# EC Backward Centrifugal Fan

LWBE3G250-102PT-08

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| | |
|---|---|
| Model No.: | LWBE3G250-102PT-08 |
| Version Number: | A0 |
| Make : | Jin |
| Review : | Zhong |
| Approvd : | Yao/Jiang |
| Date: | 2023.07.12 |

技术专用
朗伟电器

| Version number | Notes Remarks | Reason content | Revised by | Date |
|---|---|---|---|---|
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## Nominal Data

| Project1 | Unit | Rating |
|---|---|---|
| Nominal Voltage : | [VAC] | 380 |
| Voltage Range : | [VAC] | 304~456 |
| Frequency : | [Hz] | 50/60 |
| Speed : | [rpm] | 3860 |
| Current : | [A] | 1.6 |
| Power input : | [W] | 1000 |
| Air flow (Max) : | [m3/h] | 3708 |
| | [CFM] | 2181 |
| Static pressure ( Max) : | [Pa] | 1751 |
| Noise level (LpA ): | dB(A) | 92 |
| Max.ambient Temp : | ℃ | 60 |
| Min.ambient Temp : | ℃ | -25 |
| Insulation Class : | | Class F |
| Protection Type : | | IP55 |
| Work system : | | S1 |

## Technical Features

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|---|---|
| Production Reference standard | GB12350《Safety requirements of small power motors》<br>JB/T10563 《technical specification for general purposes centrifugal fans》<br>EN60335-1《Household and similar electrical appliances-safety》<br>ISO5801-1997《Industrial fans-performance testing using standardized airways》<br>GB/T2888《Methods of Noise Measurement for Fans Blowers Compressors and Roots Blowers》 |
| Certification | CE |
| Environmental protection | RoHS、Reach |



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## Technical Features

| | |
|---|---|
| Service environment | Operating temperature：-25~60℃；Operating humidity：5 ~ 90 % RH<br>Storing temperature：-40 ~ 80℃；Storing humidity：≤95 % RH<br>Applicable altitude range：＜1000m |
| Life Expectance | 40,000Hours(L10)，At 40℃ room, humidity 15%~65%RH. |
| Balancing | According to JB/T 9101-1999 requirements G6.3 |
| Vibration of the fan | Test method accord with JB/T 8689 |
| Installation method | Horizontal or vertical installation |
| Material | Aluminum Alloy （Impeller） |
| Bearing | Maintenance-free deep groove ball bearings |
| Weight | APPROX 12.8 (Kg) |

## Electrical Protection

| | |
|---|---|
| Speed Control | Control input 0~10VDC/PWM/RS485 |
| VSP Control | Control signal VSP voltage range1VDC~9.5VDC<br>(During normal operation, when the VSP voltage is below 0.8VDC, the motor switches from operating mode to standby mode) |
| PWM Control | PWM signal: frequency 1K ~ 10KHz, amplitude 10V,duty cycle 10% ~ 100% . |
| Signal Output | Tach output：5 Pulse/R；FG internal open circuit output, external pull-up resistor R, pull-up voltage V+ |
| Auxiliary power output | Output 10VDC，Max Current 10mA |
| Protection | Current limiting protection 、Over-temperature protection、Over-current protection<br>Locked-rotor protection |
| Soft start | Delay time <30 seconds to full speed |
| Serial Communication | LWRS485-02 |

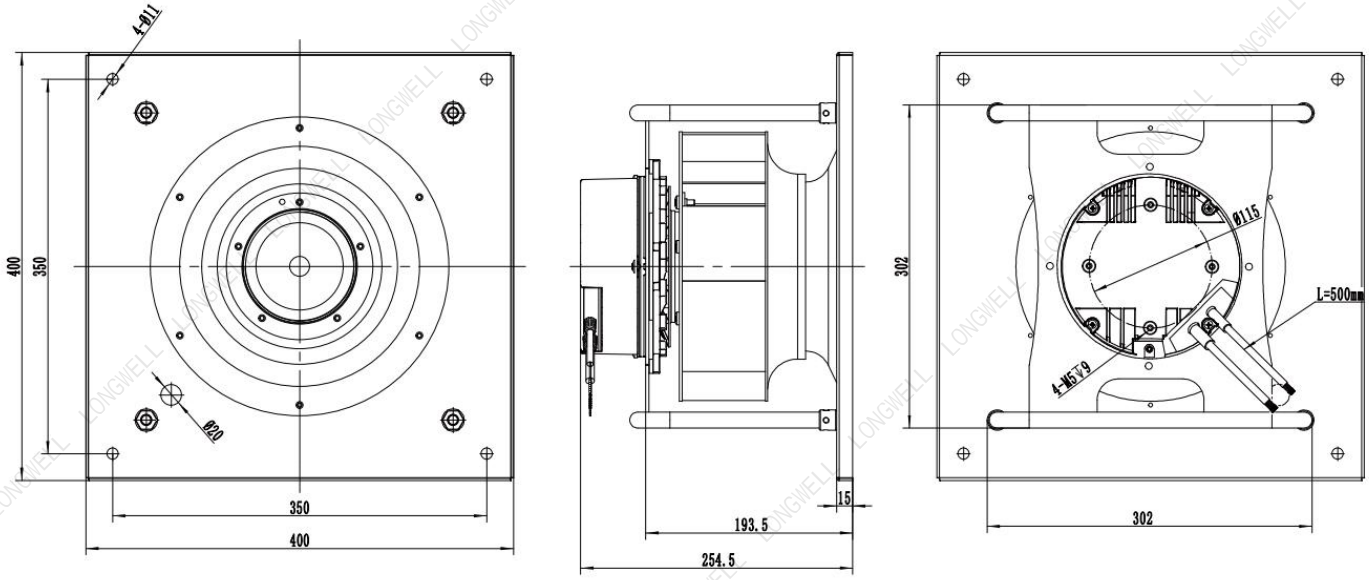


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## Product Drawing






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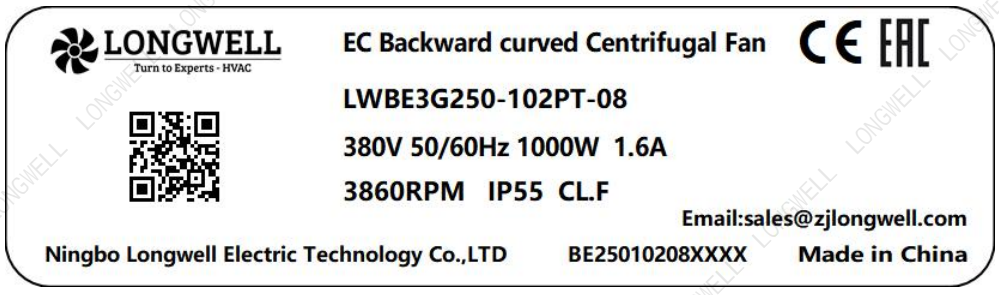
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## Wiring Diagram

| L | Color | Function | Functional description |
|---|---|---|---|
| L1 | Yellow/Green | PE | Ground lead |
| | Blue | L1 | Three-phase power supply terminal Voltage Range: 304~ 456V Frequency:50/60Hz |
| | Brown | L2 | |
| | Black | L3 | |
| | White | NC | Status relay, normally turn-off; break with error |
| | Gray | COM | The normally closedterminal of the relay is closed with COMduring normal operation or not poweredon,when the fan fails,it is disconnectedfrom COM. |
| L2 | Brown | RS485A | Bus connection RS485; RSA;MODBUS RTU |
| | Gray | RS485B | Bus connection RS485; RSB;MODBUS RTU |
| | Yellow | Speed Control | Speed regulation signal input terminal,0-10VDC voltage /PWM |
| | White | FG | Velocity feedback pulse output 5 Pulse/R |
| | Red | +10VDC | Fixed voltage output 10VDC,≦10mA |
| | Blue | GND | Ground reference end of control signal |

## Label



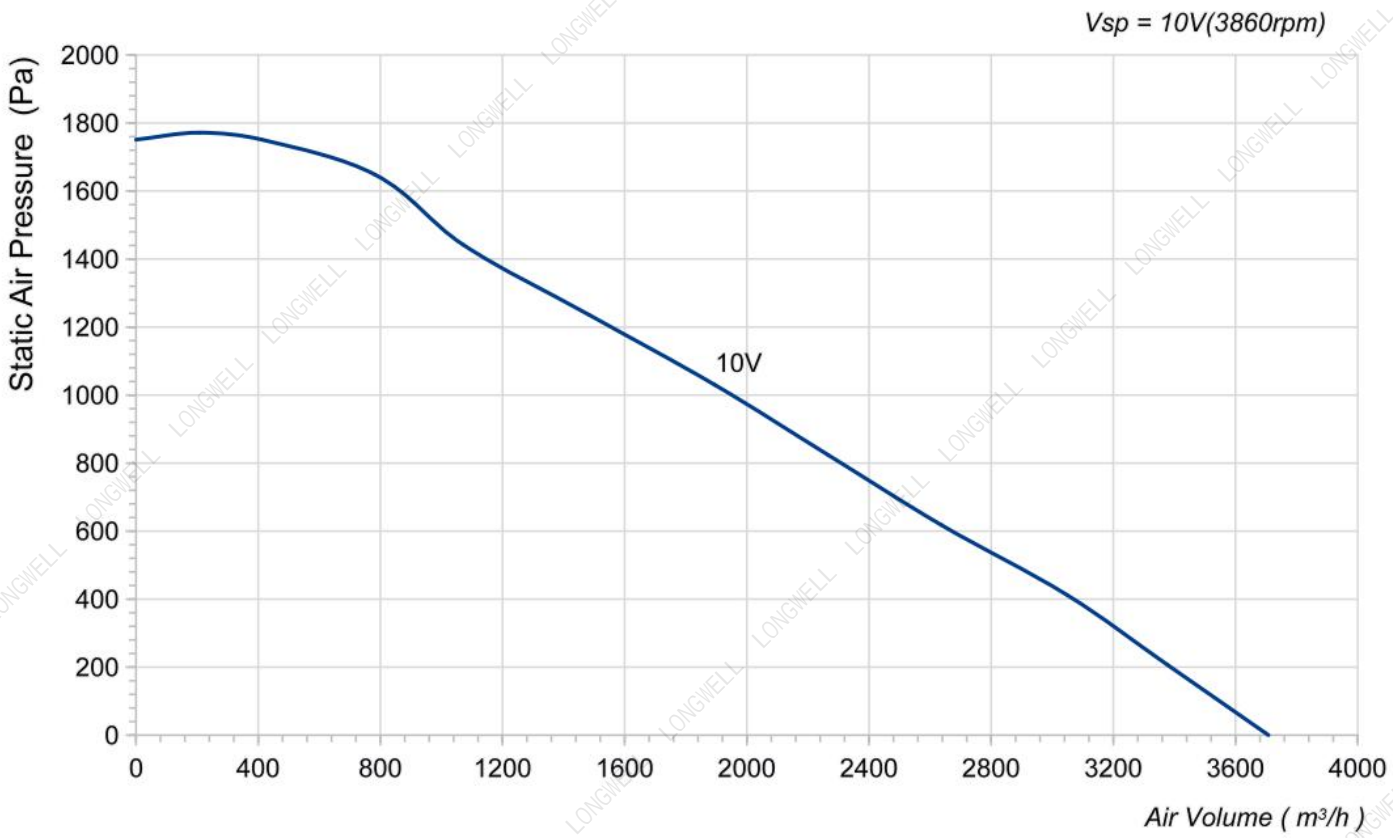



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## Charts :Air Flow (P-Q)






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## Warning:

1.The fan and motor must be used within the prescribed scope of temperature and humidity otherwise it will cause an unexpected damage.

2. Fan is not set wrong connection protection，Provide the right voltage and line sequence according to the nameplate otherwise it will damage the product.

3. Wiring depends on the wiring diagram and please connect the earth ground if required. We don't suggest to use the extension cord .Any wrong connection may cause the damage of the fan.

4. Be careful when moving the fan and do not take the blades as a handle because it will cause the distortion and chatter.

5. Connect the thermostat if required otherwise it would damage the motor because of the over temperature.

6. The length of the mounting screws shall not exceed the requirement, otherwise the fan will be damaged.

7. Do not disassemble the fan arbitrarily. It may hurt the capacity of water tightness and dynamic balance or cause other serious problems.

8. The over current protector is necessary in case the damage from the over current.

9. Install the fan as required, any other installing direction would affect the service life of the product.

10. The fan with inlet ring should be installed follow the requirements or it will affect the performance.

11. Users should use the standard cable when install the fan otherwise it will affect the water tightness.

12. The fan should keep away from the children especially the blade and electric parts .And the children are not allowed to operate the fan alone.

13. Do not connect the white signal cable directly to the red signal cable or the external DC power supply. Otherwise, the fan may be damaged.T

14.Please do not perform extraction and insertion of the connector under revolution irrespective of power on and power on and power off , and the fan should not touch or move when running.

15. Do not lift the fan wire when taking the fan, and do not impact the bearing during the handling process.

16. The version change may not be notified, please ask our company for the latest version when necessary.

17.Please be informed that we are not responsible for any damage or accidents caused by violating above rules to install and operate the fan.



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|---|---|

## Approval

# CUSTOMER APPROVAL

| CUSTOMER SIGNATURE: | DATE : |
|---|---|

## Product Data Confirm :

**Speed Control System :**

☐ PWM ☐ 0-10V ☐ Rs485

**Accessories:**

☐ Air Inlet Cone ☐ Pressure nozzle ☐ Custom wire length

Note :Please check and mark the data when you sign the specification sheet .



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