

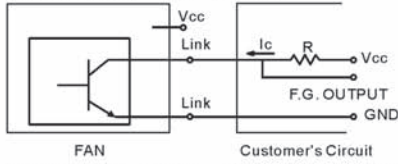


## Function

### Frequency Generator

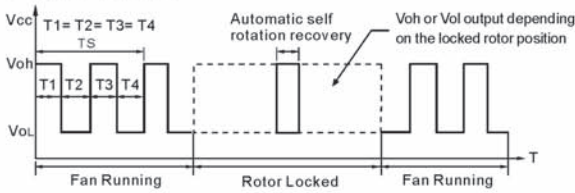
Generates a square wave out frequency equal to 2 periods per revolution for 4 poles fan and informs the user of the fan's running speed.

#### Application 1 - Open Collector



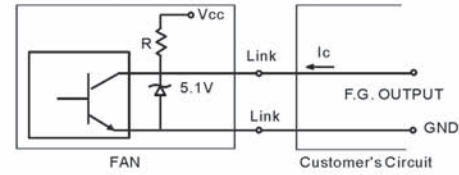
$V_{cc}$ =From + 5 To +28 VDC Do not exceed fan supply voltage  
 $I_c$ =5 mA max.  
 $R=V/I$  (Output "R" value calculation)

#### Output Waveform



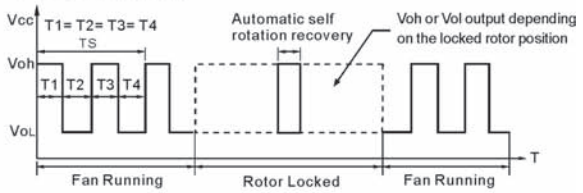
- ◆  $N=R.P.M$
- ◆  $T_s=60/N$  (Sec)
- ◆ Output Level  
 $V_{oh}=V_{cc} \pm 10\%$   
 $V_{ol}=0 \sim 0.6V$   
 $I_c=5$  mA max.

#### Application 2 - TTL Compatible



$I_c=5$  mA max.

#### Output Waveform

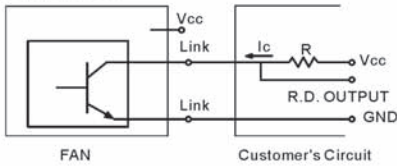


- ◆  $N=R.P.M$
- ◆  $T_s=60/N$  (Sec)
- ◆ Output Level  
 $V_{oh}=5.0V \pm 0.5V$   
 $V_{ol}=0 \sim 0.6V$   
 $I_c=5$  mA max.

### Rotation detector

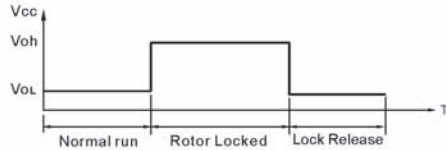
Detects whether the fan is running or has stopped by generation a high or low output signal.

#### Application 1



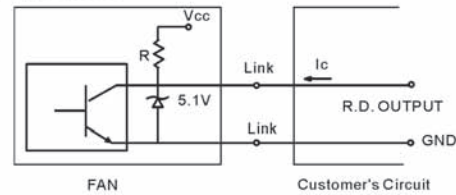
$V_{cc}$ =From + 5 To +28 VDC (Generally using + 12 or + 24VDC)  
 $I_c=2$  mA max.  
 $R=V/I$  (Output "R" value calculation)

#### Output Waveform



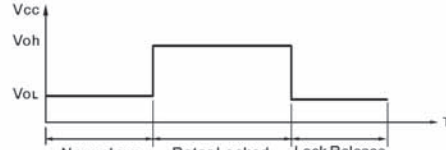
- ◆ Output Level  
 $V_{oh}=V_{cc} \pm 10\%$   
 $V_{ol}=0 \sim 0.6V$   
 $I_{cc}=5$  mA max.

#### Application 2



$V_{cc}$ = From + 5 To +28 VDC ( Generally using + 12 or + 24VDC)  
 $I_c=5$  mA max.  
 $R$  ( type ) = 10K

#### Output Waveform

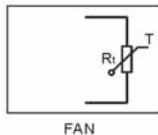


- ◆ Output Level  
 $V_{oh}=5.0V \pm 0.5V$   
 $V_{ol}=0 \sim 0.6V$   
 $I_{cc}=5$  mA max.

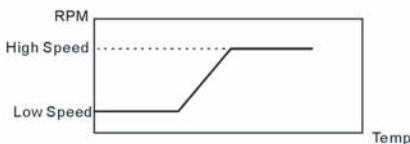
### Temperature Control

Controls the fan speed via an thermistor which changes with the temperature of the task area where the thermistor is located.

#### Application



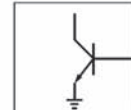
#### RPM Temperature curve



### Pulse width modulation

Controls the fan speed automatically via an external input Pulse Width Modulation signal.

#### Application



- ◆ Input impedance 10K  $\Omega$   
 PWM Operating frequency is 25  $\pm$  5KHz  
 $V_{IHMIN}=3.3VDC$   
 $V_{ILMAX}=0.4VDC$

#### RPM & Duty Cycle Curve

