

Product Features

1. Composition

The electronic vacuum pump is a diaphragm pump driven by a brushed DC motor.

2. Basic Parameters

2.1 Model: HCB60B

2.2 Weight: 2.85 kg (excluding bracket)

2.3 Operating Environment:

2.3.1 Operating Temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

2.4 Electrical Performance:

2.4.1 Rated Voltage: 12VDC

2.4.2 Rated Current: $\leq 15\text{A}$

2.4.3 Operating Voltage: 8~16V

2.4.4 Rated Power: 120W

2.5 Operating Performance:

2.5.1 Noise: $\leq 60\text{dB}$ (measured 1 meter from the vacuum pump, pump body level with the ground, background noise $\leq 20\text{dB}$)

2.5.2 Airtightness: At room temperature ($20 \pm 10^{\circ}\text{C}$), when the vacuum pump draws vacuum from the vacuum chamber to $-89\text{kPa} \pm 2\text{kPa}$, close the vacuum pump and measure the leakage within 15 seconds.

2.5.3 Environmental Requirements: Compliant with RoHS standards

2.5.4 Protection Level: IP67

2.5.5 Service Life: Total running time: 200 hours; total number of operations: 1,200,000 times

3. Testing Requirements

3.1 Installation and Testing Direction: Parallel to the ground.

3.2 Testing Parameters:

3.2.1 Test Voltage: $12 \pm 0.2\text{V DC}$

3.2.2 Test Temperature: Test environment temperature: $23 \pm 5^{\circ}\text{C}$

3.3 Preparation before Testing: Ensure that the vacuum pump is in a dry, clean, and dust-free environment before formal testing.

4. Protection Functions

4.1 Overvoltage Protection: When the operating voltage exceeds 16.5V, the vacuum pump speed will increase proportionally.

4.2 Low Voltage Protection: When the operating voltage drops below 8V, the vacuum pump will stop working. It will resume operation once the voltage exceeds 8.2V.

4.3 Stalled Protection: If the actual speed of the vacuum pump is less than 500 rpm or the pump is blocked due to foreign objects, causing it to fail to rotate, the vacuum pump will experience a short-circuit fault.

4.6 Reverse Polarity Protection: If the input voltage is below DC12V and the power supply's positive and negative terminals are reversed, the vacuum pump will still work normally and will not be damaged.