



Comair Rotron Specification Sheet

Specification Date: Feb 06, 2012

COMAIR ROTRON PART NUMBER: 19044008A
COMAIR ROTRON MODEL NUMBER: MFSE24Z3

A.) MOTOR:

RATED VOLTAGE:	24.0Vdc
OPERATING VOLTAGE RANGE:	16.0Vdc – 28Vdc
LOW-START VOLTAGE:	16.0Vdc
RUNNING CURRENT:	4.5 Amps
RATED POWER:	108 Watts
NOMINAL SPEED:	4600RPM \pm 10% (AtFree Delivery)
START UP TIME:	20 Seconds Maximum
OVER VOLTAGE PROTECTION:	No
MAX.LOCK.ROTOR CURRENT:	8.4 A
MOTOR TYPE:	Brushless DC
MOTOR PROTECTION:	Active Over Current Protection
POLARITY PROTECTION:	Yes
LOCKED ROTORT PROTECTION:	Electronic
AUTOMATIC RESTART CAPABILITY:	Yes
AUTOMATIC RESTART DELAY:	5 \pm 2S
MAX START UP CURRENT:	3.0A

B.) MECHANICAL

DIMENSIONS:	<i>Figure 1</i>
WEIGHT:	1.90 Kg
BEARING TYPE:	Permanently Lubricated Ball Bearings
VENTURI:	Two-Piece, Die Cast Aluminum, Painted Black
PROPELLER:	Plastic PA6.6 (polyamide glass-fiber reinforced ,Black, UL94V-0



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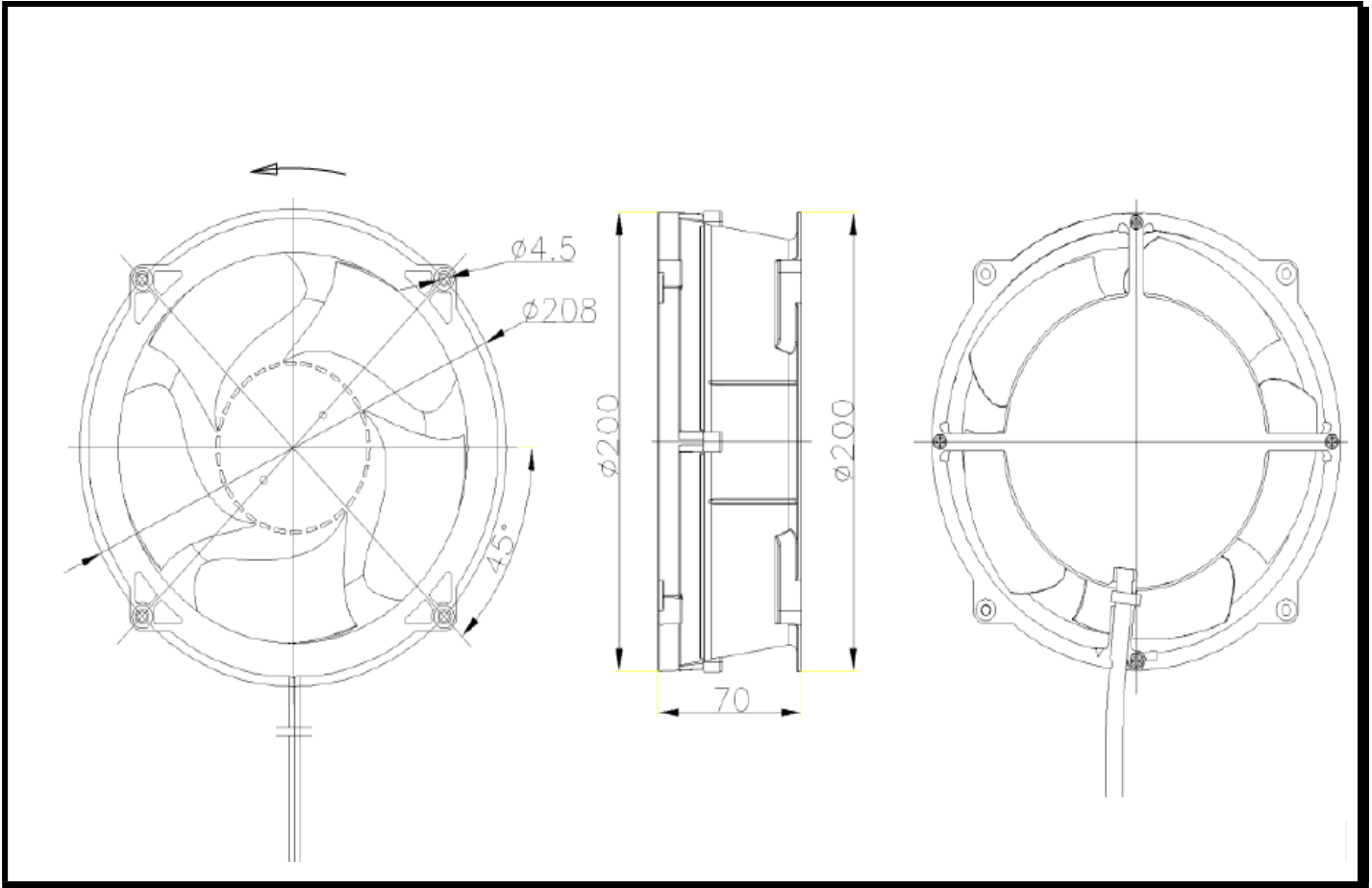


Figure 1

C.) ENVIRONMENTAL

OPERATING TEMPERATURE:	-10 °C to 70 °C
STORAGE TEMPERATURE:	-40 °C to 80 °C
HUMIDITY:	0 to 85% RH, non-condensing

D.) PERFORMANCE CHARACTERISTICS

AIR FLOW:	530 CFM ±10% (At Free Delivery and 24.0 VDC Nominal)
STATIC PRESSURE:	2.82" Inches of H ₂ O (At Shut-Off and 24.0 VDC Nominal)



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ACOUSTIC LEVEL: 85 dBA

E.) TACHOMETER FEATURES

TACHOMETER OUTPUT: Open Collector Output
Max Pull up Voltage: 28V
Max I_c : 15mA
Nominal Pull up Voltage : 24V
Nominal Pull up Resistor : 2700 OHMS

Specific feature of Tacho output with Nominal Voltage & Resistor:

Output High Level : 23 - 25V
Output Low Level : 0 - 0.5V
Pulses : 3 Per Rev
Output Pulse Duty cycle : 50% ±10%

F.) SPEED CONTROL FEATURES

Method: PWM
High Voltage Level : 10VDC ±5%
Low Voltage Level : 0- 0.5VDC
Frequency: 1-10KHz
Min Input Impedance: 20 Kohms
Duty: Speed
0-10% 0
10% 20% full speed
20% 35% full speed
30% 50% full speed
40% 60% full speed
50% 65% full speed
60% 75% full speed
70% 85% full speed
80% 90% full speed
90% 95% full speed
95%-100% full speed

G.) TERMINATION

LEADWIRE: 17" Length, UL 1007
WIRE GAUGE: 20AWG
WIRE IDENTIFICATION: Red – Power+
Blue – Return-
White – Tachometer Signal(OC)
Yellow – Speed control(PWM)

H.) SAFETY

UL , CE, CCC



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J) PWM VS P-Q CURVE

