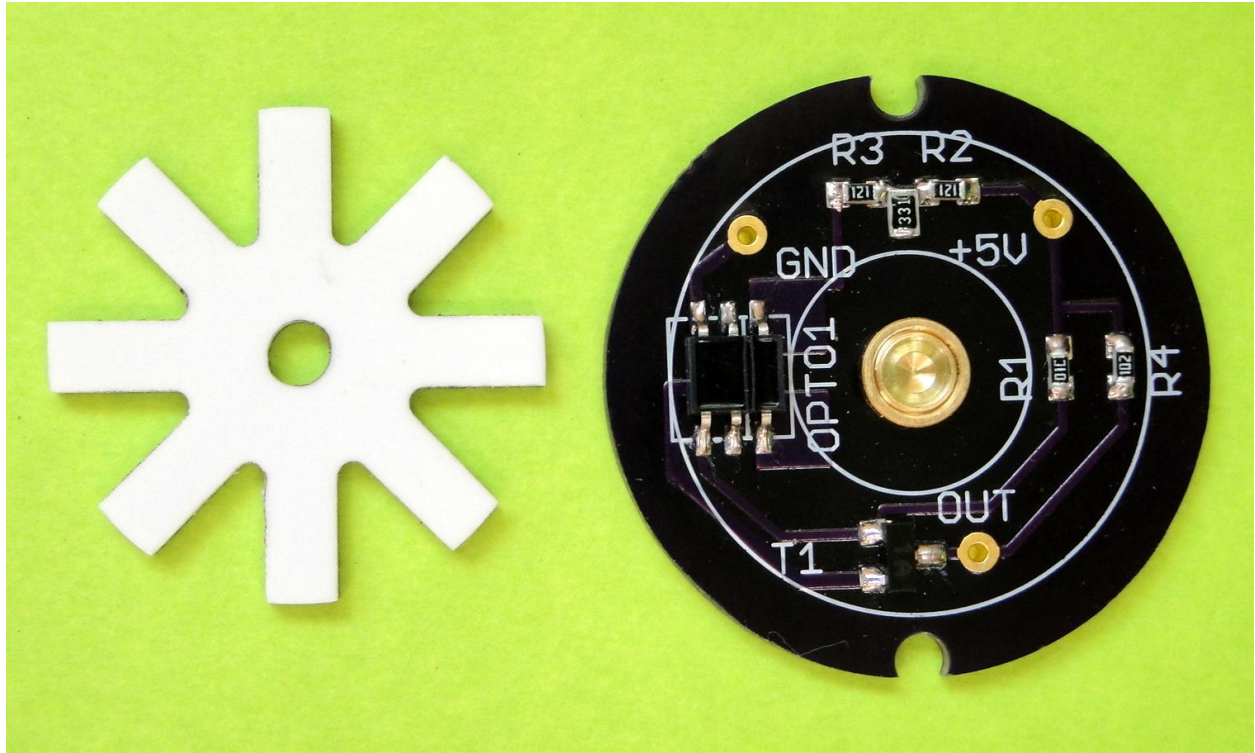


High Resolution Wind Speed Encoder



Description

Based on a reflective optical interrupt device the sensor provides an eight fold increase in resolution for wind speed measurements compared to a basic reed switch device. This allows for a reduced measure interval, thus enabling the capture of short period wind gusts and airspeeds down to 0.5 Mph. The sensor asserts no drag on the anemometer cups, which, coupled with the sapphire bearing, makes for a virtually drag-free setup.

Applications

- High definition/resolution wind speed monitoring & recording
- Capturing of micro gusts
- Capturing of very low wind-speeds
- DIY and custom weather stations

Features

- Solid state
- Drag free
- Eight times the resolution compared to standard sensors
- Interfaces direct to microcontroller inputs
- No false readings due to reed switch bounce or magnetic fatigue
- Built in Hysteresis

Electrical specifications

- Input voltage nominal 5V, maximum 5.5V
- Do not short output to ground
- Do not short output to +5V
- Required measure input impedance > 1K
- Current consumption 20 mA @5V

Name	Symbol on PCB	Description	Condition
Ground	GND	Ground reference	--
Power	+5V	Regulated power input	5V +/- 5% , less than 50mv noise
Output Signal	OUT	8 pulses per revolution	Low <0.1V, High <3.3>3V

Mechanical specifications

- PCB dimension: Round, 1" diameter
- Sensor to rotor distance 1.5mm +/- 10%

