

## General Specifications

**Motor Type:** 3 Phase DC Brushless Motor

**Motor Protection:** Auto Restart/Polarity Protection/Overload Protection (Motor withstands reverse connection for positive and negative leads.)

**Insulation Resistance:** 10M Ω or over with a DC500V Megger

**Dielectric Withstand Voltage:** AC 500V 1min

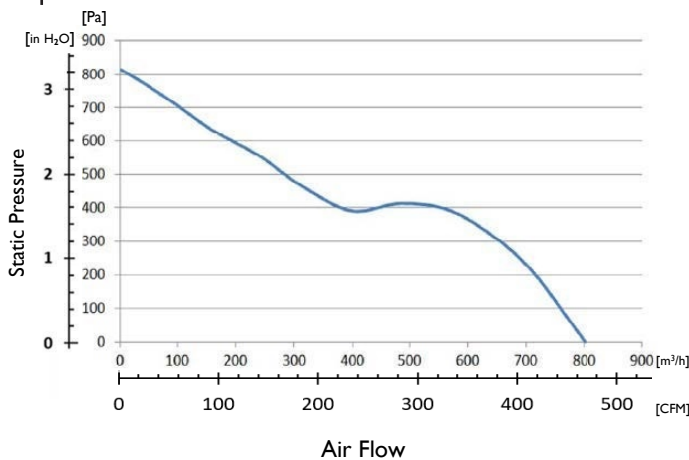
**Allowable Ambient Temperature Range:**

-30°C ~ +70°C (Operating)

-30°C ~ +70°C (Storage)

(non-condensing environment)

## Characteristics Curve



## IP Rated Fan Benefits & Applications

### PWM Benefits

- Increased life expectancy
- Energy saving
- Lower vibration
- Lower noise
- Current spike prevention

### PWM Applications

- Routers and switches
- Data centers and storage
- Broadcast equipment
- Optical repeaters
- Inverters
- UPS
- Battery chargers and fuel cells
- Industrial power supplies
- Welders and plasma cutters
- Test equipment and instrumentation
- Enclosures and more

### Features

- Customized fan performance at multiple operating points
- Peak efficiency resulting in lower total ownership costs
- Cost effective and better reliability
- Open collector Tacho output for fan speed

## Life Expectancy L10

40°C 70,000 Hours

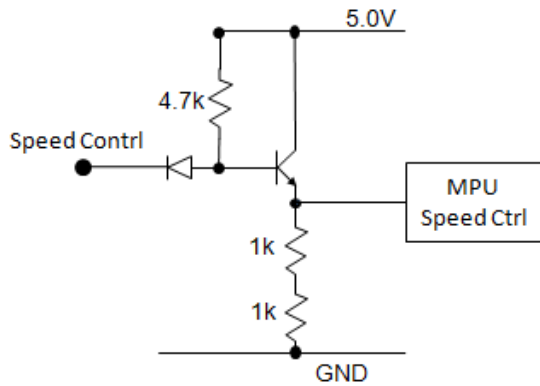
## Specifications

MODEL	Rated Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
			Avg	Max	Avg	Max		(CFM)	(m³/h)	(in H <sub>2</sub> O)	(Pa)		
R172H1-051-D0760	(V)	(V)	(A) <sup>*1</sup>	(A) <sup>*1</sup>	(W) <sup>*1</sup>	(W) <sup>*1</sup>	(min <sup>-1</sup> ) <sup>*1</sup>	(CFM)	(m³/h)	(in H <sub>2</sub> O)	(Pa)	(dB) <sup>*1</sup>	(kg)
	48	43.2 ~ 52.8	2.1	4.3	101	206.4	6,500	473	804	3.19	798	73.0	0.82

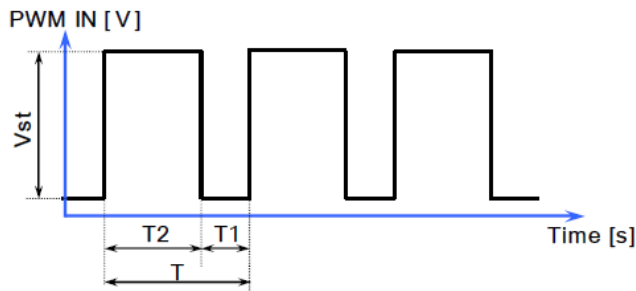
\*1: Values in Free Air

## PWM Specifications

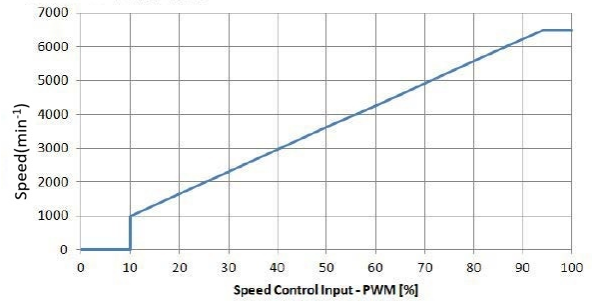
Connection wiring diagram



PWM Signal  
 Duty Rate =  $(T2/T) \times 100$  [%]  
 $V_{st} = 5$  [V]  
 Frequency = 300 Hz to 50 kHz



## PWM Characteristic Curve

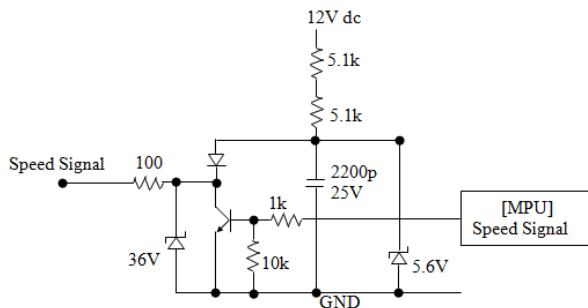


Start-up duty: min 15%

## TACHO Specifications

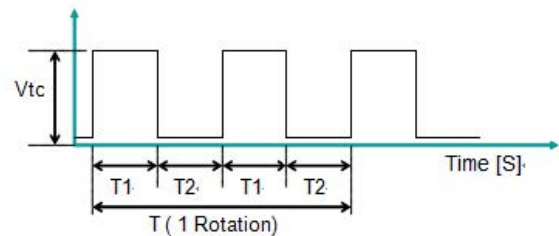
Connection wiring diagram

$V_{max} = 10V$   
 $I_{max} = 5mA$  max



Output Waveform

$V_{tc} = 5$  [V] Pulled up to 5V inside Fan Motor  
 2 Pulse / Revolution  
 $T1 = T2$  (50 ± 10% Duty)



## Outline

Name Plate



Safety Standard mark print position

## Material

- Casing : Aluminum
- Impeller ; Plastic
- Bearing : Ball Bearing
- Lead Wire : UL3266, AWG20, 22 or equivalent

(+) : Red (-) : Black (PWM): Yellow (Tacho): White

