



Approval Specification for Cofan Part # 30-1135-01 Rev 01

60x50x23mm Fan Heatsink

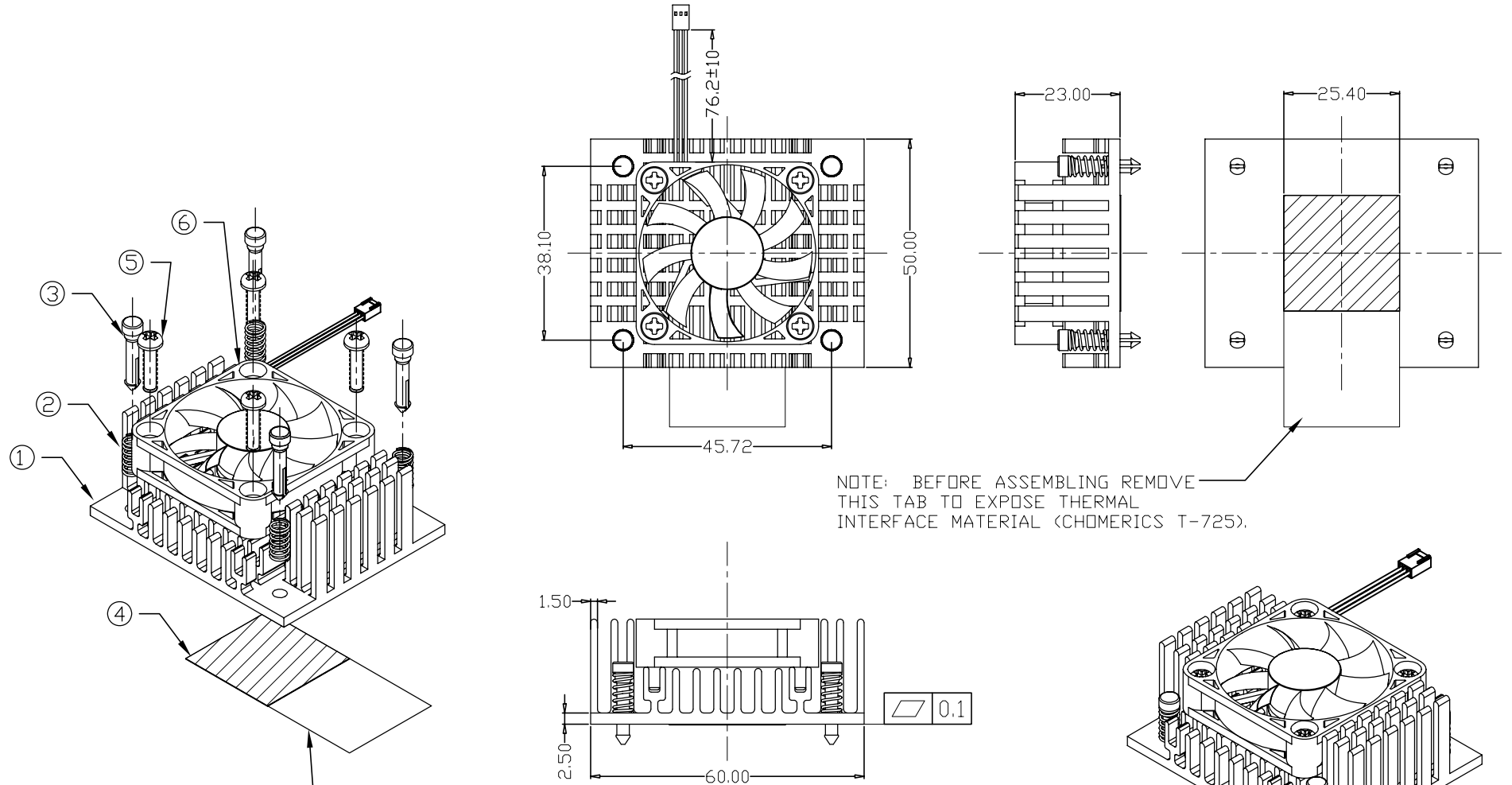
Revision Date: June-6-06

Cofan USA, 46177 Warm Springs Blvd, Fremont, CA 94539, www.cofan-usa.com , (800) 766-6097

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TO PLACE ORDER FOR THIS COMPLETE ASSY USE COFAN PART # 30-1135-01 Rev 01

REVISION HISTORY					
REV	DESCRIPTION	DRWN	CHK'D	APPVD	DATE
—	— SEE SHEET 1 —	—	—	—	—



NOTE: BEFORE ASSEMBLING REMOVE THIS TAB TO EXPOSE THERMAL INTERFACE MATERIAL (CHOMERICS T-725).

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RoHS
 Compliant
 2002/95/EC

⑥	FAN	F-4010L05BII-01 Rev 01, 3K RPM, 5V, 2 Ball, Tach		
⑤	FAN SCREW	60-1035	STEEL	ZINC PLATE
④	THERMAL PAD	70-1008	T725	N/A
③	BRASS PIN	50-1016 Rev 01	BRASS	PASSIVATE
②	SPRING	50-1008 Rev 01	SPRING STEEL	NICKLE PLATE
①	HEAT SINK	20-1310 Rev 01	AL6063-T5	BLACK ANODIZE
Item	ITEM NAME	PART #	MATERIAL	PLATING

DO NOT SCALE DRAWING
 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRE
 TOLERANCES ARE:
 1 PLACE .X ± 0.4
 2 PLACE .XX ± 0.25
 3 PLACE .XXX ± 0.13
 ANGLES EXCEPT 90° ± 0.5°
 MAXIMUM SURFACE ROUGHNESS 6.3

MATERIAL:	N/A	CUSTOMER DRAWING NUMBER:	COFAN USA 1400 FULTON PL. UNIT A FREMONT CA 94539		
FINISH:	N/A	CUSTOMER PART NUMBER:	NAME: CPU HEAT SINK ASSY		
DRAWN BY:	Bob.G	COFAN DRAWING NUMBER:	SCALE:	CUS REV:	COF REV:
APPR BY:		30-1135-01	1:1	--	01
		COFAN PART NUMBER:	SHEET:	DATE DRAWN:	
		30-1135-01	1 OF 1	June-6-2006	



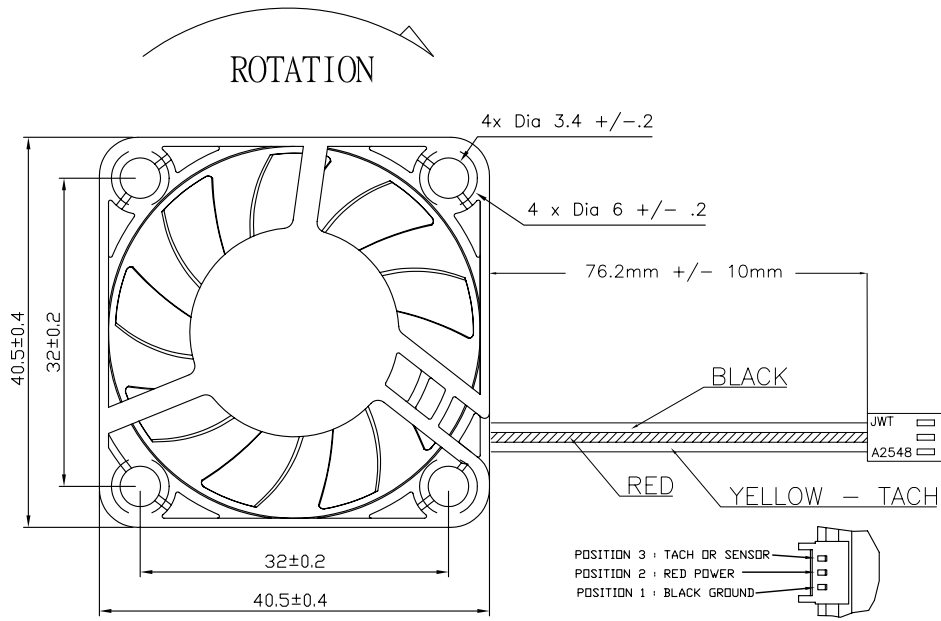
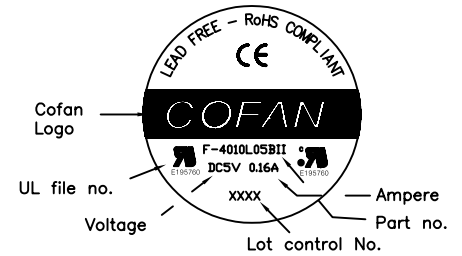
Approval Specification for Cofan Part # F-4010L05BII-01 Rev 01

2 Ball Bearing, 40x10.5mm, 5VDC, 3 Wire, 3000 RPM, 9 Blade, 14.8 dBA,
RoHS Compliant

Revision Date: June 6, 2006

Cofan USA, 46177 Warm Springs Blvd, Fremont, CA 94539 www.cofan-usa.com (800) 766-6097

TO ORDER FAN PER THIS DRAWING USE COFAN PART # F-4010L05BII-01 Rev 01
 CALL (800) 766-6097 TO PLACE ORDER OR EMAIL TO:ben@cofan-usa.com
 www.cofan-usa.com



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PARTS LIST	
①	1X FAN, F-4010L05BII, 3000 RPM
②	1X MOLEX HOUSING 22-01-3037 OR EQUIV. 3X MOLEX TERMINAL 08-50-0113 OR EQUIV.

Note:

1. MTBF to be 100K+ Hrs (2 Ball Bearing)
2. Fan to have 9 blades
3. Fan to be 3,000 RPM
4. Fan to be RoHS Compliant

RoHS
Compliant
2002/95/EC

UL# E195760
 CUL# E195760
 TUV# B 04 03 52557 002
 CE# EN5008-1

MODEL NO	RATED VOLTAGE V	OPERATING VOLTAGE V	RATED CURRENT A	ACTUAL CURRENT A	RATED POWER W	RATED SPEED RPM	MAX AIR FLOW @ 3000 RPM		MAX PRESSURE @ 3000 RPM		NOISE LEVEL dBA
							CMM	CFM	mmH ₂ O	InH ₂ O	
F-4010L05BII	5	4.5~6.0	0.16	0.06	0.80	3000	0.115	4.06	0.79	0.031	14.8

DO NOT SCALE DRAWING		DRAWING NUMBER: F-4010L05BII-01		COFAN USA 1400 Fulton Place Fremont CA 94589	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRE TOLERANCES ARE:		MATERIAL:		Fan, 40 x 10mm, Cofan Model F-4010L05BII, 5V, 3K RPM, RoHS 3 Wire, Tach, 2 Ball Bearing	
1 PLACE .X	± 0.4	FINISH:		DRAWN BY: DAN	
2 PLACE .XX	± 0.25	COFAN PART NUMBER: F-4010L05BII-01		REV: 01	
3 PLACE .XXX	± 0.13	ENGINEER:		SHEET:	
ANGLES EXCEPT 90°	± 1°	DATE DRAWN: June-6-06		SCALE: 1 : 1	
MAXIMUM SURFACE ROUGHNESS	125√				

8 7 6 5 4 3 2 1

Cofan USA
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Fremont, CA 94539
USA

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FAX: (510) 490-7931
www.cofan-usa.com

SPECIFICATION FOR APPROVAL

Rev 01

1. SCOPE:

This specification defines the electrical and mechanical characteristics of the following DC brushless axial flow fan:

Item		Description	
1-1	Part Number	F-4010L05BII-01 Rev 01	
1-2	Outline Dimensions	40 x 40 x 10.5 mm (see dimensions drawing #7)	
1-3	Bearing System	2 Ball Bearing	
1-4	Rated Voltage	5 VDC	
1-5	Operating Voltage	4.5 ~ 6.0 VDC	
1-6	Input Current	0.16A (.06A in running conditions)	
1-7	Input Power	0.80 W	
1-8	Speed	3000 R.P.M. +/- 10%	a. 25°C, 65% RH, b. Free Air c. Rated Voltage
1-9	Max. Air Flow (At zero static pressure)	4.06 CFM	a. Rated Voltage b. AMCA Standard
1-10	Max. Air Pressure (At zero airflow)	0.031 InH ₂ O	c. Rated Current
1-11	Acoustical Noise (Avg)	14.8 dBA	a. Rated Voltage b. Measured in a Non-Echo Chamber c. CNS 8753 Standard d. ISO 3744 Test Condition
1-12	Life Expectance	81,229 hours 50,077 hours	a. Continuous operation @ 25°C b. Continuous operation @ 45°C
1-13	Insulation Type	UL: Class A	
1-14	Weight	11 Grams	
1-15	Rotation	Clockwise from label side	

2. Major Material

Materials / Parts	Specification	Remarks
Plastic Material	Frame: PBT70%: + FIBER30%	UL: 94V-0
	Impeller: PBT85% + FIBER15%	UL: 94V-0
Lead Wire	(+) Red; (-) Black; (Signal) Yellow; AWG#28(3Pin) Standard wire length is 200mm, custom lengths are available at no extra charge.	UL: 1007-F
Connector	See Drawing	

3. Electrical Characteristics & Test Environmental:

Item	Specification / Condition
3-1	Operation Temperature -10°C ~ +70°C
3-2	Storage Temperature -40°C ~ +75°C
3-3	Operating Humidity 5 to 90% RH
3-4	Storage Humidity 5 to 95% RH
3-5	Locked Rotor Protection <ul style="list-style-type: none"> a. The current will shut down when rotation is locked b. Automatic restart after a continuous 72 hours rotation lock at rated voltage. c. Impedance of motor winding protects motor from fire after 72 hours of locked rotor condition at the rated voltage. d. Signal Alarm- Optional
3-6	Insulation Strength 10Meg Ohm min at 500VDC Between Frame and (+) terminal
3-7	Dielectric Strength Withstand 5 mA Max 500 VAC 60 Hz for one minute, (between frame and (+) terminal)
3-8	Vibration Test Vibration test in rest status, scan frequency : 5~55Hz 1OCT/Min. in the 3 directions(X.Y.Z), take 16 rotating scan for each axis.
3-9	Shock Test Test of acceleration 30G is applied in the 3 directions (X.Y.Z) and 6 faces, take 11± 1ms(Half Chord Wave), 3 times for each face.
3-10	Noise Level Measured in a semi-anechoic chamber. The fan is running in free air with Microphone at a distance of one meter from the fan intake.
3-11	Tolerance ±10% on rated power and current.
3-12	Polarity Protection Capable of withstanding reverse polarity connection

4. Safety Approvals

Safety Approvals	File No.
UL	E195760
CUL	E195760
TUV	B 04 03 52557 002
CE	EN5008-1

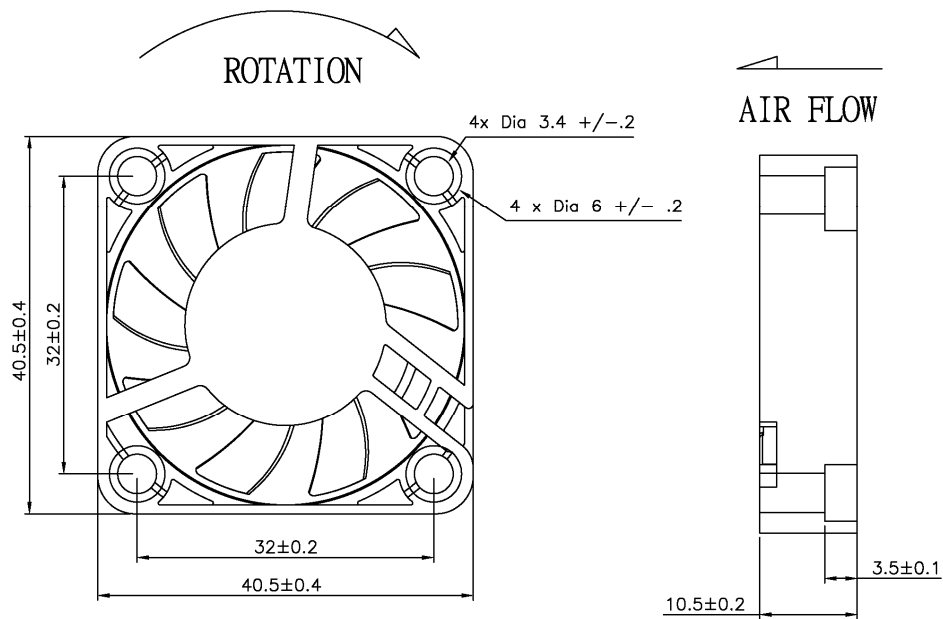
5. Ozone Depleting Substances

5-1. None of our products or manufacturing processes contain or require the use of ozone-depleting chemicals such as PBB's, PBBO's, CFC's, PBBE's, PBDPE's or HCFC's.

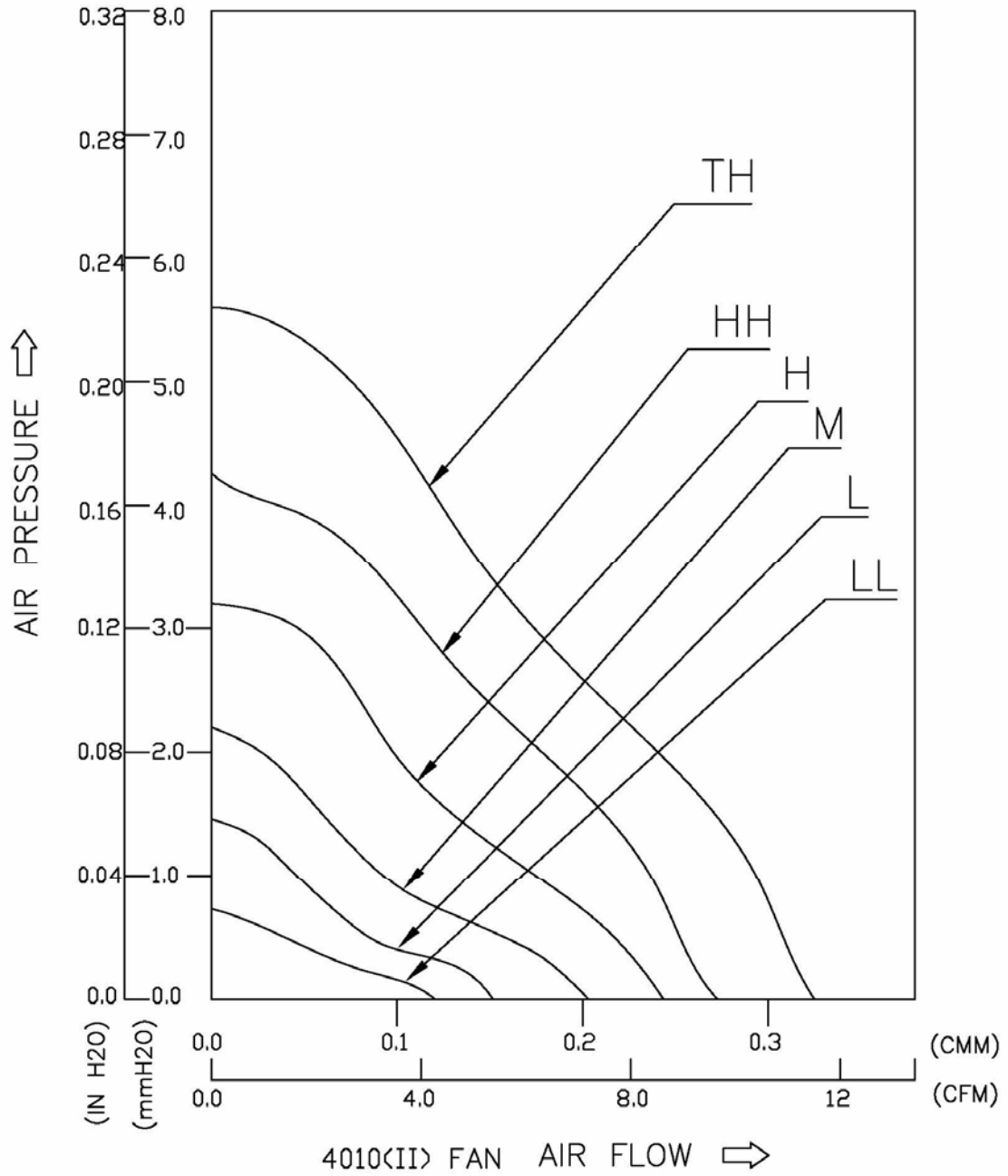
6. Production Location

6-1. Products will be produced in China and Taiwan

7. Dimensional Drawing



8. Performance Curve



9. Sensor Description

A. Tachometer Pulse Sensor

B. 2 Pulses Per Revolution

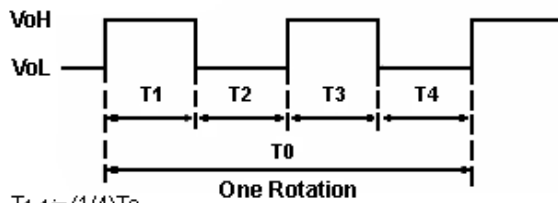
C. Drives Pin Between Nominal 0 and 12V

Pulse Sensor

(2 Pulse per revolution signal)

Pulse sensors are used for detecting the rotational speed of the fan motor

Output Waveform



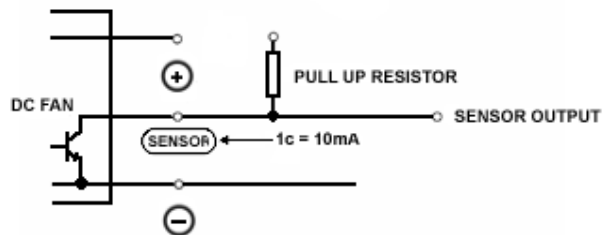
$$T_{1-4} \approx (1/4)T_0$$

$$T_{1-4} \approx (1/4)T_0$$

$$N = \text{Fan Rotational Speed (min}^{-1}\text{)}$$

Output Circuit

Open Collector



If fan locked on VH, signal stays locked. If fan locked on VL, signal stays at VL for a few hundreds MS, then moves to VH.