

## General Specifications

### Motor Protection:

Auto Restart/Polarity Protection

### Insulation Resistance:

10M Ω by DC500V Megger

### Dielectric Withstand Voltage: AC 700V 1s

### Allowable Ambient Temperature Range:

-10°C ~ +70°C (Operating)

-30°C ~ +70°C (Storage)

(non-condensing environment)

## Expected Life

### Failure Rate: 10%

40°C 70,000 Hours

## Material

Casing : Plastic (Black) UL94V-0

Impeller : Plastic (Black) UL94V-0

Bearing : Ball Bearing

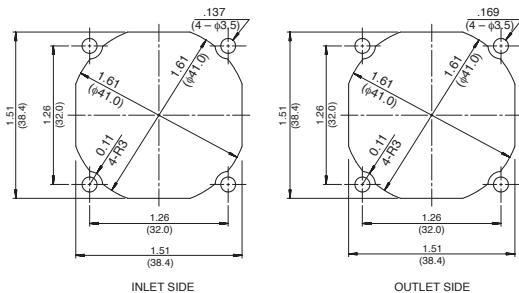
Lead Wire : UL10368, AWG 26, +Red, -Black

Tach Sig. : White

PWM Control : Brown

## Panel Cut-Outs

Units:  $\frac{\text{inch}}{\text{mm}}$



## PWM Control Voltage

Vst = 0V ~ 0.4V Stop (On Duty 0%)

Vst = 3.0V ~ 5.0V Full Speed (On Duty 100%)

Vst = Open Full Speed (On Duty 100%)

(At Ta = 25°C, rated voltage 12VDC, f=25.0kHz)

## Specifications

MODEL	Rated Voltage	Operating Voltage	Current	Input Power	Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
	(V)	(V)	(A) <sup>*1</sup>	(W) <sup>*1</sup>	(min <sup>-1</sup> ) <sup>*1</sup>	CFM <sup>*1</sup>	(m <sup>3</sup> /min) <sup>*1</sup>	in H <sub>2</sub> O	(Pa) <sup>*1</sup>	(dB) <sup>*1</sup>	(g)
04028DA-12P-AA-F0	12	10.8 ~ 13.2	0.18	2.16	12000	13.1	0.37	0.92	230.0	45.0	53
04028DA-12Q-AA-F0	12	10.8 ~ 13.2	0.29	3.48	15000	16.6	0.47	1.37	340.0	49.5	53
04028DA-12R-AA-F0	12	10.8 ~ 13.2	0.43	5.16	18000	20.1	0.57	1.93	480.0	54.5	53

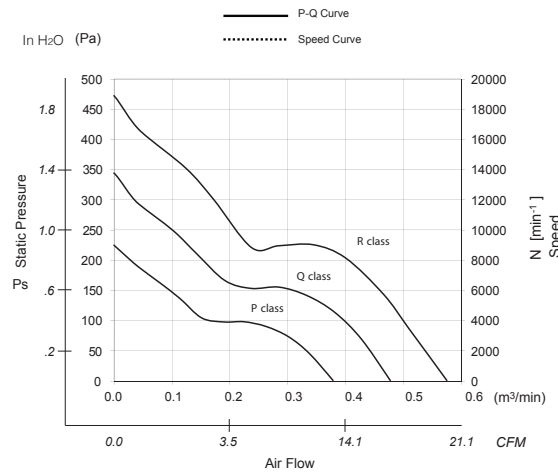
Rotation: Clockwise

Airflow Outlet: Air Out Over Struts

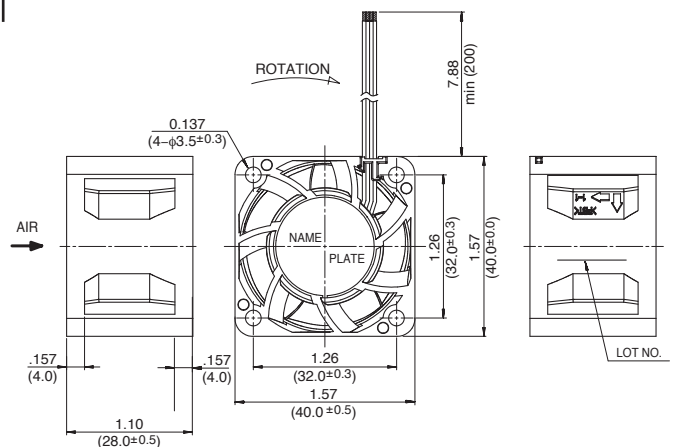
\*1: Average Values in Free Air

Note: PWM/Locked Rotor/Tach Available

## Characteristic Curves



## Outline



## Reference PWM Duty Vs. Speed Curve

