

DC Brushless Fan



RoHS
Compliant



Specifications:

Mechanical Characteristic	
Motor Design	3 phases, 4-poles Brushless DC motor
Bearing System	Precision ball bearing system
Dimensions	40mm × 40mm × 28mm
Materials of Frame	Thermoplastic PBT
Materials of Fan Blade	Thermoplastic PBT
Direction Of Rotation	Counter-clockwise viewed from front of fan blade
Mounting Holes	Diameter 3.5mm in 8 holes
Weight	35g

Electric Characteristic	
Rated Voltage	12V DC
Rated Current	520mA / Max. 624mA
Rated Power Consumption	6.24 Watts / Max. 7.49 Watts
Operating Voltage Range	8V DC to 13.8V DC
Starting Voltage	8V DC (25°C power on/off)
Operating Temperature Range	-10°C to +70°C
Storage Temperature Range	-40°C to +70°C

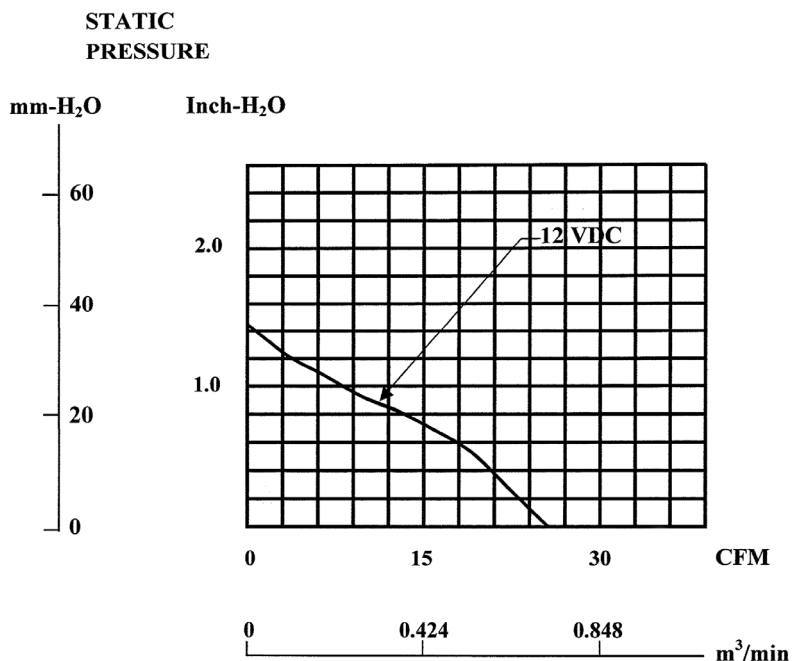
Performance Characteristic	
Rated Speed	19000 RPM ± 10% at rated voltage
Airflow	25.6CFM
Static Pressure	1.45"-H ₂ O
Acoustic Noise	58.5 dB(A)
Insulation Resistance Plastic Housing	10MΩ at 500V DC between internal stator and lead wire(+)
Dielectric Strength	Applied AC 500V for one minute or AC 600V for 2 Seconds between housing and lead wire(+)
Life Expectancy	70,000 Hours at 40°C, 65% humidity, 90%CL
Protection	*Automatic Restart
	Polarity Protection

* In a situation where the fan is locked by an external force while the electricity is on, an increase in coil temperature will be prevented by temporarily turning off the electrical power to the motor. The fan will automatically restart when the locked rotor condition is released.

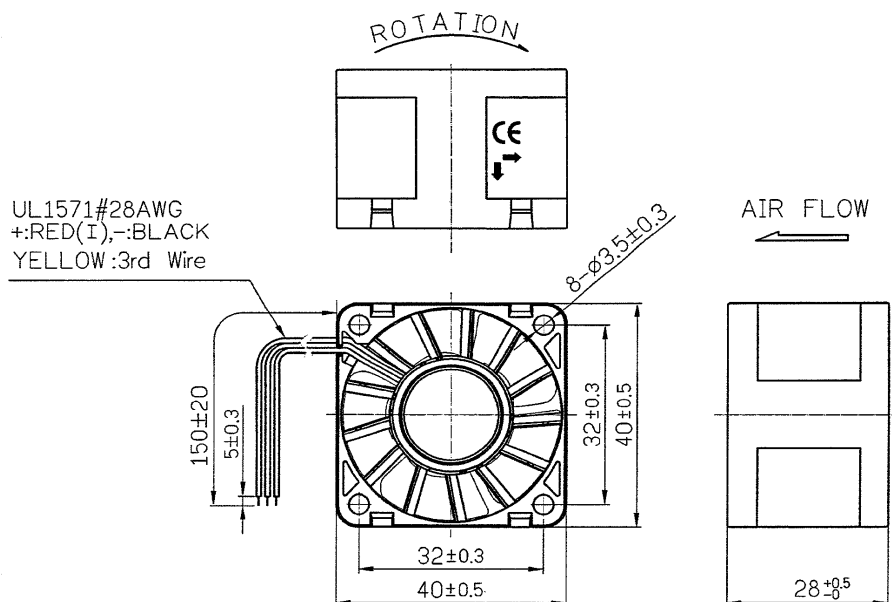
DC Brushless Fan



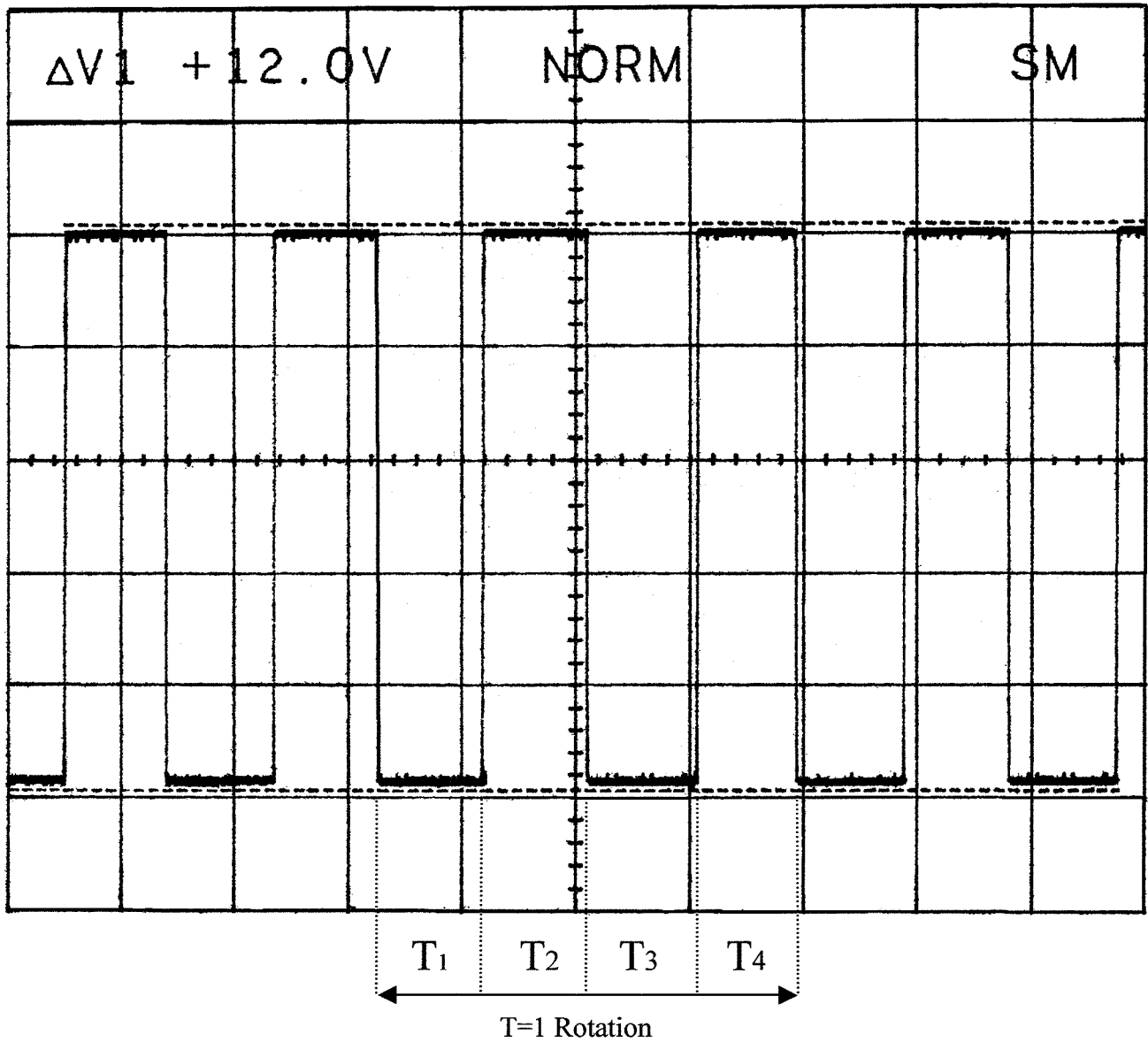
Performance Curves:



Dimensions:



Dimensions : Millimetres



$$T = T_1 + T_2 + T_3 + T_4 = (1 \text{ Rotation})$$

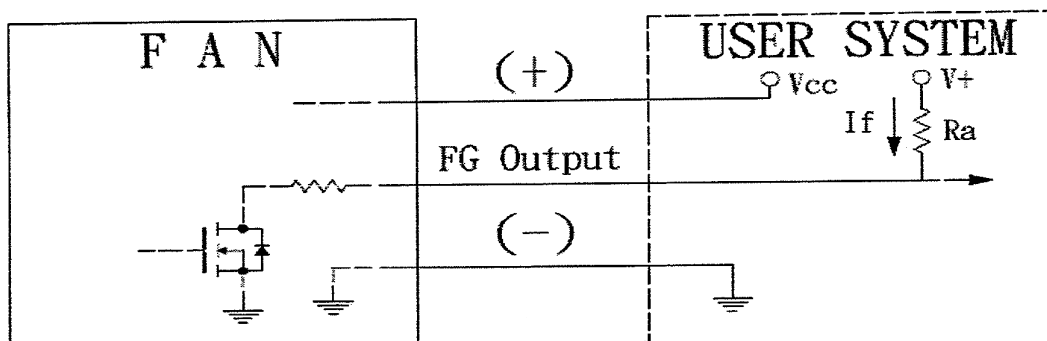
$$T_1 = T_2 = T_3 = T_4 = \frac{60}{4 \times \text{rpm}}$$

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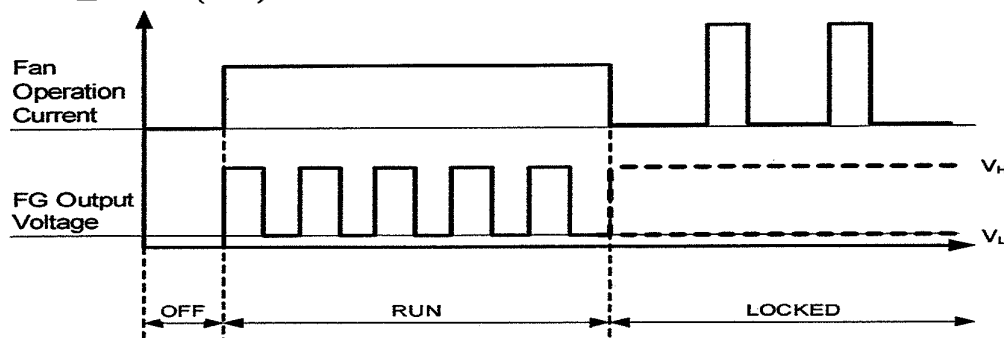


Fan 3rd Wire Signal:

F Type (Frequency Generator)



$$*Ra \geq V^+ / If (\max)$$



Electrical Characteristics : (at $T_a = 25^\circ\text{C}$, $V_{cc} = 12\text{V}$)

Parameter	Ratings			Unit
	Min.	Typ.	Max.	
FG Supply Voltage(V+)	-	-	13.8	Voltage
FG Output Current (If)	-	-	2	mA
FG Output (VL)	-	0.25	0.45	Voltage
FG Output (VH)	-	V+	-	Voltage

Part Number Table

Description	Part Number
DC Brushless Fan	SG40281B1-0000-G99

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