



## Comair Rotron Specification Sheet

Specification Date: Jan 12, 2012

**COMAIR ROTRON PART NUMBER:** 19044009A  
**COMAIR ROTRON MODEL NUMBER:** MFSE48Z3

### **A.) MOTOR:**

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RATED VOLTAGE:	48.0Vdc
OPERATING VOLTAGE RANGE:	36.0Vdc – 56.0Vdc
LOW-START VOLTAGE:	36.0Vdc
RUNNING CURRENT:	2.3 Amps
RATED POWER:	110 Watts
NOMINAL SPEED:	4600RPM±10% (AtFree Delivery)
START UP TIME:	20 Seconds Maximum
OVER VOLTAGE PROTECTION:	No
MAX.LOCK.ROTOR CURRENT:	6.0 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±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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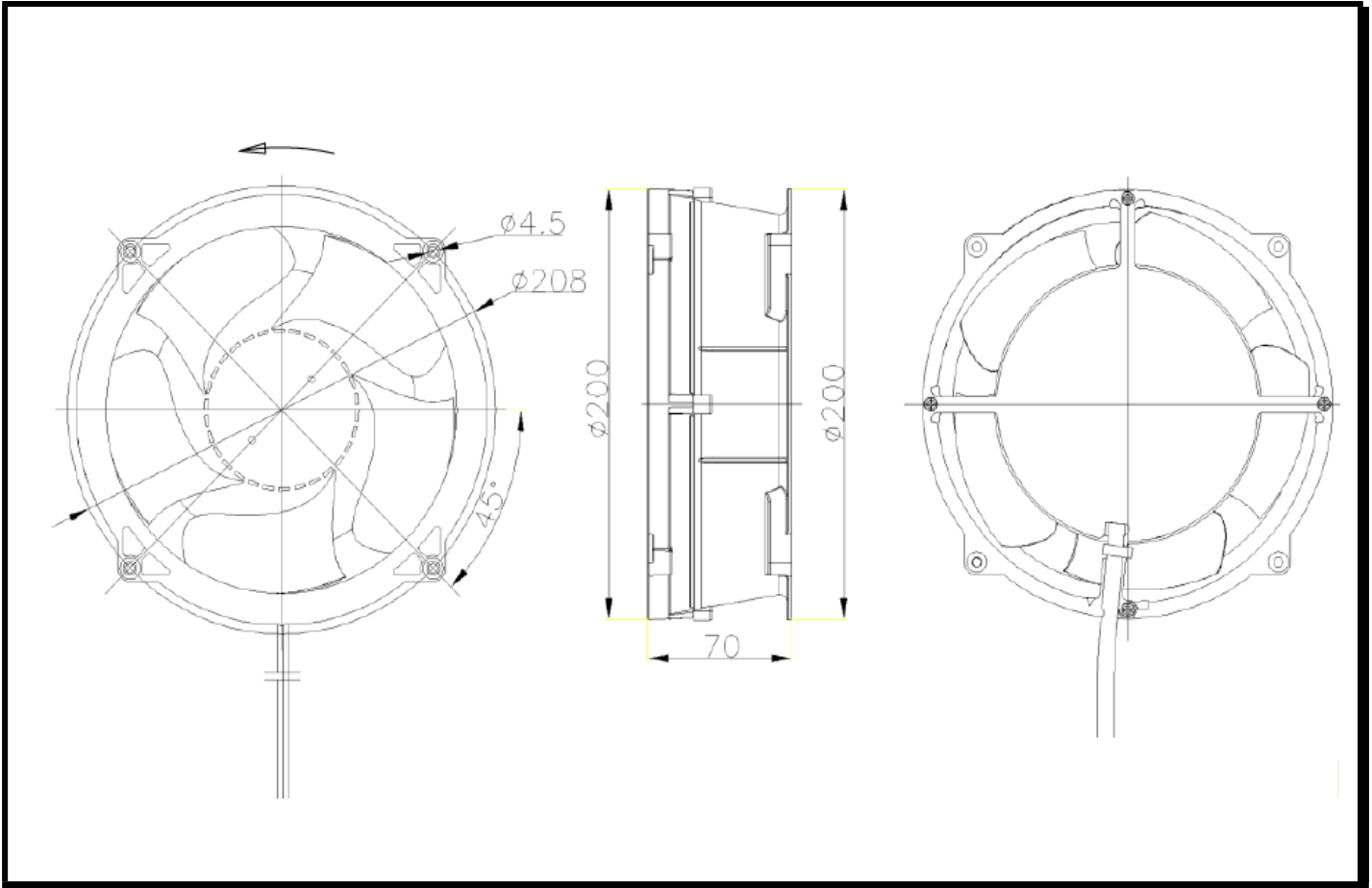


Figure 1

## C.) ENVIRONMENTAL

OPERATING TEMPERATURE: -10 to 70 STORAGE

TEMPERATURE: -40 to 80 HUMIDITY:

0 to 85% RH, non-condensing

## D.) PERFORMANCE CHARACTERISTICS

AIR FLOW: 530 CFM  $\pm$ 10%  
(At Free Delivery and 48.0 VDC Nominal)

STATIC PRESSURE: 2.82" Inches of H<sub>2</sub>O  
(At Shut-Off and 48.0 VDC Nominal)



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ACOUSTIC LEVEL: 85 dBA

## E.) TACHOMETER FEATURES

TACHOMETER OUTPUT: Open Collector Output  
 Max Pull up Voltage: 56V  
 Max I<sub>c</sub> : 10mA  
 Nominal Pull up Voltage : 48V  
 Nominal Pull up Resistor : 10000 OHMS

Specific feature of Tacho output with Nominal Voltage & Resistor:

Output High Level : 47 - 49V  
 Output Low Level : 0 - 0.5V  
 Pulses : 3 Per Rev  
 Output Pulse Duty: 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– Power-  
 White – Tachometer Signal(OC)  
 Yellow – Speed control(PWM)

## H.)SAFETY

UL , CE  
 CCC



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## J) PWM VS P-Q CURVE

