Picture

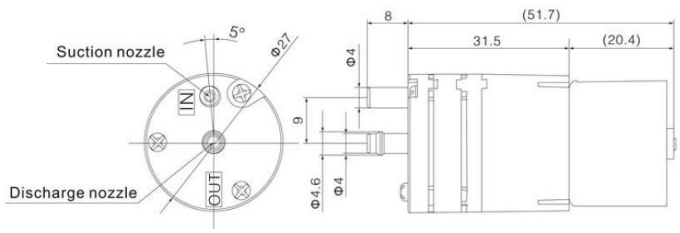
Characteristics

- Brushless motor, super long lifetime, super quiet.
- Working Ability:
  - 1.3 LPM for gas flow rate.
  - 320 mL/min for water flow rate.
- Can work with water, wine, oil, ozonized water, ammonia gas or fragrance gas.
- Water suction height is 2m.
- Control model: Fixed rpm or Speed adjustable and controllable with MCU outside.
- Corrosive resistance advanced pump film, can carry chemical gas or liquid.
- Lifetime more than 6,000 hours continuously working day and night.
- Outlet & Inlet Diameter : 4 mm

Materials

Nozzle	ABS
Diaphragm	Rubber
Motor	DC brushless

Dimension (mm)



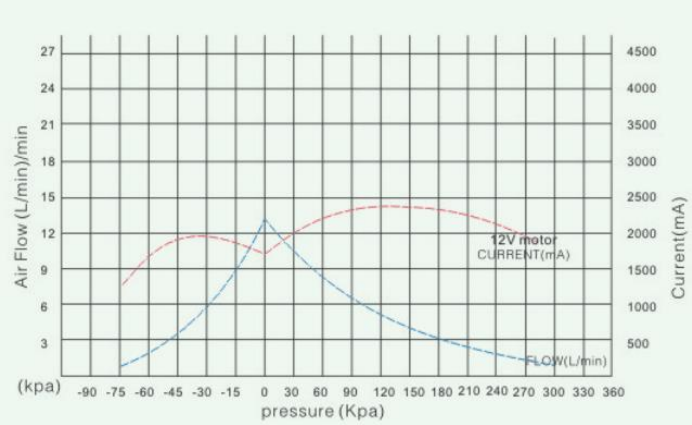
Applications

- Pressure and vacuum applications
- Coffee machine
- Analytical instruments
- Respiratory therapy devices
- Blood analyzer
- Water transport

Specifications (For Air)

Model Name	ST27VW15	
Voltage	12	VDC
Optional voltage	24	VDC
Flow	1.1 – 1.5	LPM
Current	320	mA
Max. Vacuum	-40	KPA
Max. Pressure	90	KPA
Life	6,000	Hours
Testing Cycle	continuous	
Noise Level	30	Db
Weight	60	g
Operation temp.	5 - 50	℃
Insulation class	A type	
Certification	CE, LVD, ROHS	

Curve (For Air @ 12 VDC)



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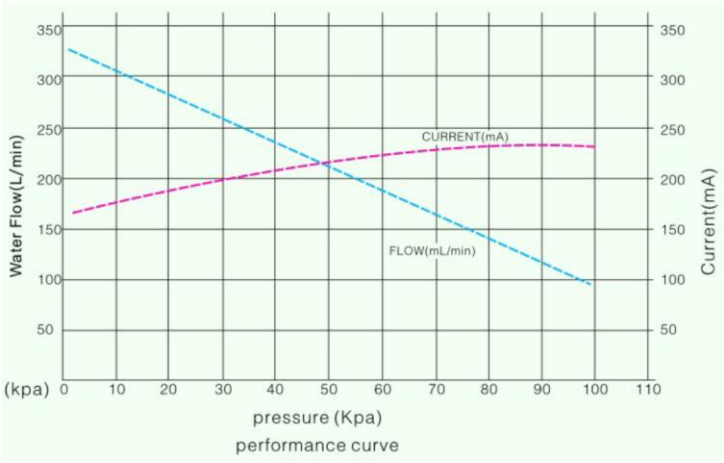
Specifications (For Water)

Model Name	ST27VW15	
Voltage	12	VDC
Optional voltage	24	VDC
Max. Flow	320±50	ml/mins
Current	250	mA
Self-suctionable lifting height	> 2	meter
Max. Pressure	90	KPA
Life	6000	Hours
Testing Cycle	continuous	
Noise Level	30	Db
Weight	60	g
Operation temp.	5 - 50	℃
Insulation class	A type	
Certification	CE, LVD, ROHS	

Curve (For Water @ 12 VDC)



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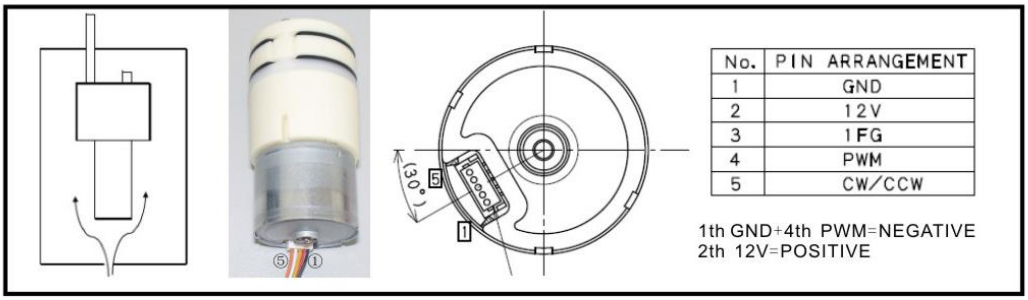
Control

1). Please use rated voltage such as dc12v or dc24v to drive the air pump, not more than that.

2). Please keep clear before the input or output of the air pump, not block them.

3). Please make air flowrate arround the motor surface, recommend to connect as down photo.

4). If you need not the speed adjustable and controllable function, and you want to keep 4860rpm, then wire as this, or the motor will not work.



No.	PIN ARRANGEMENT
1	GND
2	12V
3	1FG
4	PWM
5	CW/CCW

1th GND+4th PWM=NEGATIVE
2th 12V=POSITIVE

5). If you need the speed adjustable and controllable function, then wire as this.

7. Interface

Pin No.	Signal name	I/O	Specification	Note
1	GND	IN	Ground	Ground
2	Vm	IN	DC 12[V]±10%	Power supply
3	FG Rev.A			
	VOH	OUT	4[V] Min at 5[V] 4.7[kΩ] pull up	You need to pull up for FG terminal, so that the terminal is open-drain output. FG
	VOL		0.6[V] Max	
	Maximum ratings of FG sink current FG		3[mA]	Max pull up voltage should not exceed 6[V] 6[V]Max.
	The number of FG output pulse FG		6 Pulse/round 6 /	
4	PWM			
	Input voltage range	IN	0[V] 5[V]	-
	VIH		2[V] Min	High Motor OFF
	VIL		0.8[V] Max	Low Motor ON
	Maximum PWM input frequency PWM		60[kHz] Max	Our recommending PWM frequency range is between 15[kHz] to 25[kHz]. PWM 15 25[kHz]
5	NC			

* You should connect a Schottky Barrie Diode between each signal line to ground to prevent IC from damage.

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