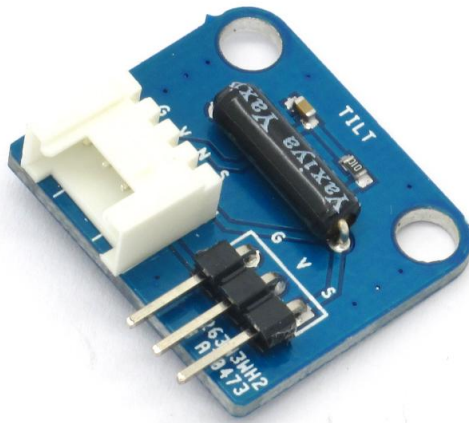**ITEAD STUDIO**

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Electronic Brick of Tilt Switch

Overview

What is an electronic brick? An electronic brick is an electronic module which can be assembled like Lego bricks simply by plugging in and pulling out. Compared to traditional universal boards and circuit modules assembled with various electronic components, electronic brick has standardized interfaces, plug and play, simplifying construction of prototype circuit on one's own. There are many types of electronic bricks, and we provide more than twenty types with different functions including buttons, sensors, Bluetooth modules, etc, whose functions cover from sensor to motor drive, from Ethernet to wireless communication via Bluetooth, and so on. We will continue to add more types to meet the various needs of different projects.

Electronic brick of tilt switch can be connected to analog I/O port and used in tilt sensor for smart car or robot. When the sensor is in the horizontal position, the output is high level; when the sensor rotates counterclockwise to form an angle of more than 15 ° with the horizontal line, the output is low level.

Features

1. Plug and play, easy to use. Compatible with the mainstream 2.54 interfaces and 4-Pin Grove interfaces in the market.
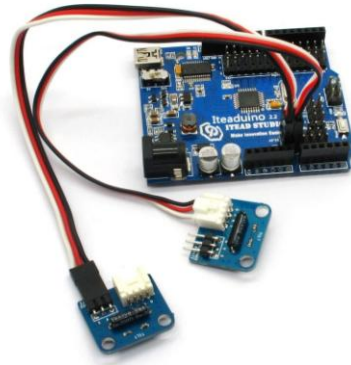
2. With use of M4 standard fixed holes, compatible with M4-standard kits such as Lego and Makeblock.
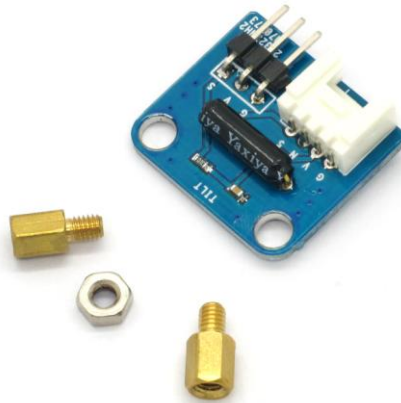
Specifications

PCB size	24.0mm X 21.0mm X 1.6mm
Working voltage	3.3 or 5V DC
Operating voltage	3.3 or 5V DC
Compatible interfaces	2.54 3-pin interface and 4-pin Grove interface[1]

Note 1 :   S for digital output port, V and G for voltage at the common collector and ground respectively

Electrical characteristics

Parameter	Min.	Typical	Max.	Unit
Working voltage	3	5	5.5	VDC
Digital output voltage (VCC=5V)	0	-	5	V
Working current (VCC=5V)	-	450	-	uA

DEMO

Connect S port of electronic brick of tilt switch to D2 port of Arduino board, and we will use the following program to read its digital value. When the digital value read is high level, LED lamp will be ON; when the digital value read is low level, LED lamp will be OFF.

```
int tilt=2;        //connect tilt to D2
int LED=13;
void setup()
{
   pinMode(LED, OUTPUT);
   pinMode(tilt, INPUT);
}

void loop()
{
if(digitalRead(tilt)==HIGH)    //when the digital output value of tilt is high, turn on the LED.
   {
      digitalWrite(LED, HIGH);
   }
if(digitalRead(tilt)==LOW)     //when the digital output value of tilt is low, turn off the LED.
   {
      digitalWrite(LED, LOW);
   }
}
```

Revision record

Version	Description	Date	Written by
v1.0	Initial edition	17th, April, 2013	Stan Lee