

Measuring Motor Speed Using a Slotted Optical Coupler Module



Overview

In this project, I will talk about Phototransistor Optical Interrupter Switches (Opto Coupler) Module, how this module works and helps in determining the speed of a rotating object and finally I will show you how to Interface Optical Interrupter Switch Sensor. In this project, I will talk about Phototransistor Optical Interrupter Switches (Opto Coupler) Module, how this module works and helps in determining the speed of a rotating object and finally I will show you how to Interface Optical Interrupter Switch Sensor. This tutorial is a comprehensive, practical guide to the Speed Sensor / Tacho Sensor (Slot-Type Optocoupler) (Leobot Product #245). It explains how slot-type optocouplers work, how this module converts mechanical motion into clean digital pulses, how to calculate speed and RPM correctly, and how to. An optocoupler sensor is a gadget that uses “electricity-light-electricity” conversion to keep the input and output circuits electrically isolated. It's made up of a light-emitting diode (the input side) and a photosensitive part (like a phototransistor or IC, the output side). Before we can control the speed however, we need to be able to measure it. You'll also learn multiple techniques for Motor Speed (RPM) Measurement With Arduino & motor encoder (optical encoder).



Article Content

Dec 10, 2025

LM393 Motor Speed Sensor Module Guide

This document summarizes an LM393 motor speed measuring sensor module. It detects motor speed through an optical sensor that outputs pulses to a pin when

Dec 24, 2025

Oiyagai 5pcs LM393 Chip Motor Measuring Comparator

Buy Oiyagai 5pcs LM393 Chip Motor Measuring Comparator Speed Sensor Module Slot Type IR Optocoupler for MCU Arduino: Comparators - Amazon FREE

Mar 09, 2026

Arduino: Using Photo Interrupter (Slotted Optocoupler)

Story Slotted Optocouplers (Photo Interrupters) are very useful sensors, often included in Arduino projects to detect position of moving objects, measure speed

Aug 27, 2025

LM393 Motor Speed Measuring Sensor Module For Arduino COM41

Designed with slotted optical switch sensor, indicator light. Working with official MCU board. Widely used in motor speed detection, pulse counter, etc .

Dec 21, 2025

How to Interface LM393 Speed Sensor with Arduino?

The main aim of this project is to measure the rotational speed of a motor using an Arduino. In order to measure the speed of a rotating device like a

Jun 19, 2026

Speed Sensor LM393 Optocoupler – OKY3276-1 –

IR Optocoupler Motor Speed Sensor Module LM393 For Arduino Product Description
1.The use of imported groove coupler sensor. 2.The slot width 5mm. 3.The output

Nov 19, 2025

STUDY OF SPEED MEASUREMENT TRAINER (USING PHOTO

This trainer kit consists of : Photo Electric pick – up (Opto Coupler) fitted on a P.C.B. near to the slotted disc attached to the Motor.

Aug 28, 2025

LM393 Speed sensor with Arduino using L9110 motor

In this tutorial, we are going to use LM393 IR speed sensor to count the pulses or in simple words the revolutions of the DC motor using L9110 motor

Jan 05, 2026

Measure motor speed (RPM) with Optocoupler and

Measure rotation speed (RPM) with Optocoupler and Encoder disk and Arduino - Quick and Easy!. Find this and other hardware projects on Hackster.io.

Apr 19, 2026

LM393 Test Motor Speed Counter Sensor Groove

Widely used in motor speed detection, pulse count, the position limit, etc.
Specification: Operating Voltage: 3.3~5V DC Comparator: LM393 Material:

Dec 21, 2025

Arduino RPM Sensor (RPM Meter/Counter With

This tutorial explains how to interface Arduino with a motor optical encoder for motor speed measurement applications. And it gives you some code example projects

Jun 13, 2026

Speed Test Module — Motor Speed Measurement

This article introduces common motor speed test modules (slotted optocoupler, through-beam photoelectric) that generate pulses by code disc light

Jun 24, 2026

Speed Measuring Sensor Counter Motor Test Groove

This is Speed Measuring Sensor Groove Coupler Module For Arduino. The DO output interface can be directly connected to a micro-controller IO port if there is a

Jun 05, 2026

Buy Lm393 Motor Speed Measuring Sensor Module

Buy LM393 Test Motor Speed Counter Sensor Groove Coupler Encoder Module Good signal and waveform, with a strong driving ability for more

Apr 23, 2026

flashtree 10pcs Speed Measuring Sensor IR Infrared

Speed Measuring Sensor IR Infrared Slotted Optical Optocoupler Module Photo Interrupter Sensor for Motor Speed Detection IT can be used for slot-type

Apr 17, 2026

Arduino IR Infrared Slotted Optical Speed Measuring

& nbsp;This IR Infrared Slotted Optical Speed Measuring Sensor is composed of an infrared light emitting diode and an NPN phototransistor with a groove width of

Oct 21, 2025

Slot-Type Optocoupler Speed Sensor Tutorial: RPM

It explains how slot-type optocouplers work, how this module converts mechanical motion into clean digital pulses, how to calculate speed and RPM correctly, and

Apr 15, 2026

Fielect Speed Sensor Module LM393 Motor Measuring

Product description Widely used in motor speed detection, pulse counter, etc. Designed with slotted optical switch sensor and indicator light. Indicator lights on

Oct 18, 2025

Slot-Type Optocoupler Speed Sensor Tutorial: RPM

This tutorial is a comprehensive, practical guide to the Speed Sensor / Tacho Sensor (Slot-Type Optocoupler) (Leobot Product #245). It explains how slot-type

Jan 12, 2026

Use LM393 IR Module as Motor Speed Sensor

Unlike stepper and servo motors, precision control for DC motors is impossible unless a sort of feedback mechanism is employed. If your application

Oct 30, 2025

Interfacing Speed Measuring Sensor Module with Arduino

Learn how to connect and program a Speed Measuring Sensor Module with Arduino. This guide includes wiring diagrams, code examples, and practical applications.

Aug 28, 2025

Measuring Speed with an Optical Slot Speed Sensor

A common prerequisite for many projects, from robotics applications to do-it-yourself tachometers, is speed measurement. This blog post will explain how to measure

Oct 24, 2025

Slot Type IR Optocoupler Speed Sensor Module (LM393

This speed sensor has an optical sensor that allows you to measure revolution per minute (RPM). It requires an encoder disc to count the number of times the

Dec 22, 2025

How to Interface LM393 Speed Sensor with Arduino?

Irrespective of the type of implementation, all speed sensor serves the same purpose: help us determining the rotational speed of a rotating object. A

Feb 17, 2026

Lm393 Motor Speed Measuring Sensor Module For Arduino

Widely used in motor speed detection, pulse count, the position limit, etc. The DO output interface can be directly connected to a micro-controller IO port, if there is a block detection sensor, such as the

Oct 02, 2025

Lm393 Motor Speed Measuring Sensor Module For Arduino

Lm393 Motor Speed Measuring Sensor Module For Arduino Widely used in motor speed detection, pulse count, the position limit, etc. The DO output interface can be directly connected to a micro

Contact Us

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