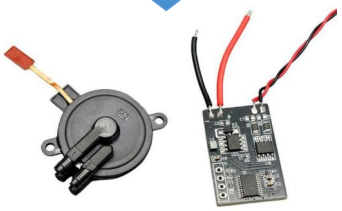
BD - 05T Series - Micro Piezoelectric pump

Model:BD-05T01PZ09

by using a piezoelectric By generating ultrasonic vibrations through a piezoelectric element, the device functions as an air pump (fan), offering a compact structure, low noise, and relatively high airflow.

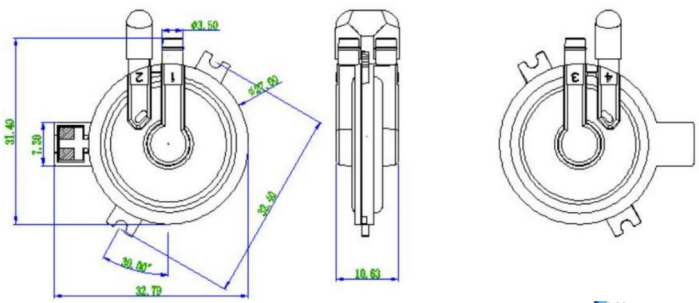


Performance Data	
Model	BD-05T01PZ09
Drive Voltage	18-25V DC
Ambient Temperature Range	1-45 ° C
Drive Frequency	19–23 kHz
Drive Resonant Frequency	22.20 kHz
Flow Rate @ 20 Vdc	≥ 2 L/min(In parallel); ≥ 0.8 L/min (In series)
Output Pressure @ 20 Vdc	≥ 15kPa(In parallel); ≥ 30kPa (In series)
No-Load Flow Rate	2L/min(@20VDC)
Static Pressure	15kPa(@20VDC)

Note

1. Driven by AC square wave. A forward-driving circuit should supply 18–25 Vdc, with current limited to less than 100 mA.
2. Test conditions: Ambient temperature 20–28°C; Atmospheric pressure 950–1020 hPa.
3. Flow rate and pressure will vary with changes in temperature and pressure.
4. Under high voltage conditions (above 24 Vdc), the pump’s service life will decrease rapidly—especially during continuous operation due to heat generation.
5. It is recommended to operate under conditions where the surface temperature of the material does not exceed 60° C. Pay attention to ambient temperature and heat dissipation, and avoid use in condensation or freezing conditions.
6. During continuous operation, heat buildup may prevent the pump from maintaining optimal performance.
7. Under continuous operation, the pump may not deliver sufficient performance due to heat buildup, and in severe cases, damage may occur.Please operate the product within a surface temperature of 60° C or below.
8. This miniature air pump is not waterproof and must not be exposed to liquids or cleaned with water. Clean only with a slightly damp cloth. Avoid operation in high-humidity environments where condensation may occur.
9. Do not operate the pump in dusty environments. Airborne particles may accumulate inside the pump chamber. Operation in filtered submicron-particle environments or cleanroom conditions is recommended. Please note that filters alone cannot completely prevent degradation of pump performance or service life.
10. In particular, avoid operation in environments exposed to smoke, such as cigarette smoke, mosquito coil smoke, or similar airborne contaminants.
11. Do not manually disassemble or bend the pump body, including the nozzle, wiring, fittings, or connectors.

Dimensions (mm)



Parallel Connection (Higher Flow)

Connect air nozzles #1 and #4 together using a Y-connector to form the outlet port.

Connect air nozzles #2 and #3 together using a Y-connector to form the inlet port.

Series Connection (Higher Pressure)

Connect air nozzle #1 to air nozzle #3 using tubing.

Use air nozzle #2 as the inlet port.; Use air nozzle #4 as the outlet