



# Comair Rotron Specification Sheet

Specification Date: Jan 06, 2015

Version: 01

RoHS Compliant

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

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## A.) MOTOR:

RATED VOLTAGE:	48 Vdc
OPERATING VOLTAGE RANGE:	36 Vdc – 56 Vdc
LOW-START VOLTAGE:	36 Vdc
RUNNING CURRENT:	2.3 Amps
RATED POWER:	110 Watts
NOMINAL SPEED:	4600 RPM $\pm$ 10% (At Free Delivery)
START UP TIME:	20 Seconds Maximum
MOTOR TYPE:	Brushless DC
MOTOR PROTECTION:	By Integrated Circuit, Fuse
LOCKED ROTOR PROTECTION:	Electronic
POLARITY PROTECTION:	Yes
AUTOMATIC RESTART CAPABILITY:	By Integrated Circuit
ROTATION:	Counterclockwise when viewed from Inlet

## B.) MECHANICAL

DIMENSIONS:	220.4 mm Dia. x 69.9 mm (8.68" Dia. x 2.75") <i>Figure 1</i>
WEIGHT:	1.81 Kg (4.0 Lbs.)
BEARING TYPE:	Ball Bearing, Permanently Lubricated, Shielded
MOTOR BASE:	Cast Aluminum, Painted black
IMPELLER:	Plastic



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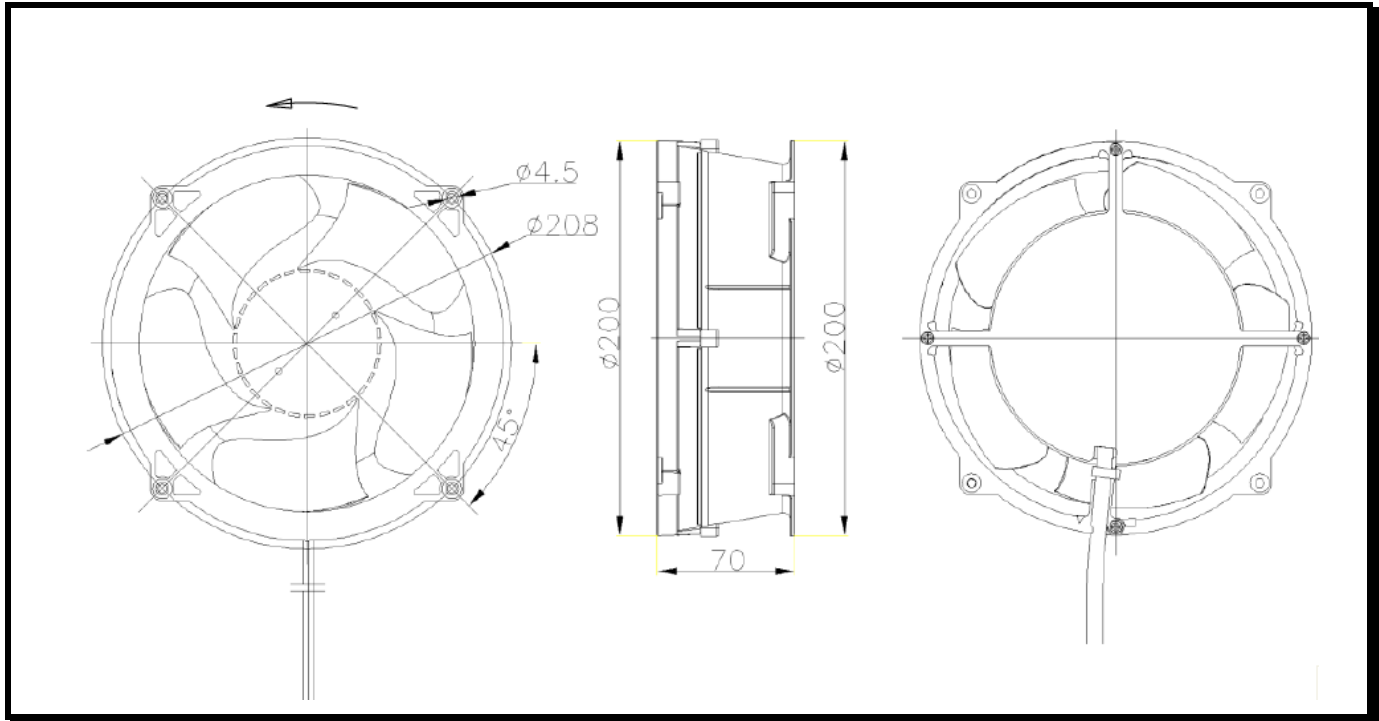


Figure 1

## C.) ADDITIONAL FEATURES

### TACHOMETER OUTPUT:

Max Pull up Voltage:

Open Collector Output

56V

Max I<sub>c</sub> :

15mA

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 cycle :

50% ±10%



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## D.) SPEED CONTROL FEATURES

Method:	PWM
High Voltage Level :	10VDC $\pm$ 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

## E.) ENVIRONMENTAL

OPERATING TEMPERATURE:	-10°C to 70°C
STORAGE TEMPERATURE:	-40°C to +80°C
HUMIDITY:	5% to 95% RH, non-condensing
VIBRATION:	3G's (20 to 200 Hz)
SHOCK:	100G peak, 10 msec, half sine wave

## F.) PERFORMANCE CHARACTERISTICS

AIR FLOW:	530 CFM $\pm$ 10% (Measuring at zero static pressure)
STATIC PRESSURE:	2.82" Inches of H2O (Measuring at zero air flow)
ACOUSTIC LEVEL:	85 dBA (Freely Suspended at 1 meter per ANSI S12.11-1987)



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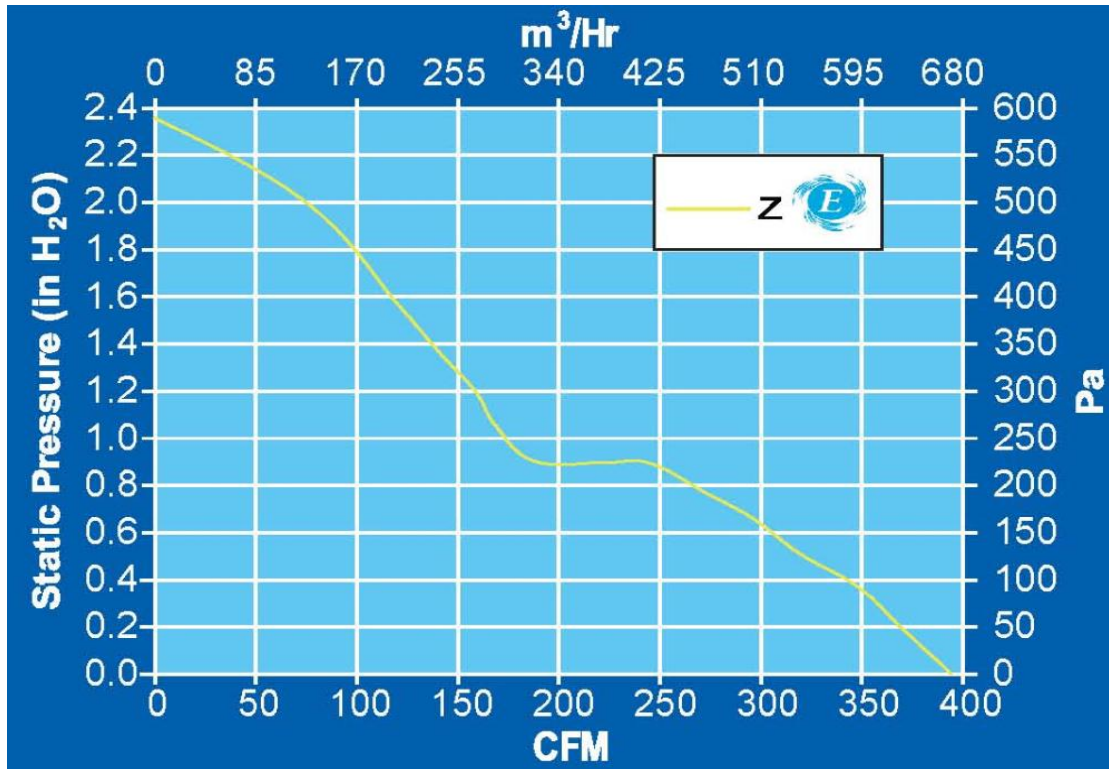


Figure 2

## G.) TERMINATION

LEADWIRES:

17" ±1" lead wires  
20 AWG, UL 1007 Style

COLOR DESIGNATION:

Red – Power (+)  
Black – Return (-)  
White – Tachometer Output  
Yellow – Speed control

## H.) RELIABILITY

This fan is designed for continuous duty life of 70,000 Hours at 40°C, (L10)

## I.) SAFETY

UL, CUL, CE

## J.) Flammability

The all components of the motorized impeller meet a UL94V-0 rating or better.