Liquid Level Sensor User Manual

1. Features

Operating voltage	2.0V-5.0V
Output type	Analog output
Detectable depth	48mm
Dimensions	19.0mm*63.0mm
Fixing hole size	2.0mm

Operating principle:

This module is an application of the current amplification by a transistor. When the liquid level is high enough to conduct the current between the base and the positive power supply, a certain amount of current is generated between the base and the emitter. And in a mean while, an electric current is produced in a certain amplification factor between the collector and the emitter, and applied to the resistant in the emitter to produce a voltage. Then, this voltage will be collected by an AD converter.

2. Applications

This module can be applied to liquid level alarm system.

3. Interfaces

Pin No.	Symbol	Descriptions
1	AOUT	Analog output
2	GND	Power ground
3	VCC	Positive power supply (3.3V-5.0V)

4. How to use

We will illustrate the usage of the module with an example of liquid level detection by connecting a development board.

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
AOUT	GPIOA.6
GND	GND
VCC	3.3V

Port	Arduino pin
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 Put the module into the water, and the serial output is as followed:

Output on high level	Output on low level
High water level!	High water level!

④ Immerse the sensor into the water deeply. The table below shows the relationship between the output voltage from the AOUT pin and the liquid level.

Liquid level	Output voltage
0cm	0v
0.5cm	1.3v
1cm	1.53v
1.5cm	1.62v
2cm	1.69v
2.5cm	1.74v
3cm	1.77v
3.5cm	1.81v
4cm	1.84v
4.5cm	1.86v
4.8cm	1.88v