Diaphragm	EPDM
Valves	EPDM
Motor	BLDC

RELIABILITY DATA

Models	D15S		
	Simplified	Standard	Premium
Fully Loaded Lifetime (hrs)	5000	8000	12000
Unloaded Lifetime (hrs)	8000	12000	18000
Motor Lifetime (hrs)	10000	15000	20000
Test conditions	In a clean and non-corrosive laboratory, the pump is fully loaded (the outlet is blocked, the inlet is directly connected to the atmosphere) or unloaded (the inlet and outlet are directly connected to the atmosphere), and runs continuously around the clock; ambient temperature: 5°C~33 °C, relative humidity: 50%-85%, fluctuates with the climate.		
Working Condition			
Operating temperature	Permissible ambient temperature is 0°C~50°C, it is not suitable to be exposed to the sun, and it should work in a clean and ventilated environment		
Medium	Permissible temperature of the medium is 5°C~50°C, the transferring gas is allowed to be rich in water vapor, but cannot contain solid particles		
Wetted materials	EPDM, fiber reinforced nylon, tolerance to alcohol, acid, alkali, etc. (except strong acid, concentrated acid, lipids, benzene, gasoline, etc.)		

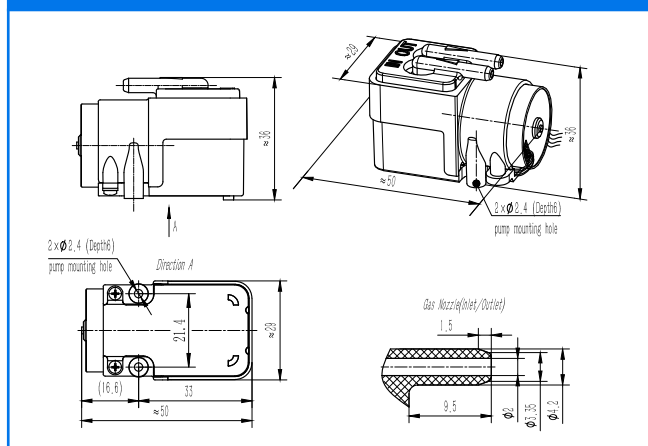
D15 MODEL KEY



ELECTRIC SPECIFICATION

Wire	Function	Definition of Signal	Remarks
1-Red-Vm	+ Supply voltage	+3.2V~+6V	The supply voltage is not allowed to exceed 6V, otherwise it will damage the motor
2-Black-GND	- Supply voltage	Ground (GND)	
3-White-PWM	Pulse width speed control (PWM)	Pulse width modulation signal, active low $0V \leq \text{Low} \leq 0.8V$ Running $2V \leq \text{High} \leq 5V$ Stop PWM frequency range:15kHz~25kHz	The frequency will not be changed after a value in the range of 15kHz~25kHz is selected, and the speed can be adjusted by changing the duty cycle
4-Yellow-FG	FG speed feedback signal	The motor speed feedback signal is a 3.3V pulse signal, and the motor outputs 6 pulses per revolution;	The simplified version does not have the speed feedback function, and there is no such wire

D15 DIMENSIONS



ACCESSORIES		
Descriptions	Illustration	Function
Shock-isolation mounting feet		Reduce the impact of vibration on the equipment during the operation of the pump. This accessory comes with the pump*4
Filter		The 80-mesh filter protect both pumps and other upstream instrumentation and hydraulic circuits against particulate, crystals and fibers . It is recommended to replace it regularly. This accessory comes with the pump*1
Check valve		Enhance the cut-off capability of the gas circuit system to ensure one-way gas flow. This accessory can be purchased on demand
Flow stabilizer		Eliminate and reduce pulsation, make gas output smooth and stable, this accessory can be purchased on demand
Manual control valve		It can be used to manually adjust the gas flow rate, pressure and vacuum. This accessory can be purchased on demand
DC power adapter		220V AC to DC switching power supply, this accessory can be purchased on demand
Silencer		It is used to eliminate and reduce the airflow noise caused by pumping operation, this accessory can be purchased on demand



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