

### General Specifications

#### Motor Protection:

Auto Restart/Polarity Protection

#### Insulation Resistance:

10M  $\Omega$  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

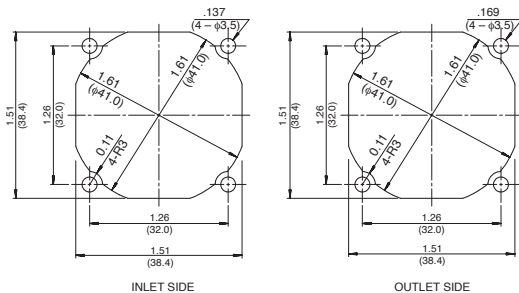
Lead Wire : UL10368, AWG 26, +Red, -Black

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)*1   | (W)*1       | (min <sup>-1</sup> )*1 | CFM*1         | (m <sup>3</sup> /min)*1 | in H <sub>2</sub> O  | (Pa)*1 | (dB)*1 | (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   |

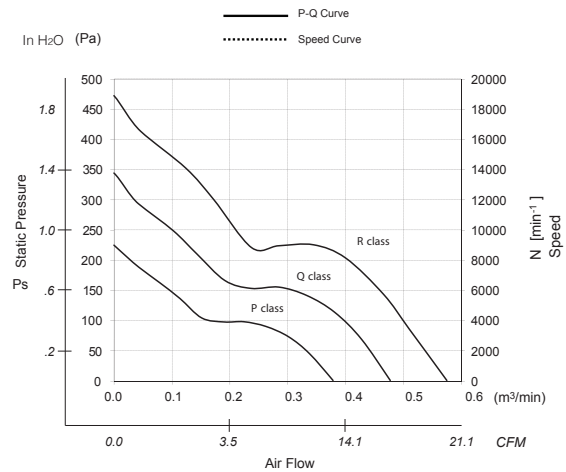
Rotation: Clockwise

Airflow Outlet: Air Out Over Struts

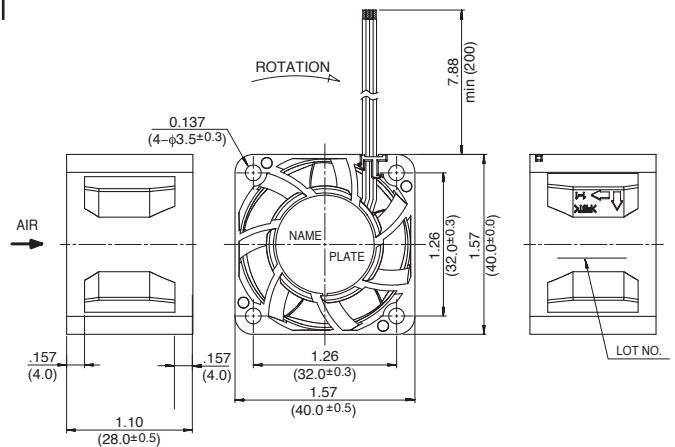
\*1: Average Values in Free Air

Note: PWM/Locked Rotor/Tach Available

### Characteristic Curves



### Outline



### Reference PWM Duty Vs. Speed Curve

