

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

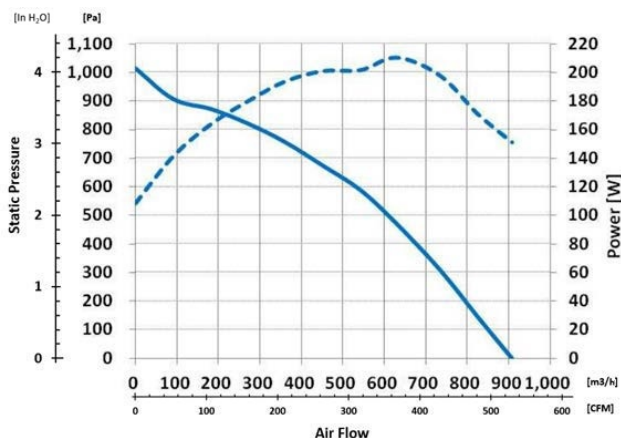
Allowable Ambient Temperature Range:

-30°C ~ +60°C (Operating)

-40°C ~ +70°C (Storage)

(non-condensing environment)

Characteristics Curve



IP Rated Fan Benefits & Applications

IP68

NMB offers Ingress Protection (IP) rated cooling fans. IP68 fans provide dust tight protection, and safeguard against wet location and powerful water jets for outdoor applications and other harsh environments. NMB fans are designed with NMB precision machined ball bearings assuring long life and high reliability.

Benefits

- IP68 rating per IEC 60529 standard
- Long life and high reliability with NMB precision ball bearings (L10 number)
- Open Collector Tacho Signal output for fan speed
- PWM Speed Control

Applications

- Outdoor Applications
- Factory Automation
- Food Processing
- Inverters
- Telecomm
- Horticulture

Life Expectancy L10

40°C 70,000 Hours

Specifications

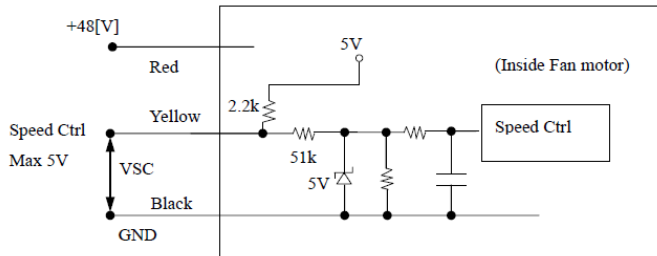
MODEL	Rated Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow ^{*2}		Max. Static Pressure ^{*2}		Noise	Mass
			Avg	Max	Avg	Max		(CFM)	(m³/h)	(in H₂O)	(Pa)		
F175GI-061-D0750	(V)	(V)	(A) ^{*1}	(A) ^{*1}	(W) ^{*1}	(W) ^{*1}	(min ⁻¹) ^{*1}					(dB) ^{*1}	(kg)
	48	36.0 ~ 54.0	3.2	6.0	153.6	288.0	5,100	534.4	908	4.07	1015	77.0	1.2

*1: Values in Free Air

*2: Attach Inlet-ring (NMB: IR12714)

PWM Specifications

Connection wiring diagram



PWM Signal

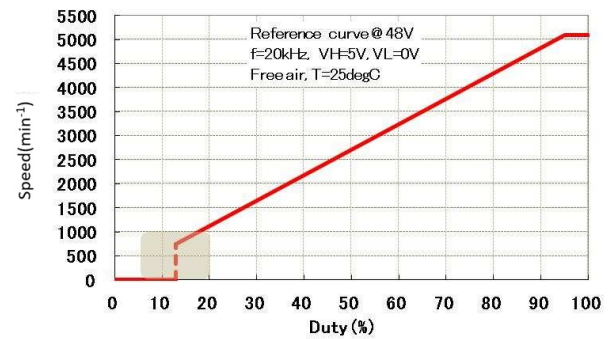
$$\text{Duty Rate} = (T_2/T) \times 100 [\%]$$

$$V_{st} = 5 [V]$$

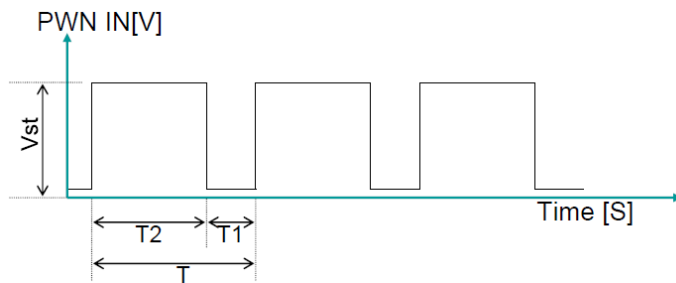
$$\text{Frequency} = 20\text{kHz}$$

$$V_{st} \text{ OPEN} = \text{Full speed}$$

PWM Characteristic Curve

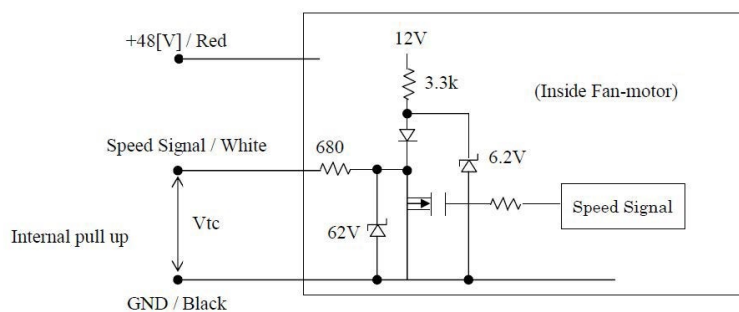


Start-up duty: min 30%



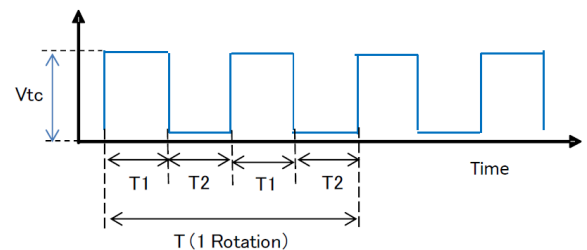
TACHO Specifications

Connection wiring diagram



Output Waveform 2 Pulse / Revolution

$$T_1 = T_2 (50 \pm 10\% \text{Duty})$$



Outline



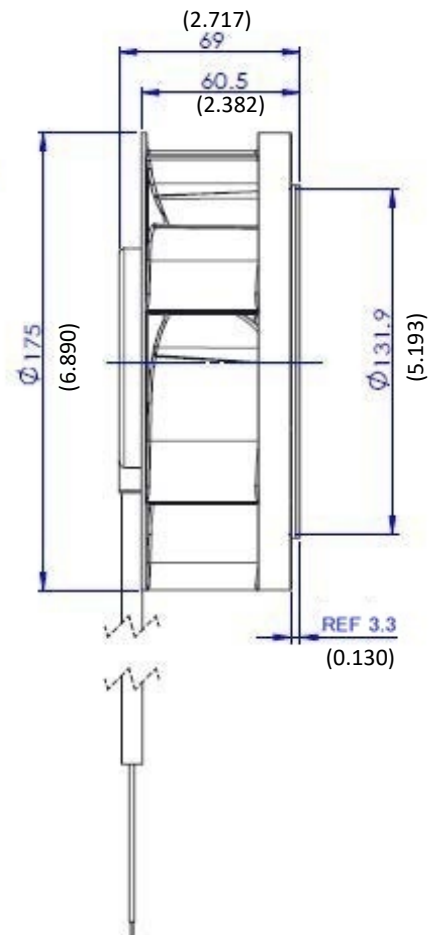
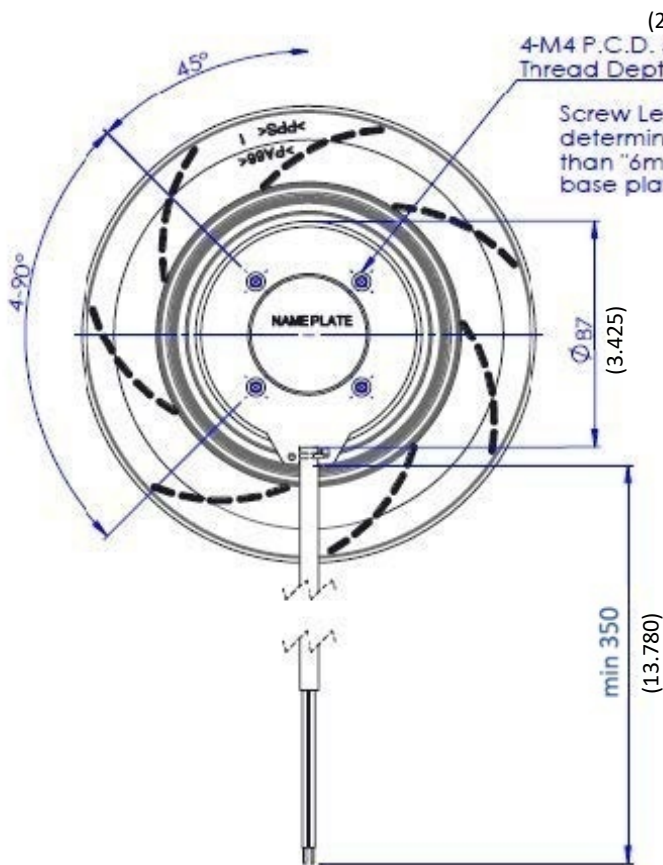
Product Label Drawing

Material

Casing : Aluminum
 Impeller : UL94V-O Reinforced Plastic
 Bearing : Ball Bearing

Lead Wire : UL1430 or UL3266 AWG18 or 20
 (+): Red (-): Black

UL1430 or UL3266 AWG18, 20 or 22 (PWM): Yellow (Tacho): White



Unit: mm (inch)

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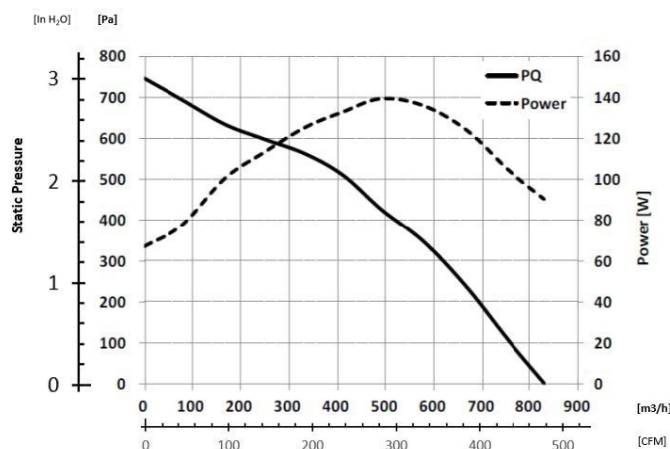
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Characteristics Curve



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F175G3-061-D0540	(V)	(V)	(A) ^{*1}	(A) ^{*1}	(W) ^{*1}	(W) ^{*1}	(min ⁻¹) ^{*1}					(dB) ^{*1}	(kg)
	24	18.0 ~ 27.0	3.7	8.5	88.8	204.0	4,200	476.7	810	2.97	740	73.0	1.2

*1: Values in Free Air

*2: Attach Inlet-ring (NMB: IR12714)

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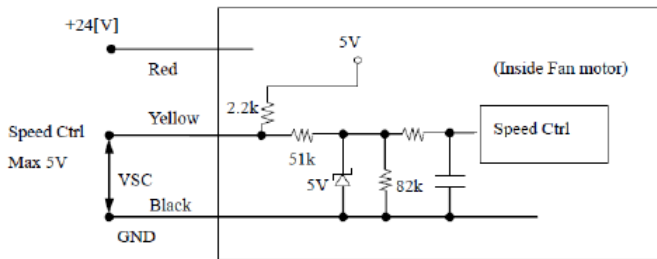
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Life Expectancy L10

40°C 70,000 Hours

PWM Specifications

Connection wiring diagram



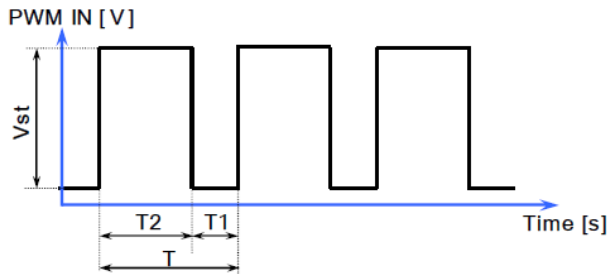
PWM Signal

$$\text{Duty Rate} = (T_2/T) \times 100 [\%]$$

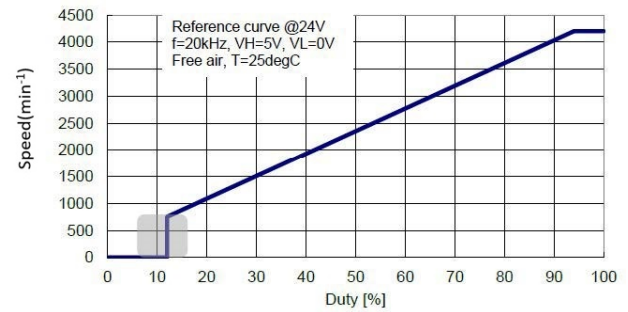
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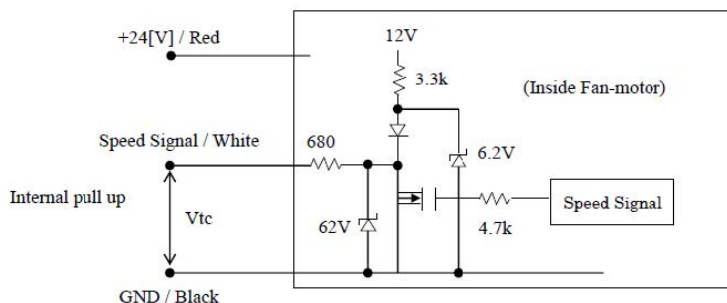
PWM Characteristic Curve



Start-up duty: min 20%

TACHO Specifications

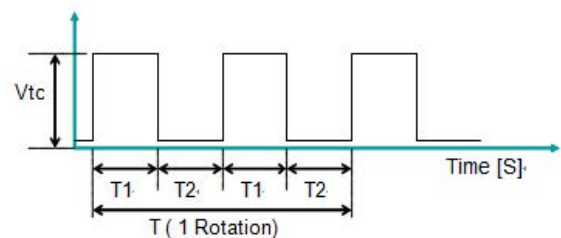
Connection wiring diagram



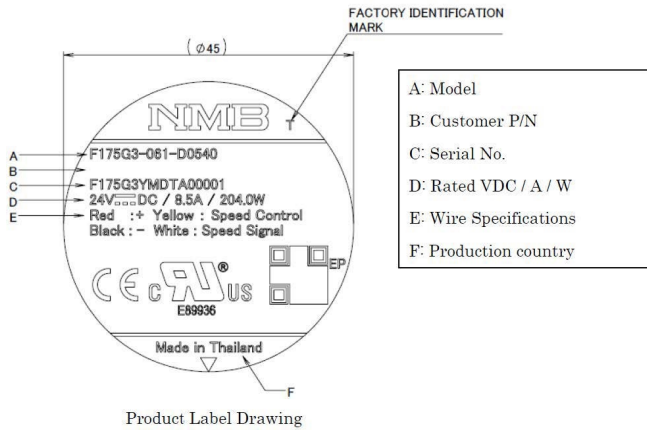
Output Waveform

2 Pulse / Revolution

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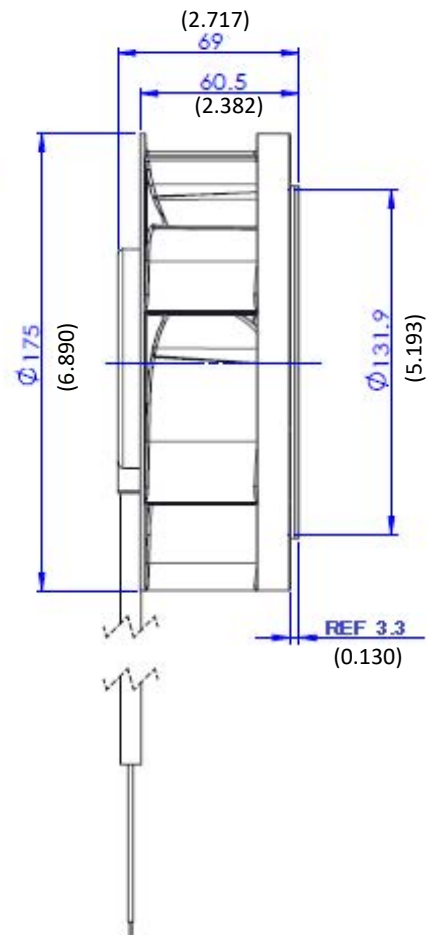
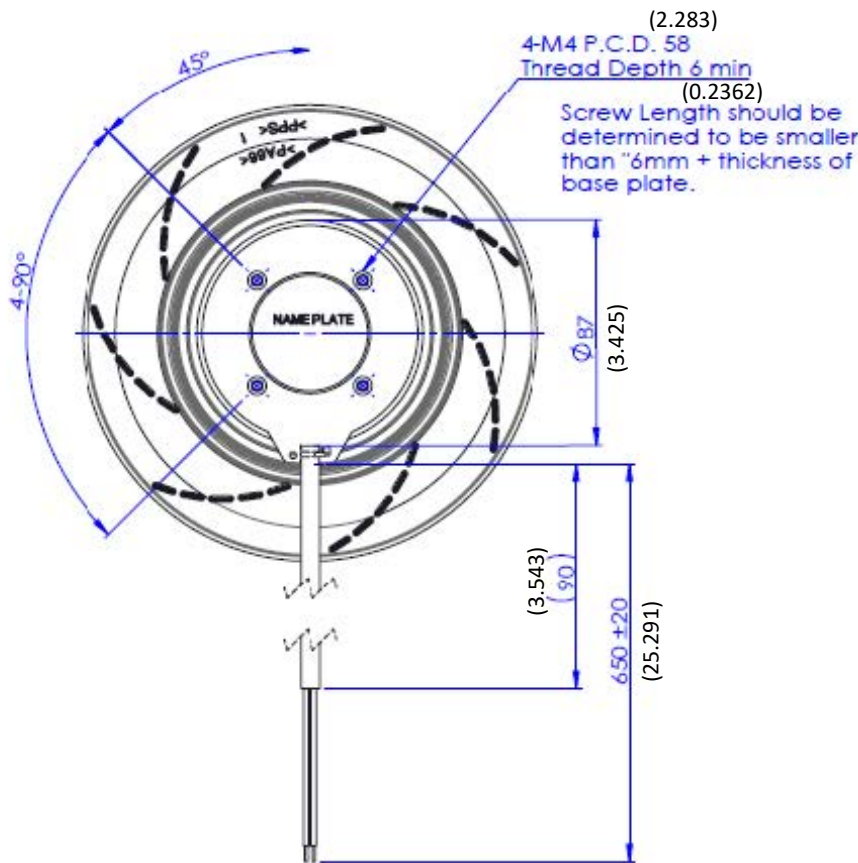
Outline



Material

Impeller : Plastic (UL94V-0)
 Bearing : Ball Bearing
 Lead Wire : AWG18, UL1430

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



Unit: mm (inch)