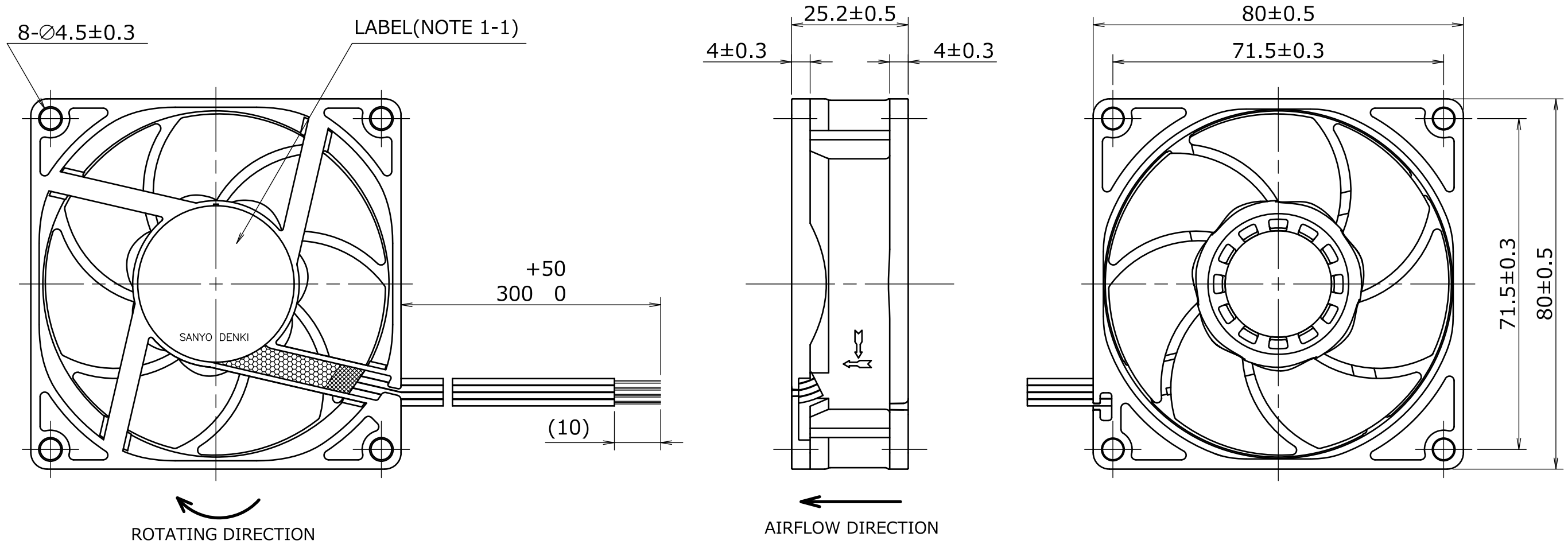


1. DIMENSIONS AND PARTS LIST

<DIMENSIONS>



<LEAD WIRE CONNECTION TABLE>		
FAN		
SIGNAL	LEAD WIRE	COLOR
+	UL1430 AWG26	RED
GND	UL1430 AWG26	BLACK
PWM	UL1430 AWG26	BROWN
SENSOR	UL1430 AWG26	YELLOW

NOTE 1-1. PRINT PRODUCT NAME, MODEL No., MANUFACTURER, AND MANUFACTURED DATE ETC.
品名, 型名, 製造会社名 及び 製造年月日等を表示する。

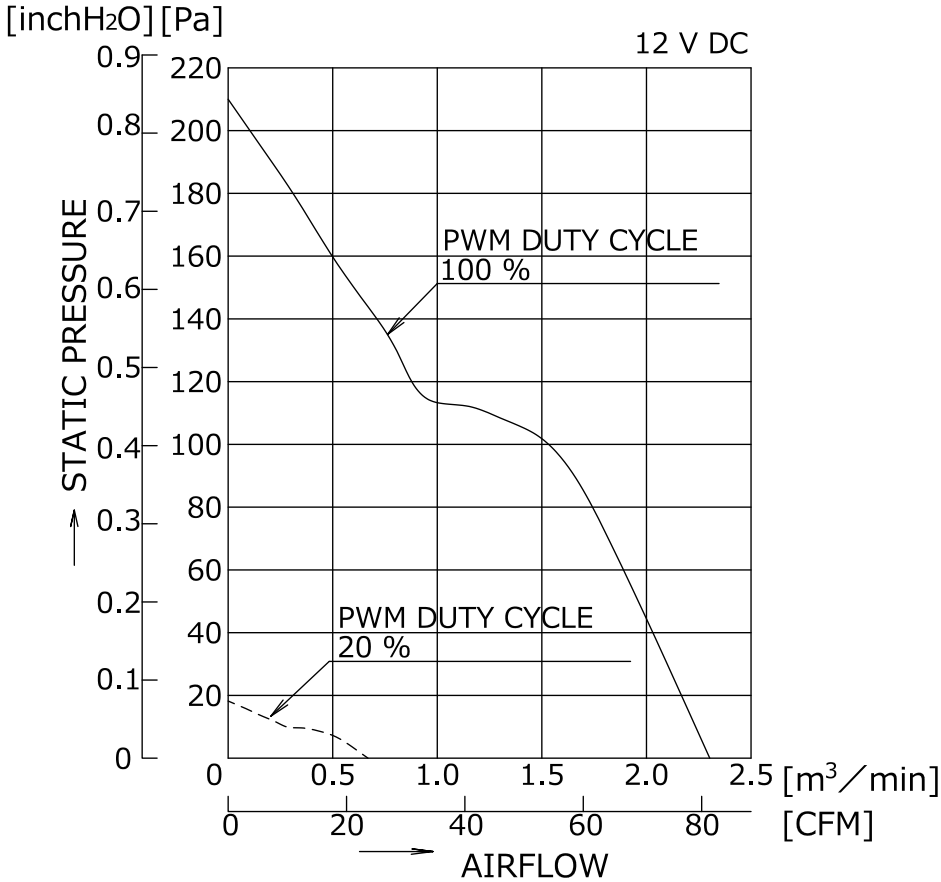
	ECN No.	名称 Title		
	E0204670	San Ace 80W (9WPA)		
単位 Unit	新規 New Design	RIBLESS/PULSE_SENSOR/ PWM_CONTROL		
mm	T.KAISE			
	20-10-27			
尺度 Scale	図面番号 Dwg. No.	9WPA0812P4G2011		
-		Rev. B		
		承認 Approved By	審査 Checked By	設計 Designed By
		T.IKEDA	M.TAKAKUWA	T.KAISE
		20-11-13	20-11-12	20-11-12
		Group	User	Page
		D12K	E0	1/4

2. DESCRIPTION AND AIRFLOW-STATIC PRESSURE CHARACTERISTICS EXAMPLE

<DESCRIPTION>

ITEM	UNIT	DESCRIPTION		
PWM DUTY CYCLE	%	100	20	0
RATED VOLTAGE	V DC	12		
OPERATING VOLTAGE RANGE	V DC	10.8 ~ 13.2		
MAX. AIRFLOW (NOTE 2-2)	m ³ /min (CFM)	2.32 (81.9)	0.67 (23.6)	- -
MAX. STATIC PRESSURE (NOTE 2-2)	Pa (inchH ₂ O)	210 (0.84)	18.2 (0.073)	- -
RATED CURRENT (NOTE 2-2)	A	0.71	0.07	0.04 MAX.
RATED SPEED	min ⁻¹	8250±825	2400±720	NO ROTATION
INSULATION RESISTANCE (NOTE 2-3)	-	10 MΩ MIN. AT 500 V DC		
DIELECTRIC STRENGTH (NOTE 2-3)	-	1 MINUTE AT 500 V AC, 50/60 Hz		
OPERATING TEMPERATURE	℃	-40 ~ 70		
STORAGE TEMPERATURE	℃	-40 ~ 70		
EXPECTED LIFE	-	40,000 h / 60 ℃ (L10, CONTINUOUS OPERATION)		
SOUND PRESSURE LEVEL (NOTE 2-2, 2-4)	dB(A)	54	21	-
MASS	g	APPROX. 130		
MATERIAL	-	FRAME, IMPELLER : PLASTICS		
BEARING SYSTEM	-	2 BALL BEARINGS		
CONTROL TERMINAL	-	SOURCE CURRENT: 1 mA MAX. AT CONTROL VOLTAGE 0 V		
	-	SINK CURRENT : 1 mA MAX. AT CONTROL VOLTAGE 5.25 V		
	-	CONTROL TERMINAL VOLTAGE : 5.25 V MAX. (OPEN CIRCUIT)		
IP CODE	-	IP68 (IEC 60529:2001)		

<AIRFLOW-STATIC PRESSURE CHARACTERISTICS EXAMPLE>



- NOTE 2-1. VALUES FOR EACH CHARACTERISTIC ARE AT ROOM TEMPERATURE AND NORMAL HUMIDITY.
諸特性は常温、常湿での値。
- 2-2. UNSPECIFIED VALUE IS THE NOMINAL VALUE.
指定なき値は標準値。
- 2-3. MEASURED BETWEEN LEAD WIRE CONDUCTORS AND FRAME.
リード線導体部とフレームとの間。
- 2-4. MEASURED AT 1 m FROM THE AIR INLET.
ファン吸込側より1 mにて測定する。
- 2-5. MOTOR IS PROTECTED FROM DAMAGE OF LOCKED ROTOR CONDITION AT THE OPERATING VOLTAGE.
DO NOT LOCK ROTOR OUTSIDE OF OPERATING VOLTAGE.
ファン拘束時焼損の恐れはない。使用電圧範囲外でファンを拘束しないこと。

2-6. ALL ERECTRICAL PARTS IN THIS FAN MOTOR HAVE BEEN COATED WITH A LAYER OF RESIN.
本ファンモータは、活電部に樹脂コーティングを施しています。

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尺度 Scale -	図面番号 Dwg. No.	9WPA0812P4G2011		Rev. B
		承認 Approved By T.IKEDA 20-11-13	審査 Checked By M.TAKAKUWA 20-11-12	設計 Designed By T.KAISE 20-11-12
		Group D12K	User E0	Page 2/4



3. SENSOR SPECIFICATIONS

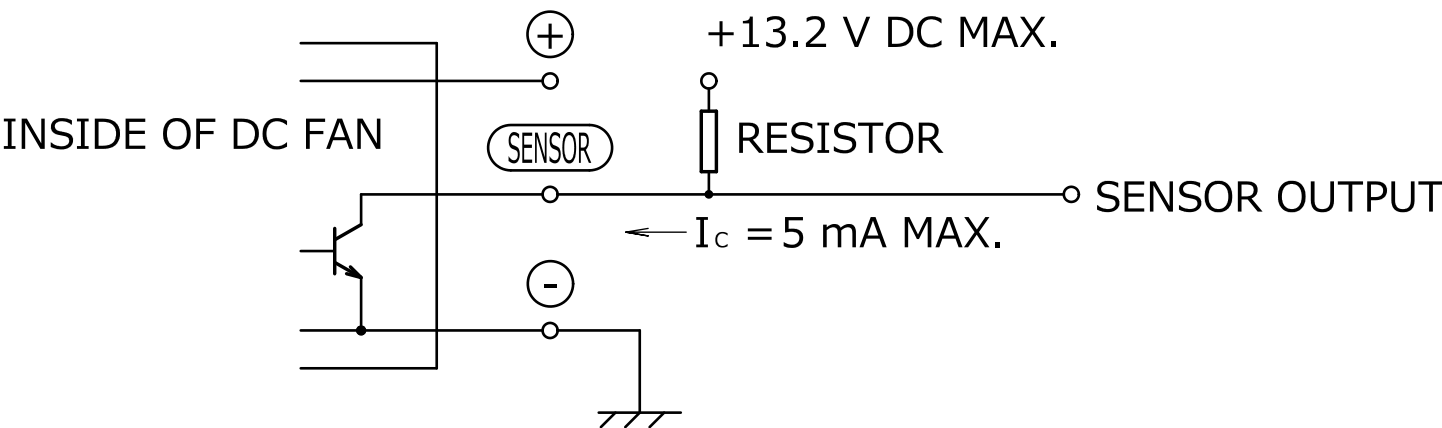
<OUTPUT CIRCUIT>

OPEN COLLECTOR

<SPECIFICATIONS>

$$V_{CE} = +13.2 \text{ V DC MAX.}$$

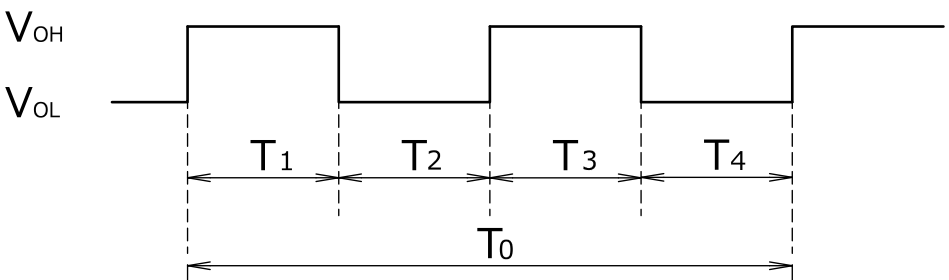
$$I_C = 5 \text{ mA MAX. (} V_{CE} \text{ (SAT)} = 0.8 \text{ V MAX.)}$$



<OUTPUT WAVEFORM>

(a) IN CASE OF STEADY RUNNING

ONE REVOLUTION



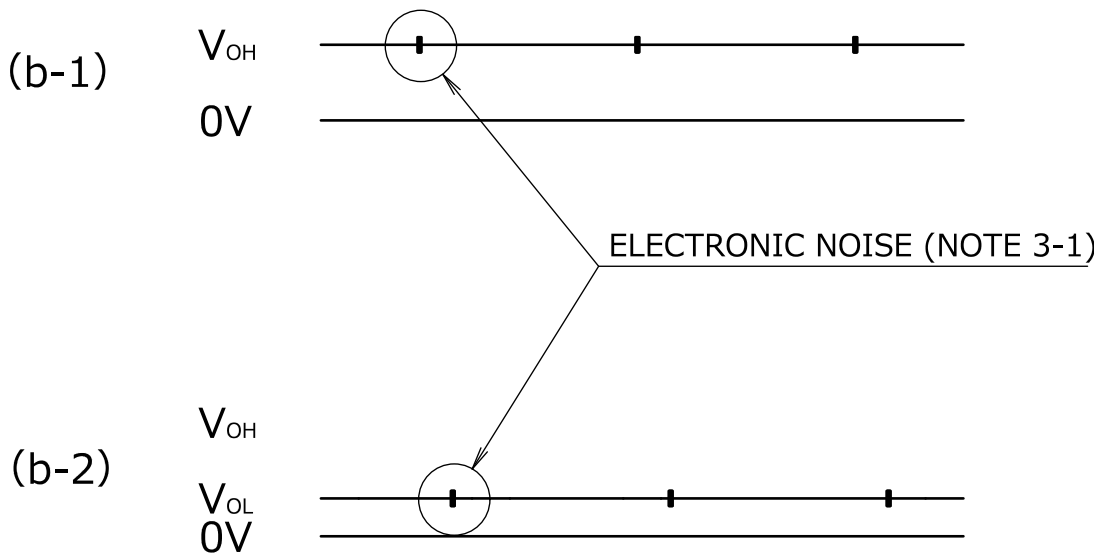
$$T_{1 \text{ to } 4} \cong (1/4) T_0$$

$$T_{1 \text{ to } 4} \cong (1/4) T_0 = 60/4 \text{ N (s)}$$

$$N = \text{FAN SPEED (min}^{-1}\text{)}$$

(b) IN CASE OF STEADY LOCKED ROTOR

SENSOR OUTPUT IS FIXED EITHER (b-1) OR (b-2) .
センサー出力は(b-1)あるいは(b-2)のどちらかに固定される。

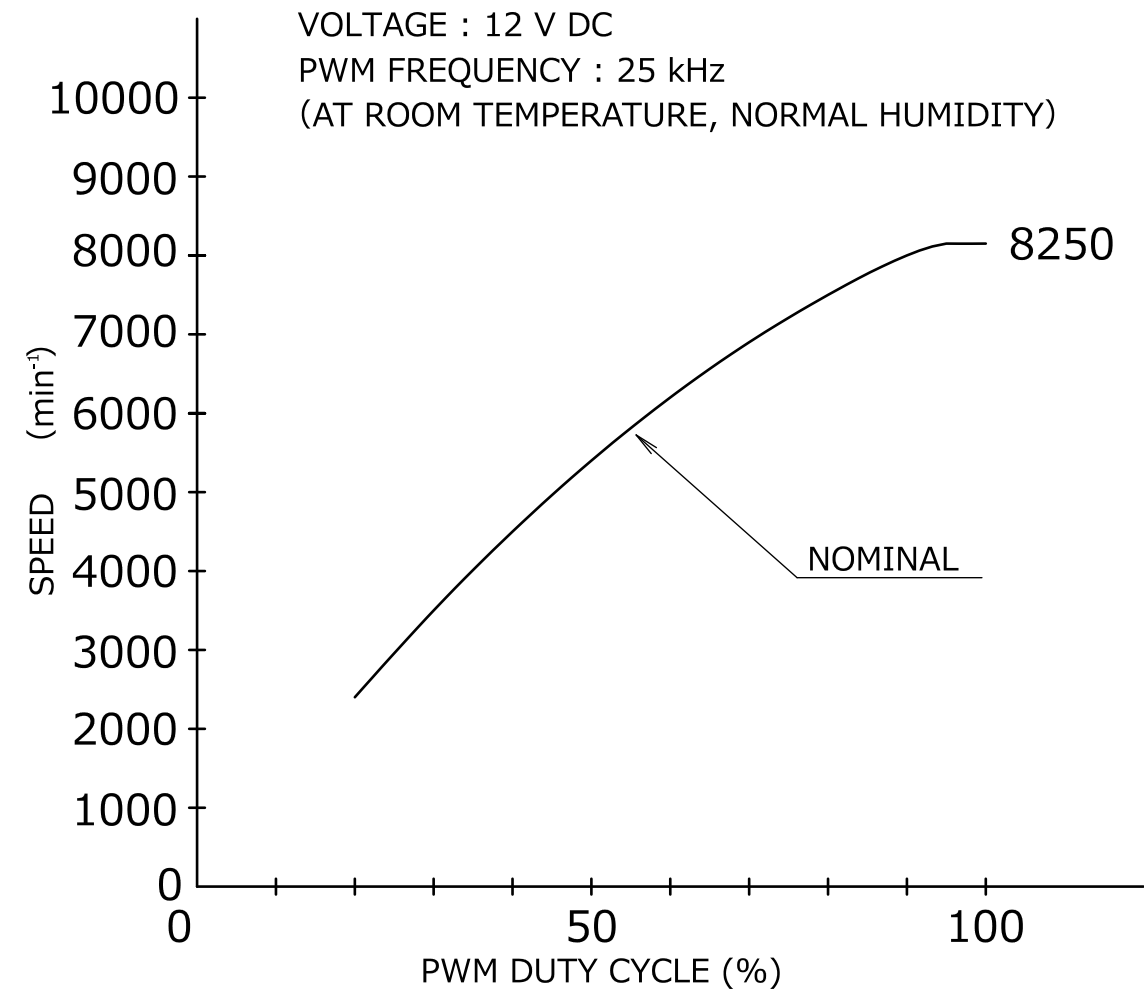


NOTE: 3-1. THE ELECTRONIC NOISE DUE TO AUTO-RESTART
BEHAVIOR OF THE MOTOR MAY INFLUENCE V_{OH} OR V_{OL} .
モータの再起動動作にともない、 V_{OH} あるいは V_{OL} にノイズが載ることがある。

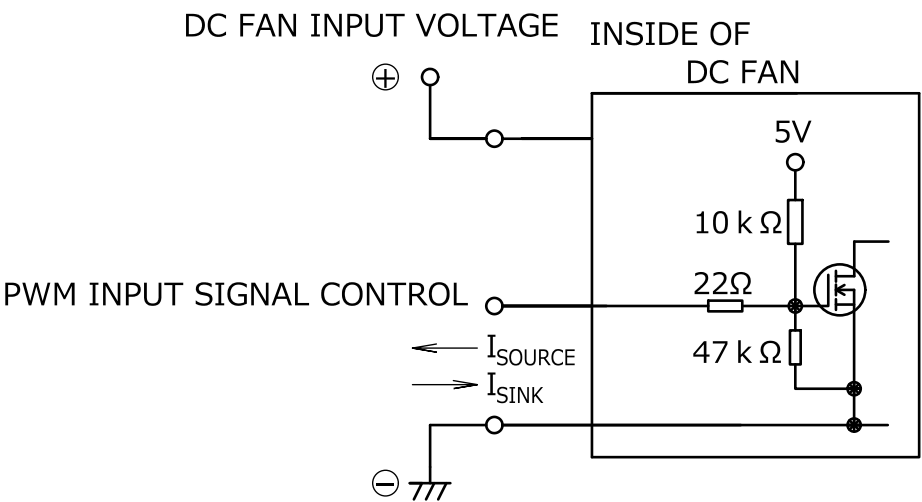
	ECN No.	名称 Title		
	E0204670	San Ace 80W (9WPA)		
単位 Unit	新規 New Design	RIBLESS/PULSE_SENSOR/ PWM_CONTROL		
mm	T.KAISE 20-10-27			
尺度 Scale	図面番号 Dwg. No.	9WPA0812P4G2011		Rev.
-		B		
SANYO DENKI		承認 Approved By	審査 Checked By	設計 Designed By
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4. PWM DUTY-SPEED CHARACTERISTICS EXAMPLE

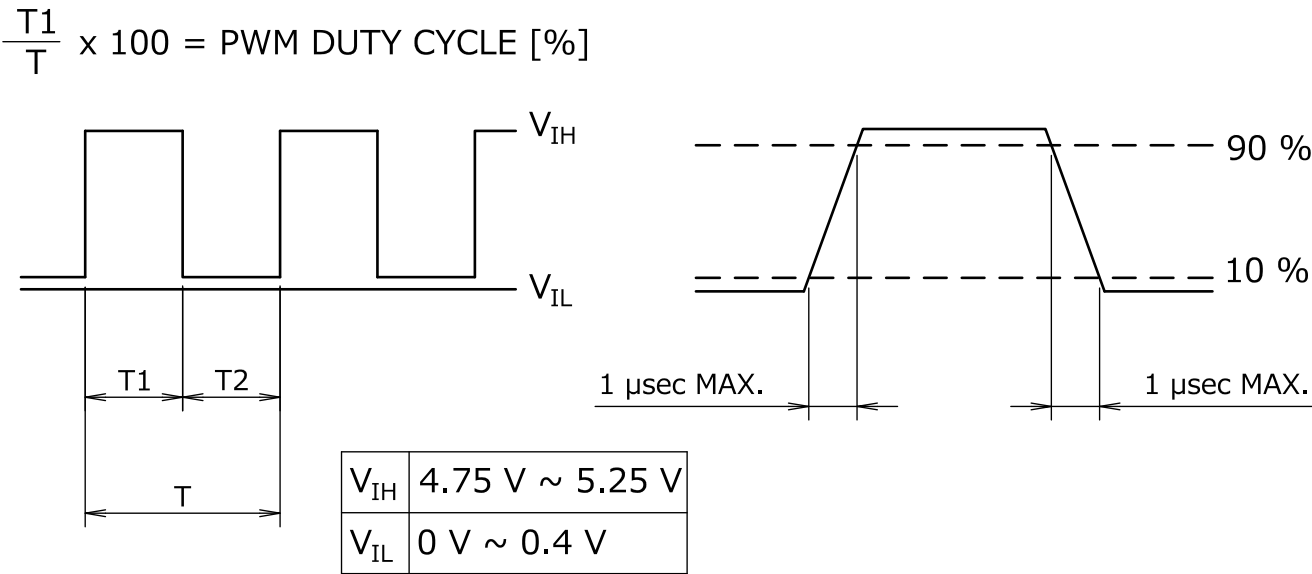
<PWM DUTY-SPEED CHARACTERISTICS EXAMPLE>



<EXAMPLE OF CONNECTION SCHEMATIC>



<PWM INPUT SIGNAL EXAMPLE>



- NOTE 4-1. PWM CONTROL SWITCHING MAY AFFECT THE SENSOR OUTPUT.
PWM制御によるスイッチングがセンサ出力に影響する場合がある。
- 4-2. REFER TO PAGE 2 FOR THE SPEED WITH PWM DUTY CYCLE OF 0, 20, 100 %.
PWMデューティサイクルが 0, 20, 100 %の時、回転速度は2頁を参照のこと。
- 4-3. WHEN THE CONTROL TERMINAL IS OPEN,
FAN SPEED IS THE SAME AS WHEN PWM DUTY CYCLE IS 100 %.
PWM入力端子がオープン状態の時、回転速度はPWMデューティサイクル100 %と同じであること。
- 4-4. EITHER TTL INPUT, OPEN COLLECTOR OR OPEN DRAIN CAN BE USED
FOR PWM CONTROL INPUT SIGNAL.
AND IN CASE OF OPEN COLLECTOR, DRAIN INPUT,
THE PWM DUTY CYCLE SHOULD BE $(T-T2) \times 100 / T$.
PWM入力信号はTTL入力又は、オープンコレクタ、ドレイン入力にて使用可能であること。
但し、オープンコレクタ、ドレイン入力の場合、PWMデューティ = $(T-T2) \times 100 / T$ のこと。

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	単位 Unit mm	新規 New Design T.KAISE 20-10-27	
尺度 Scale -	図面番号 Dwg. No.	9WPA0812P4G2011	
SANYO DENKI		承認 Approved By T.IKEDA 20-11-13	設計 Designed By T.KAISE 20-11-12
SANYO DENKI CO.,LTD. ISSUED		審査 Checked By M.TAKAKUWA 20-11-12	設計 Designed By T.KAISE 20-11-12
Group		D12K	User E0
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