Hall Sensor User Manual

1. Features

Sensor	49E Hall sensor
Voltage comparator chip	LM393
Operating voltage	2.3V-5.3V
Dimensions	29.2mm*11.2mm
Fixing hole size	2.0mm

Operating principle:

49E Hall sensor is a small-sized universal linear Hall sensor. And the output signal level of 49E is proportional to the magnetic field intensity applied to its sensitive head. For a zero magnetic field, the output voltage of 49E is a half of the supply voltage.

2. Applications

This module can be applied to motor speed measurement, objective position detection, smart car, electronic building blocks, etc.

3. Interfaces

Pin No.	Symbol	Descriptions
1	DOUT	Digital output
2	AOUT	Analog output
3	GND	Power ground
4	VCC	Positive power supply (2.3V-5.3V)

4. How to use

① Download the relative codes to the development board.

② Connect the development board to a PC via a serial wire and the module to the development board. Then, power up the development board and start the serial debugging software. Here is the configuration of the connection between the module and the development board.

Port	STM32 MUC pin
DOUT	GPIOA.4
AOUT	GPIOA.6
GND	GND
VCC	3.3V

Port	Arduino pin
DOUT	D2
AOUT	A0
GND	GND
VCC	5V

Here is the configuration of the serial port

Baud rate	115200
Data bits	8
Stop bit	1
Parity bit	None

③ The detected result can be checked by a signal indicator on the module. The signal indicator will turn on, when the sensor is close to a magnet. And it will turn off, when the sensor is away from the magnet.
Also, you can find that the serial output changes along with the distance from the sensor to the magnet.