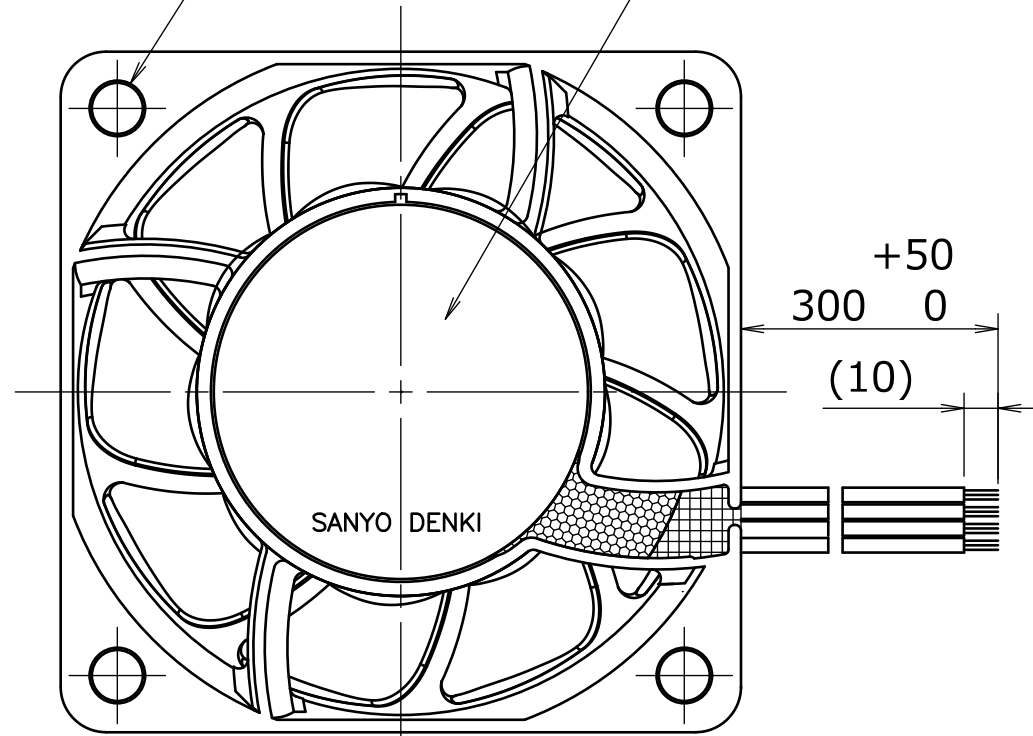


1. DIMENSIONS AND PARTS LIST

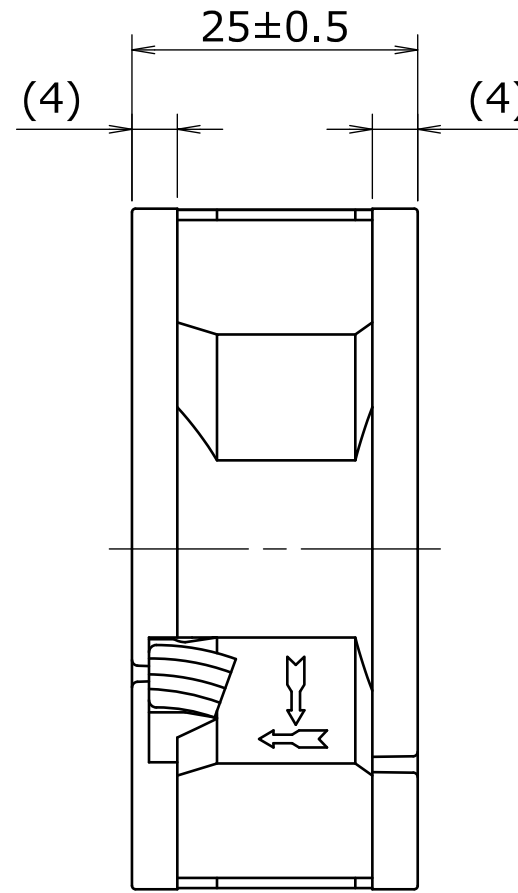
<DIMENSIONS>

4- $\varnothing 4.5 \pm 0.3$

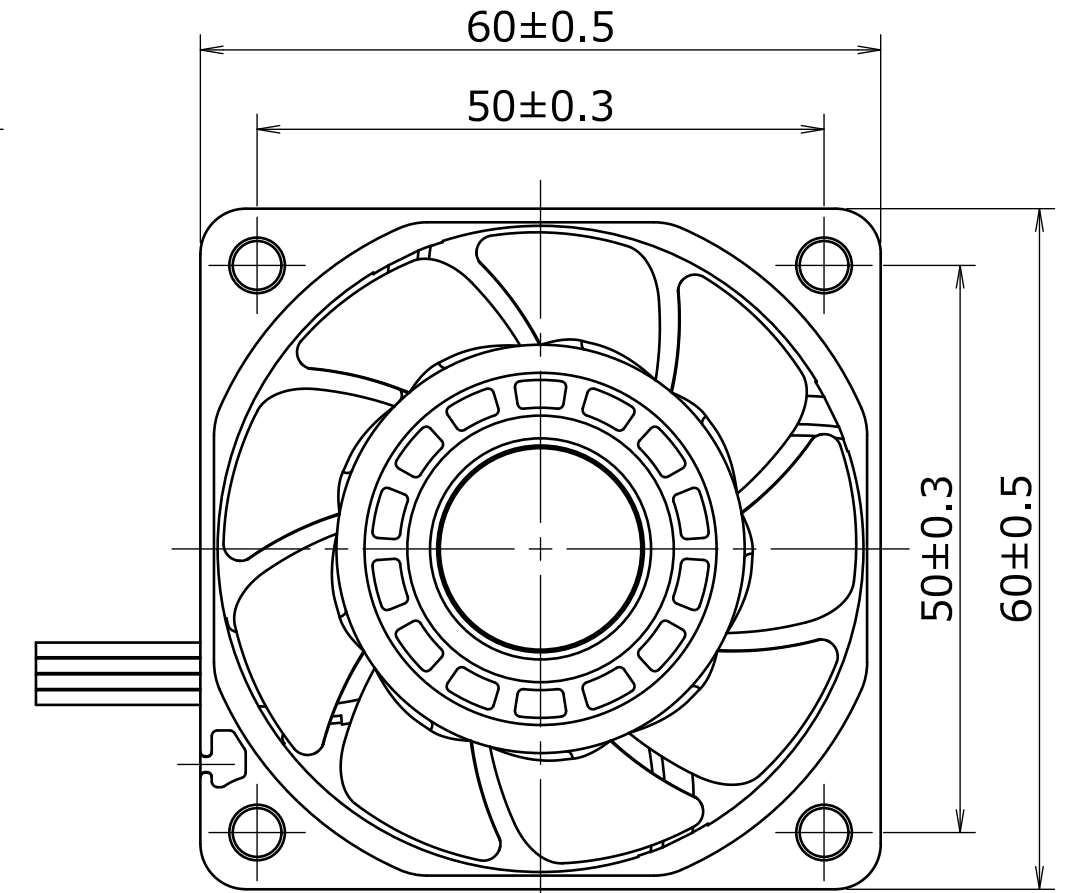
LABEL(NOTE 1-1)



ROTATING DIRECTION



AIRFLOW DIRECTION



- NOTE 1-1. THE PRODUCT NAME, MODEL NO., MANUFACTURER, MANUFACTURE DATE, ETC. ARE PRINTED ON LABEL.
 銘板上に品名、型名、製造会社及び製造年月日等を表示する。
 1-2. THE ELECTRICAL LIVE PARTS OF THIS FAN ARE COATED WITH 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る。

<LEAD WIRE CONNECTION TABLE>

FAN		
SIGNAL	LEAD WIRE	COLOR
+	UL1430 AWG26	RED
GND	UL1430 AWG26	BLACK
PWM	UL1430 AWG26	BROWN
SENSOR	UL1430 AWG26	YELLOW

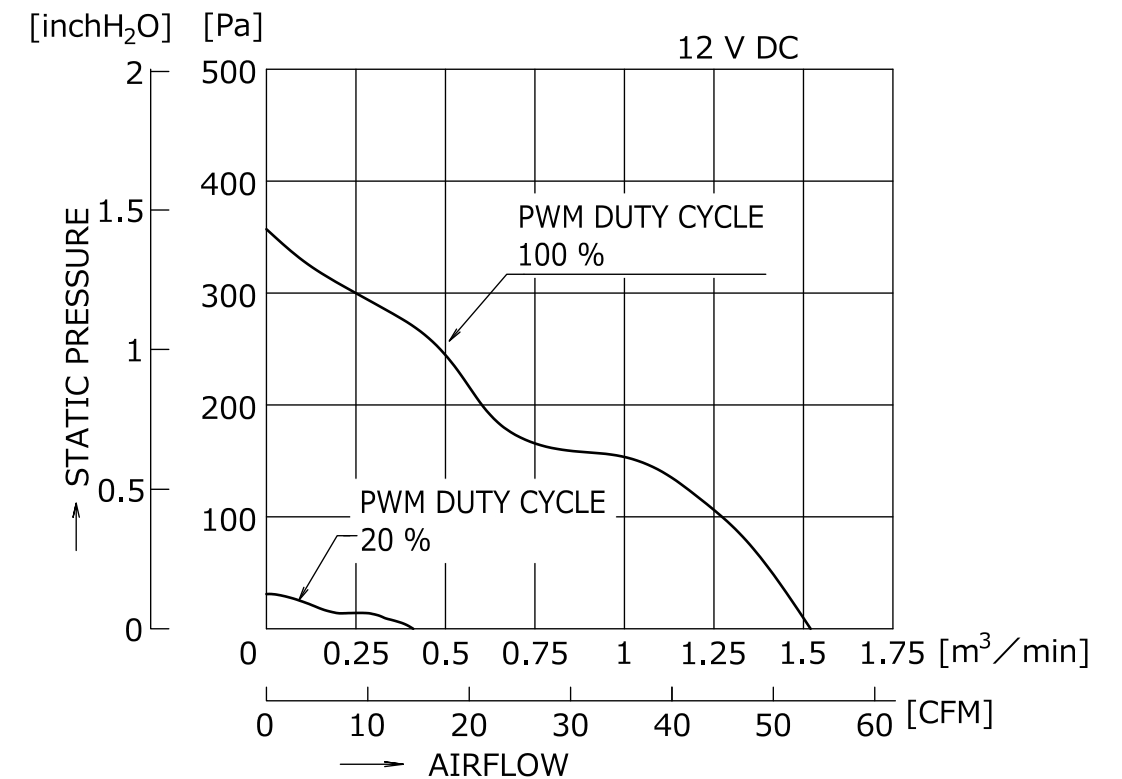
	ECN No. E0206024	名称 Title San Ace 60W (9WPA)	
	単位 Unit mm	新規 New Design S.MITOMO 20-10-28	RIBBED/PULSE_SENSOR/PWM_CONTROL
尺度 Scale -	図面番号 Dwg. No.	9WPA0612P4G201	
		承認 Approved By T.IKEDA 21-03-15	設計 Designed By Y.OKUDA 21-02-19
		審査 Checked By H.OHSAWA 21-03-09	Rev. B
Group D12K		User E0	Page 1/4

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)	1.52 (53.7)	0.43 (15.1)	-
MAX. STATIC PRESSURE (NOTE 2-2)	Pa (inchH ₂ O)	357 (1.43)	30 (0.12)	-
RATED CURRENT (NOTE 2-2)	A	0.93	0.09	0.04 MAX.
RATED SPEED	min ⁻¹	12000±1200	3500±1050	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	°C	-40 ~ +70		
STORAGE TEMPERATURE	°C	-40 ~ +70		
EXPECTED LIFE	-	40,000 h / 60 °C (L10, CONTINUOUS OPERATION)		
SOUND PRESSURE LEVEL (NOTE 2-2, 2-4)	dB(A)	56	22	-
MASS	g	APPROX. 110		
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。

	ECN No.	E0206024	名称 Title	
	単位 Unit	新規 New Design	San Ace 60W (9WPA)	
	mm	S.MITOMO	RIBBED/PULSE_SENSOR/PWM_CONTROL	
	尺度 Scale	図面番号 Dwg. No.	Rev.	
			9WPA0612P4G201 B	
SANYO DENKI	承認 Approved By	T.IKEDA	審査 Checked By	H.OHSAWA
		21-03-15		21-03-09
	設計 Designed By	Y.OKUDA		
		21-02-19		
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3. SENSOR SPECIFICATIONS

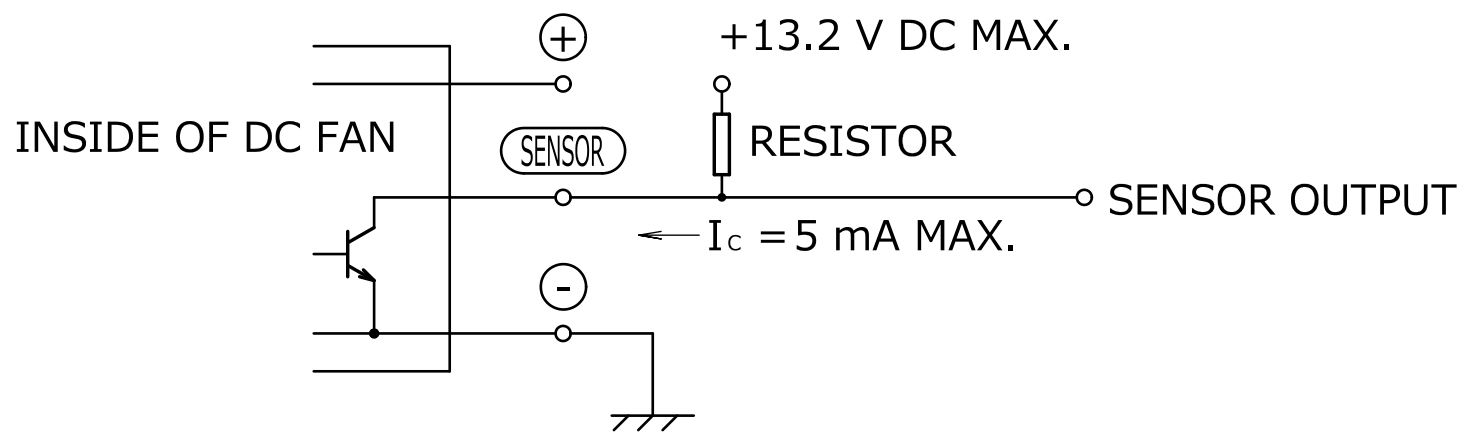
<OUTPUT CIRCUIT>

OPEN COLLECTOR

<SPECIFICATIONS>

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

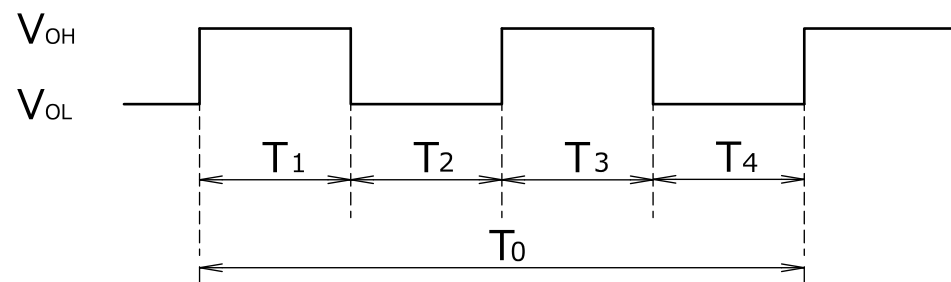
$I_C = 5 \text{ mA MAX. (} V_{CE} \text{ (SAT)} = 0.8 \text{ V MAX.)}$



<OUTPUT WAVEFORM>

(a) IN CASE OF STEADY RUNNING

ONE REVOLUTION



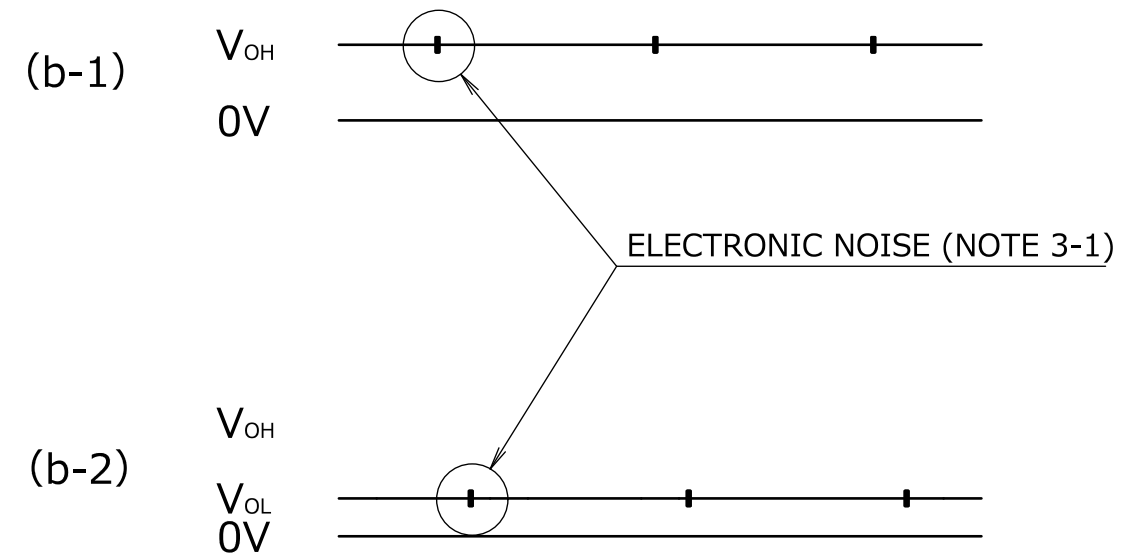
$$T_{1 \text{ to } 4} \cong (1/4) T_0$$

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

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

(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	
	E0206024	San Ace 60W (9WPA) RIBBED/PULSE_SENSOR/PWM_CONTROL	
単位 Unit	新規 New Design	設計 Designed By	
mm	S.MITOMO 20-10-28	T.IKEDA 21-03-15	Y.OKUDA 21-02-19
尺度 Scale	図面番号 Dwg. No.	承認 Approved By	
-		T.IKEDA 21-03-15	
		審査 Checked By	設計 Designed By
		H.OHSAWA 21-03-09	Y.OKUDA 21-02-19
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