



Comair Rotron Specification Sheet

Specification Date: Feb 06, 2012

COMAIR ROTRON PART NUMBER: 19044008A
COMAIR ROTRON MODEL NUMBER: MFSE24Z

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±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± 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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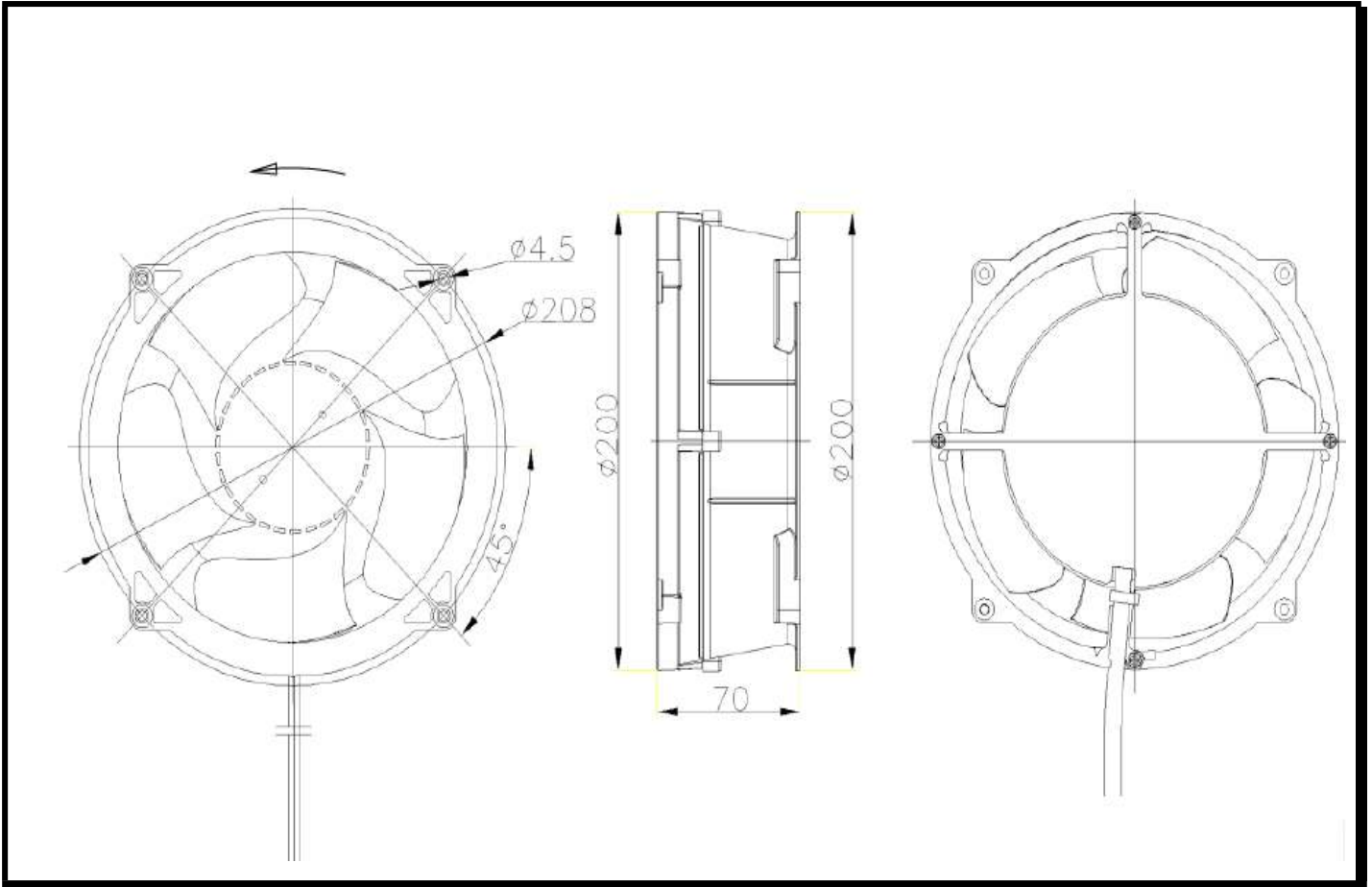


Figure 1

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

