



Comair Rotron Specification Sheet

EC Backward Curved Centrifugal Fan

Specification Date: June 03, 2016

COMAIR ROTRON PART NUMBER:
COMAIR ROTRON MODEL NUMBER:

17000469A
CREB250ST-92-00

A.) GENERAL DATA:

A—1	RATED VOLTAGE	230 VAC
A—2	FREQUENCY	50/60 Hz
A—3	OPERATING VOLTAGE	200~277 VAC
A—4	START VOLTAGE	199 VAC
A—5	RATED SPEED	2760 RPM ①
A—6	INPUT CURRENT	0.96 A ①
A—7	INPUT POWER	123 W ①
A—8	AIR FLOW	765 CFM / 1300m ³ /h ① (free delivery)
A—9	STATIC PRESSURE	680 Pa / 69 mm H ₂ O
A—10	ACOUSTIC LEVEL:	71 dB (A) ①
A—11	RELIABILITY	50,000 Hours (L10) at 40 °C, humidity 15%~65% RH.
A—12	ROTATION	Clockwise when viewed from inlet
A—13	INSULATION CLASS	Class F
A—14	INSULATION RESISTANCE	1800VAC/50Hz for duration 1 second, 10mA max. leakage current between frame and (+) terminal
A—15	ELECTRICAL PROTECTION	Locked rotor protection Reverse polarity Soft start protection Automatic restart capability Overvoltage Protection
A—16	SPEED CONTROL	Control input 0~10VDC / PWM (input duty cycle and amplitude)
A—17	IP CLASS	IP44
A—18	DIELECTRIC STRENGTH	50 Mega Ohm minimum at 1000VDC between frame and (+) terminal
A—19	FG OUTPUT	FG (Frequency Generator) output, Open collector 4 pulses per revolution

Note: ①, full speed free delivery, see performance curve.



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B.) MECHANICAL

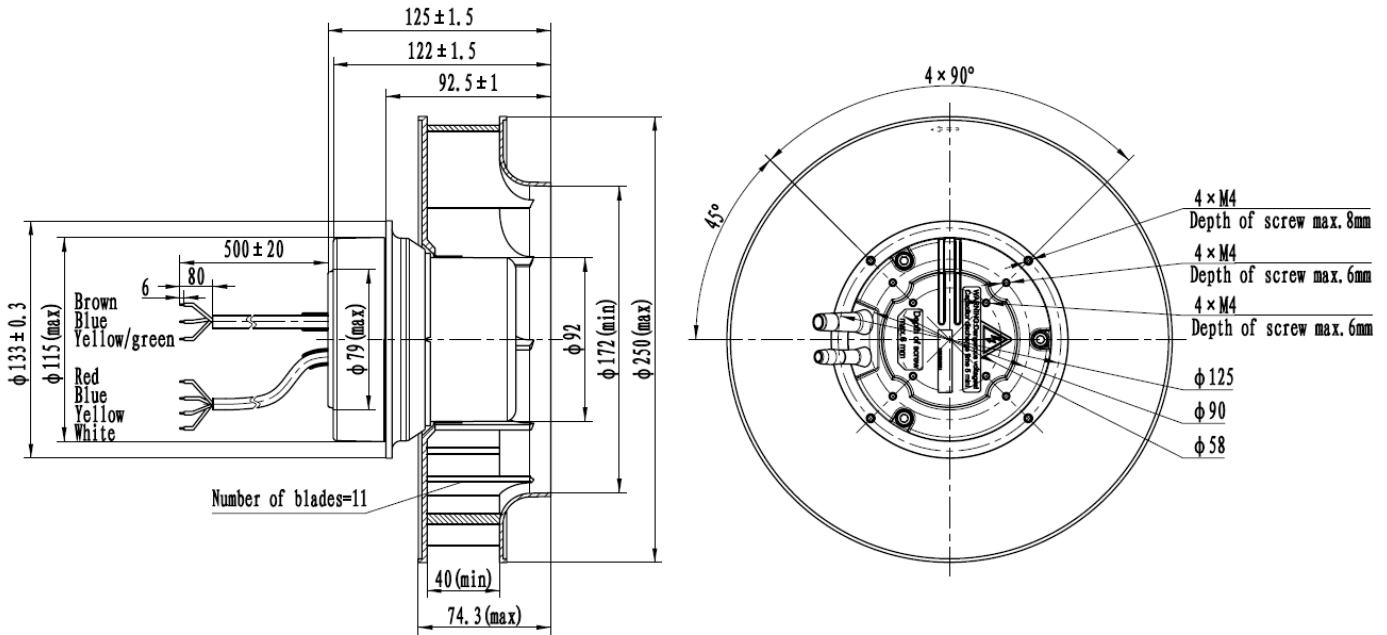


Figure 1

Note:

- Lead wire AC power input (AWG#18 UL 1332),
Brown - L, Blue - N, Green/Yellow - Protecting Earth
Lead wire DC speed control input (AWG#22 UL 1332)
Red: +10VDC output, Yellow: 0-10VDC / PWM input, White: FG, Blue: GND
- 4 × M4 installation screws, max. depth 6mm.

B—1	Dimension	Φ250mm × 125mm (see dimension drawing).
B—2	Material of Impeller	PA66 + GF25%
B—3	Number of Blades	7
B—4	Impeller Plate	PA66 + GF25%
B—5	Impeller Color	Black
B—6	Surface of Rotor	Coated in black
B—7	Ball Bearing	NSK
B—8	Weight	2.3kg
B—9	Package	carton with shock- absorption material



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C.) ELECTRICAL PROTECTION:

C—1	Locked-rotor Protection	Motor stop in case of lock rotor. Restart automatically in 2 ~ 4 seconds. After 3 attempts and restart fail, motor power-off and stop completely. Locking must be removed and the motor should reset so that the fan can start work again.
C—2	High Voltage and constant power control	when the input voltage is larger than 240VAC, the rotating speed is stable instead of varying with the input speed control DC voltage. This protection prolongs the lifespan and provides a more stable status.
C—3	Soft Start	In the condition of normal working voltage, it takes 8 seconds for the motor to accelerate to the stable speed. This acceleration process protects the motor from the potential damage caused by sudden high current.
C—4	Current Limited	In the condition of normal working voltage, when the input current exceeds the limit, motor automatically enter power-off protection mode.
C—5	Over-voltage protection	When the power voltage exceeds the limit, motor automatically enter power-off protection.

D.) ENVIRONMENTAL

D—1	Operating Temperature	-25 °C to 60 °C
D—2	Storage Temperature	-40 °C to 75 °C
D—3	Operating Humidity	5% to 90% RH
D—4	Storage Humidity	5% to 95% RH
D—5	Drop Test	In the minimum packaging condition, the package is dropped from 300mm height onto a 10mm thick wooden board. The package stays in good condition and the motor suffers no damage.
D—6	Vibration Test	Sine Wave. Displacement amplitude: 0.75mm (Equivalent 10G). Frequency Range: 10Hz~55Hz / 30 sec. 55Hz~10Hz / 30 sec Linear Scanning 120 Cycles Endurance timer per axis: 2 hours Orientation: X,Y,Z.
D—7	Shock Test	Keep applying peak acceleration of 50g during 11ms (half sine wave).
D—8	Dustproof Test	Temperature range: 15 °C - 35 °C. Metal object of 1mm diameter cannot drop the gap between rotor cup and base; this applies to GB4942.1 IP4X. Note: the test only applies to motor, not to an operating fan. It is very dangerous to test on an operating fan.
D—9	Waterproof Test	Temperature range: 15 °C - 35 °C. Duration of test: minimum 10 minutes. If water is sprayed from any direction onto a fan inclined at 15 °, the ventilation functions normally. This applies to GB4942.1 IPX4.
D—10	RoHS	All the material meets RoHS standard.



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E.) PERFORMANCE CHARACTERISTICS

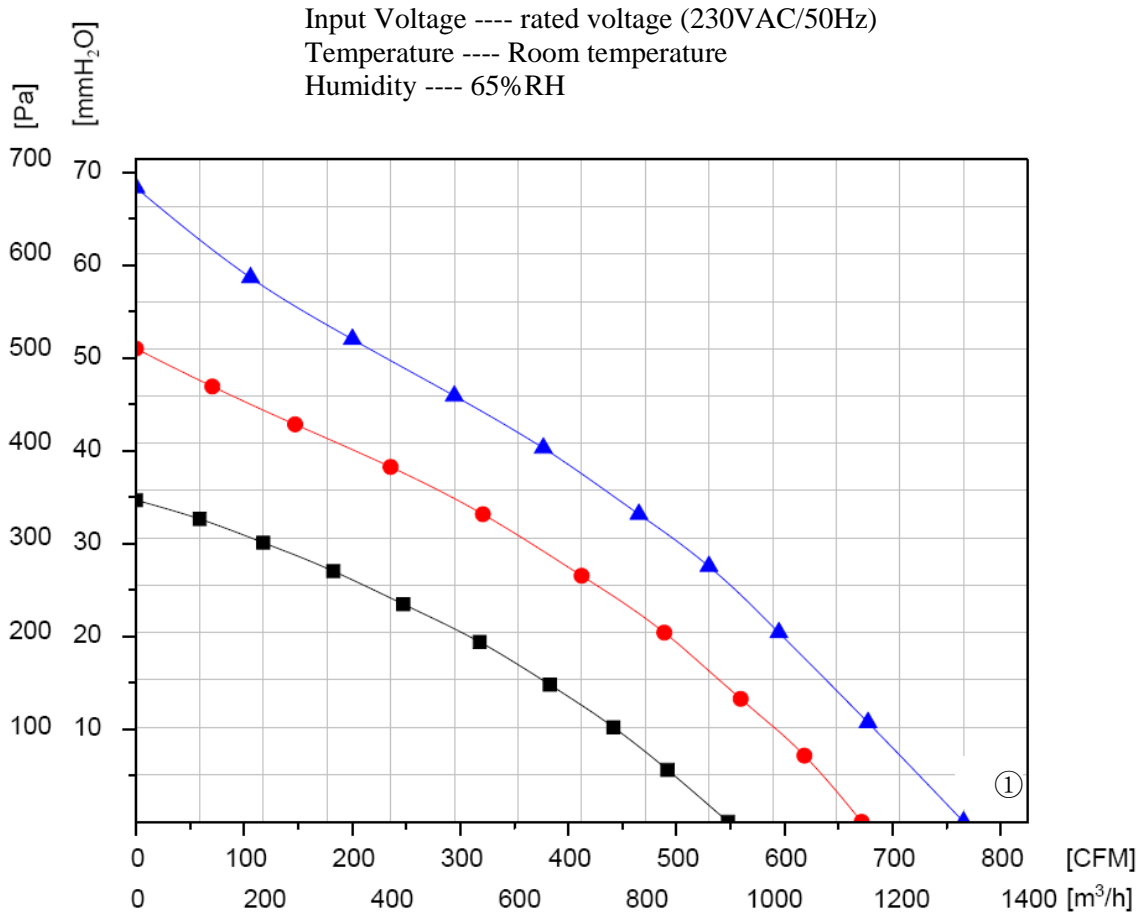


Figure 2



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F.) CONNECTION DIAGRAM:

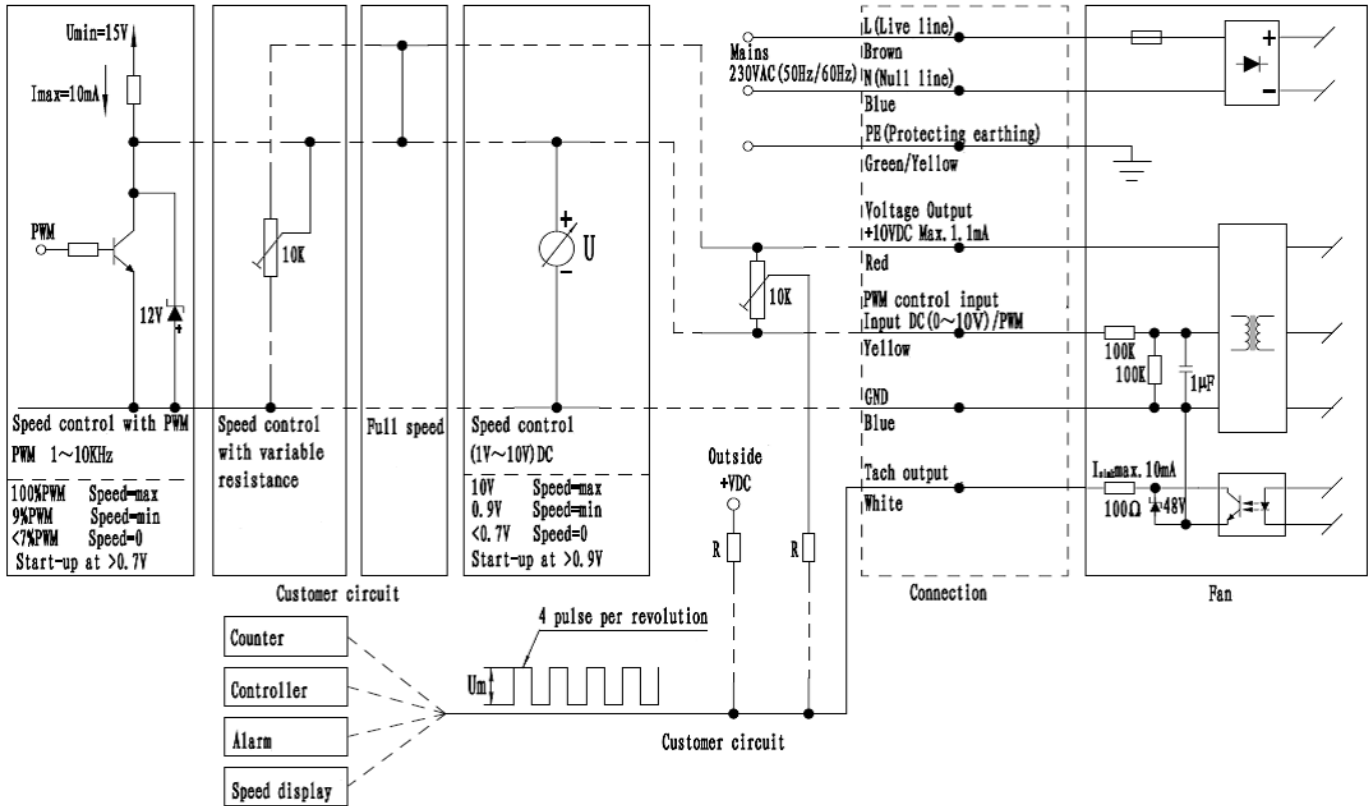


Figure 3

R: coherent with the voltage (eg: if $V_{+}=5VDC$ then $R=1K\Omega$)

$V_{outside+}$: 0~48VDC, max voltage $\leq 51VDC$

U_m : coherent with $V_{outside+}$

G.) SAFETY

