

DC-F133B-EC-N07

EC Double Inlet Centrifugal Blower



Product Overview

The DC-F133B-EC-N07 is a compact 115 VAC electronically commutated double inlet centrifugal blower. It combines high-efficiency EC motor technology with 0–10 V or PWM speed control, tachometer feedback, integrated motor protection and a side-discharge housing for HVAC and equipment-cooling applications.

Key characteristic	Value
Maximum airflow	Approx. 1100 m ³ /h
Maximum static pressure	Approx. 460 Pa
Nominal voltage	115 VAC, 50/60 Hz
Maximum input power	200 ±10 W
Control	0–10 VDC / PWM
Protection / insulation	IP44 / Class B

Technical Data

Parameter	Specification	Parameter	Specification
Type	EC double inlet centrifugal blower	Phase	Single phase (1~)
Nominal voltage	115 VAC	Voltage range	92–138 VAC
Frequency	50/60 Hz	Data condition	Maximum load (ML)
Nominal speed	2300 ±150 RPM	Max. input current	2 A
Max. input power	200 ±10 W	Sound pressure	75 dB(A)
Ambient temperature	-25 to +60 °C	Operating mode	S1 continuous duty
Motor model	EC092AC115V230W	Motor size	92 mm
Overall dimensions	198 × 172 × 254 mm	Impeller	Metal, 38 blades
Airflow / rotation	Side discharge / clockwise viewed from rotor side	Mounting	Any position
Housing / rotor	Stretched housing / blue powder-coated rotor	Bearing	Ball bearing
Protection	IP44	Insulation class	Class B
Storage temperature	-40 to +80 °C	Relative humidity	Operation 5–90%; storage 5–95%
Cable	500 ±20 mm; extendable in 500 mm increments	Safety class	Class I; protective earth required
Certifications	CE, RoHS	Screw strength	Class 8.8

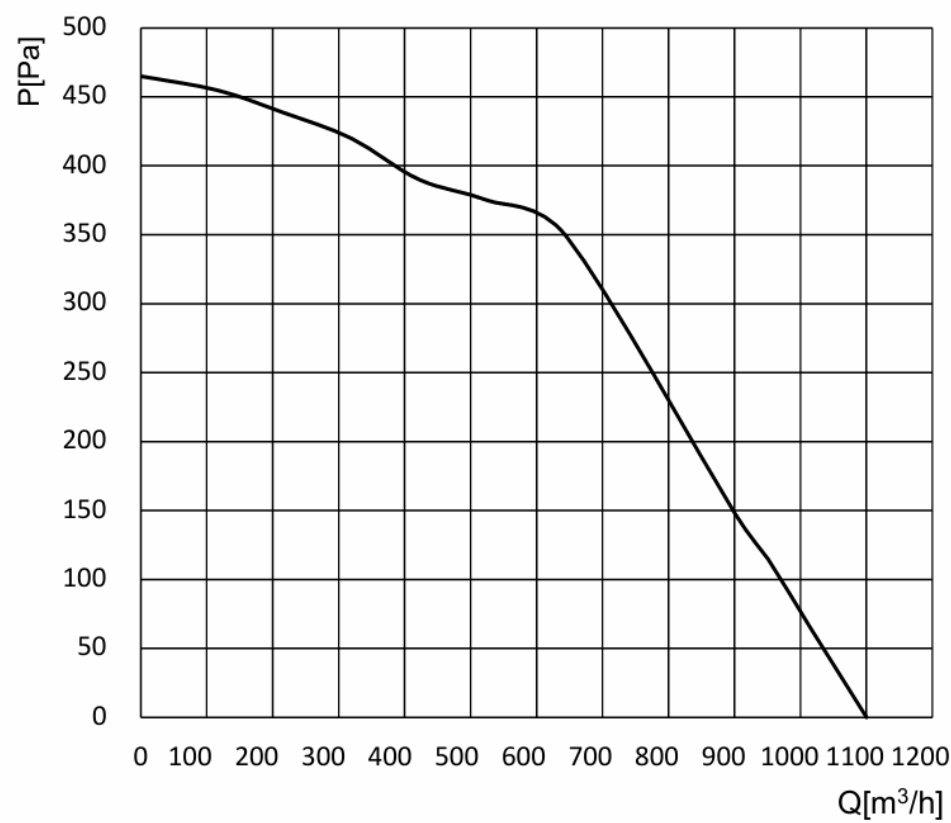
Integrated Features and Protection

Fixed 10 VDC auxiliary output (maximum 10 mA); 0–10 VDC/PWM speed-control input; tachometer feedback; locked-rotor, over-temperature, overvoltage, undervoltage and overcurrent protection; soft start.

Electrical Safety

Dielectric withstand: 1800 VAC at 50 Hz for 1 second, leakage current ≤10 mA. Touch current ≤3.5 mA. The protective-earth conductor and grounding point must be connected reliably before operation.

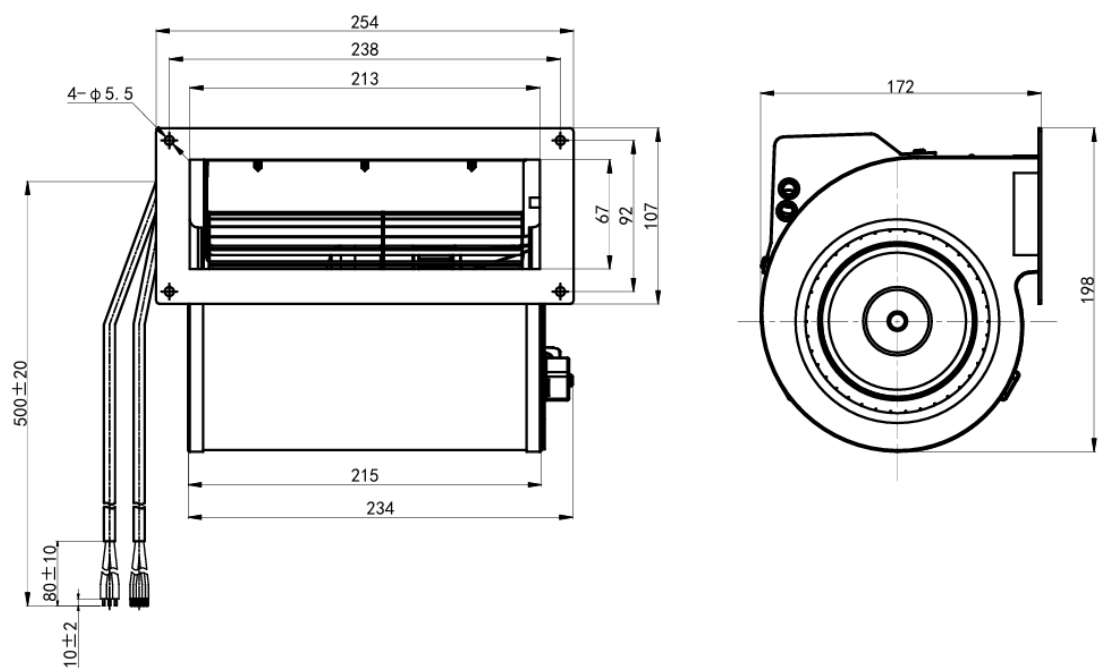
Air Performance



Air performance curve

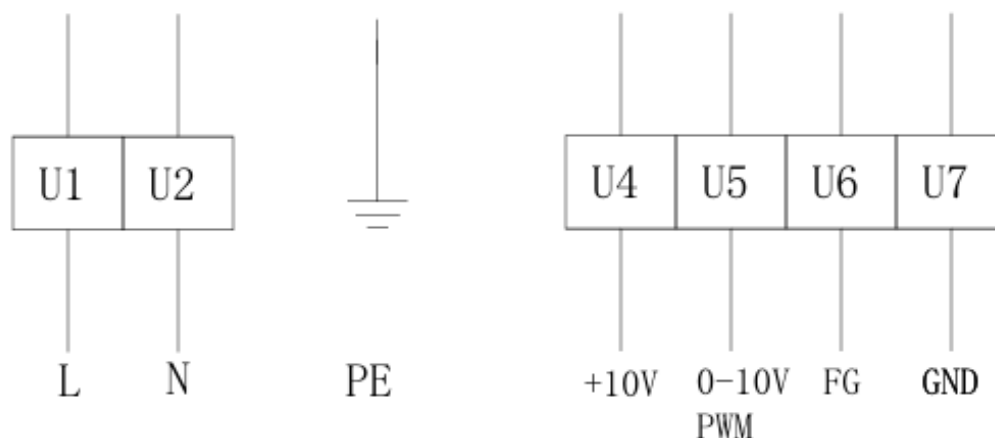
Performance testing is conducted in accordance with AMCA 210 / GB/T 1236. Values shown are typical and may vary with installation and system resistance.

Overall Dimensions



Dimensions in millimetres

Electrical Connection



Line	Connection	Designation	Colour	Function / Assignment
Power	—	PE	Green/Yellow	Protective earth
Power	U1	L	Brown	Mains power supply, live conductor
Power	U2	N	Blue	Mains power supply, neutral conductor
Control	U4	+10 V	Red	Fixed 10 VDC output, $\pm 5\%$, max. 10 mA; supply for external devices; SELV
Control	U5	Speed control	Yellow	0–10 V/PWM input; recommended PWM amplitude 10 V; SELV
Control	U6	Signal feedback	White	Tach output, 5 pulses/revolution; may be customised or changed to RD signal; SELV
Control	U7	GND	Blue	Reference ground for control interface; SELV

Speed Control Settings

Control method	Operating condition
Full speed	Short the red (+10 V) and yellow (speed-control) conductors.
0–10 VDC	Motor starts above 1.0 V and stops below 0.5 V.
PWM	Frequency 1–10 kHz; recommended amplitude 10 V $\pm 5\%$. Motor starts above 10% duty and stops below 5% duty.
Potentiometer	A 10 k Ω potentiometer is recommended.

Note

1. Connect the power and control conductors strictly according to the wiring diagram.
2. Do not connect the white signal-feedback conductor directly to the red conductor or to an external DC power supply.
3. Shorting the red and yellow conductors applies the fixed 10 V reference and commands full speed.
4. If the blower does not start, check the speed-control input. Prevent injury from an unexpected start and never touch the rotor while energised.
5. Startup may take several seconds. Do not touch the impeller or rotor while energised or operating at low speed.
6. Before applying power, verify that the motor and blower assembly are installed securely.
7. Do not pull the cable. A damaged cable must be replaced by the manufacturer or authorised service personnel.
8. Do not drop, strike or wash the motor; moisture can reduce insulation performance and create a safety hazard.
9. Consult the manufacturer before using the product outside the agreed operating conditions.
10. The motor casing may remain hot for a short time after shutdown. Take measures to prevent burns.
11. Keep the housing clean and prevent debris from entering during installation.
12. Before initial operation, rotate the rotor by hand to confirm that there is no collision, interference or jamming.
13. The motor is part of the blower and must not be operated alone without an impeller or load.
14. For storage after unpacking, repack the product and keep it at -40 to +80 °C, RH ≤95%, in a clean ventilated area free of corrosive gases and at least 15 cm above the floor.
15. Install the blower out of children's reach and do not allow children to operate it.
16. The manufacturer reserves final interpretation of this specification.

Life and Maintenance, Warranty

1. The design life is 50,000 hours, limited by ball-bearing life at 40 °C. Actual service life depends on temperature, humidity, installation, load and the operating environment.
2. Clean and maintain the blower every 3–6 months, adjusted as appropriate for the operating environment.
3. The complete product is covered by a two-year warranty from the delivery date. The manufacturer will repair or replace failures caused by product-quality defects. Damage caused by unauthorised disassembly, improper handling, human action, natural disaster or other force majeure is excluded.

Application Notes

Suitable for HVAC units, air-handling equipment, ventilation systems, air purifiers, heat exchangers, telecommunications cabinets, data-centre cooling and general industrial equipment cooling. The final selection must be verified against the required airflow, pressure, acoustic and environmental conditions.