



Comair Rotron Specification Sheet

Specification Date: Jan 12, 2012

COMAIR ROTRON PART NUMBER: 19044009A
COMAIR ROTRON MODEL NUMBER: MFSE48Z

A.) MOTOR:

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% (At Free 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 ROTOR 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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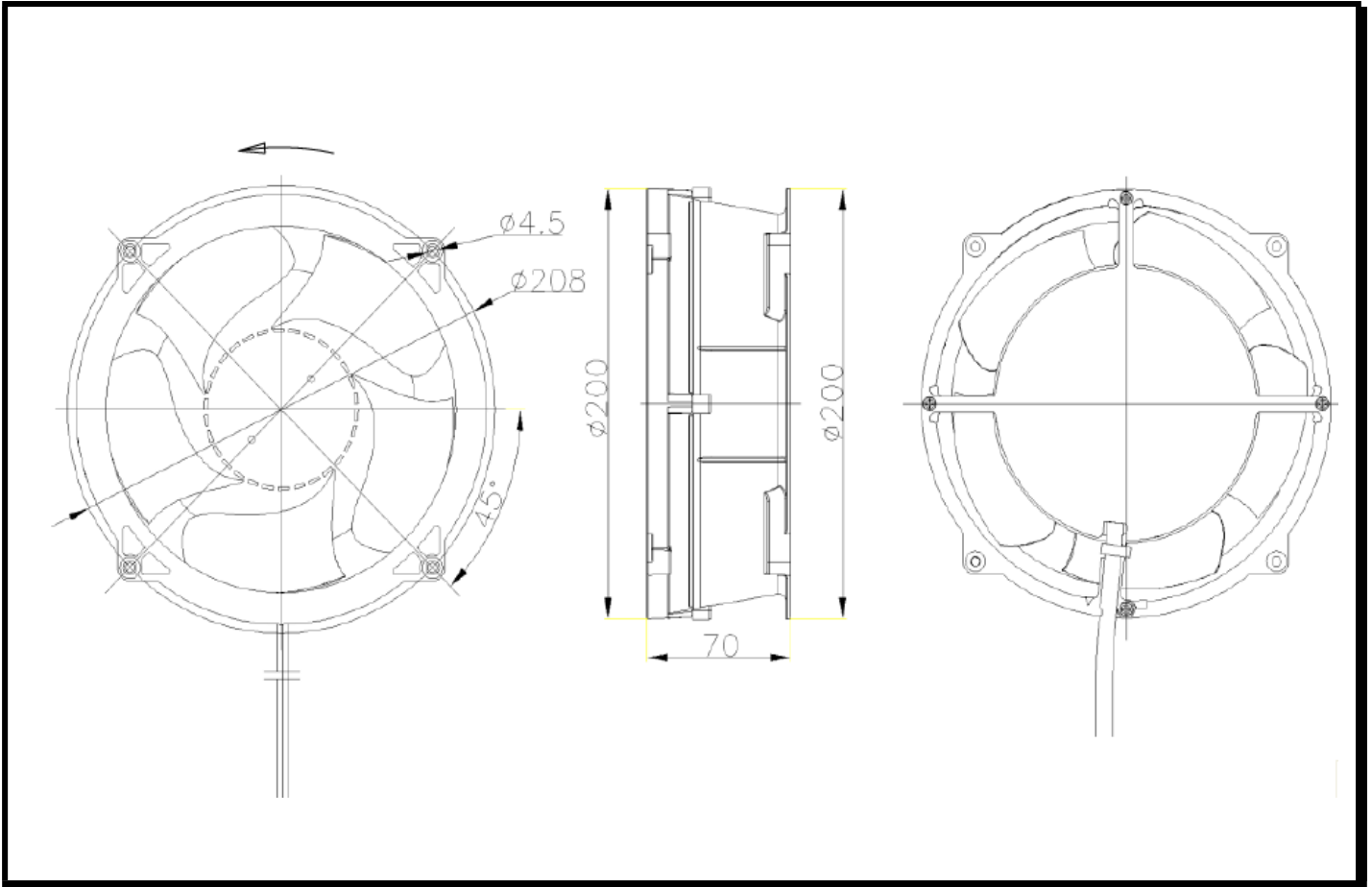


Figure 1

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 48.0 VDC Nominal)
STATIC PRESSURE: 2.82" Inches of H₂O
(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_c : 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 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– Power-
 White – Tachometer Signal(OC)
 Yellow – Speed control(PWM)

H.)SAFETY

UL , CE
 CCC



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J) PWM VS P-Q CURVE

