

# WHADDA ACS712 Current Sensor User Manual

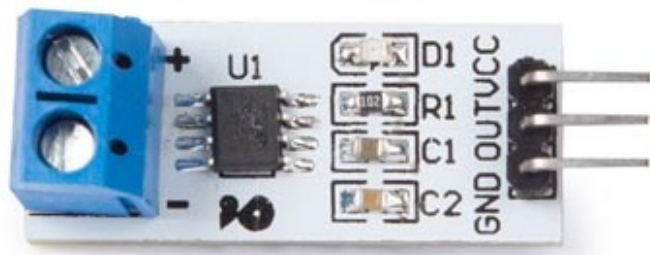
[Home](#) » [WHADDA](#) » WHADDA ACS712 Current Sensor User Manual 

## Contents

- [1 WHADDA ACS712 Current Sensor](#)
- [2 Introduction](#)
- [3 Safety Instructions](#)
- [4 General Guidelines](#)
- [5 Product Overview](#)
- [6 Specifications](#)
- [7 Pin Layout](#)
- [8 Documents / Resources](#)
  - [8.1 References](#)
- [9 Related Posts](#)



## WHADDA ACS712 Current Sensor



## Introduction

To all residents of the European Union Important, environmental information about this product, This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local

environmental rules.

**If in doubt, contact your local waste disposal authorities.**

Thank you for choosing Whadda! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

## Safety Instructions

Read and understand this manual and all safety signs before using this appliance. For indoor use only.

- This device can be used by children aged 8 years and above, and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way and understand the hazards involved. Children shall not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

## General Guidelines

- Refer to the Velleman® Service and Quality Warranty on the last pages of this manual.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorized way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Nor Velleman Group nv nor its dealers can be held responsible for any damage (extraordinary, incidental or indirect) – of any nature (financial, physical...) arising from the possession, use or failure of this product.
- Keep this manual for future reference.

## What is Arduino®

Arduino® is an open-source prototyping platform based on easy-to-use hardware and software. Arduino® boards are able to read inputs – light-on sensor, a finger on a button or a Twitter message – and turn them into an output – activating a motor, turning on an LED, or publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, you use the Arduino programming language (based on Wiring) and the Arduino® software IDE (based on Processing). Additional shields/modules/components are required for reading a Twitter message or publishing online. Surf to [www.arduino.cc](http://www.arduino.cc) for more information.

## Product Overview

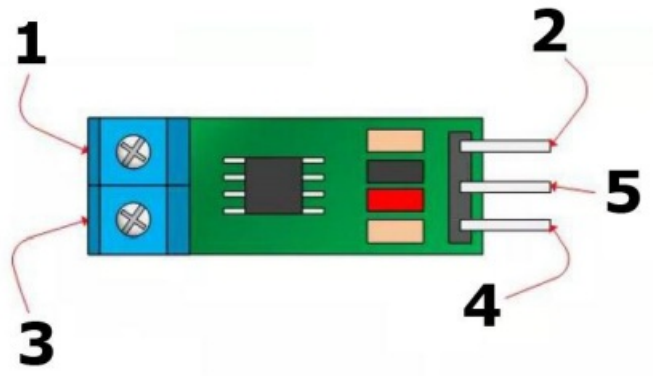
The Allegro® ACS712 provides economical and precise solutions for AC or DC current sensing in industrial, commercial, and communications systems. The device package allows for easy implementation by the customer. Typical applications include motor control, load detection and management, switched-mode power supplies, and overcurrent fault protection.

## Specifications

- **supply voltage:** 5 VDC
- **measurement range:** -20 to +20 A
- **output voltage:** VCC/2 at no load
- **scale factor:** 100 mV per A

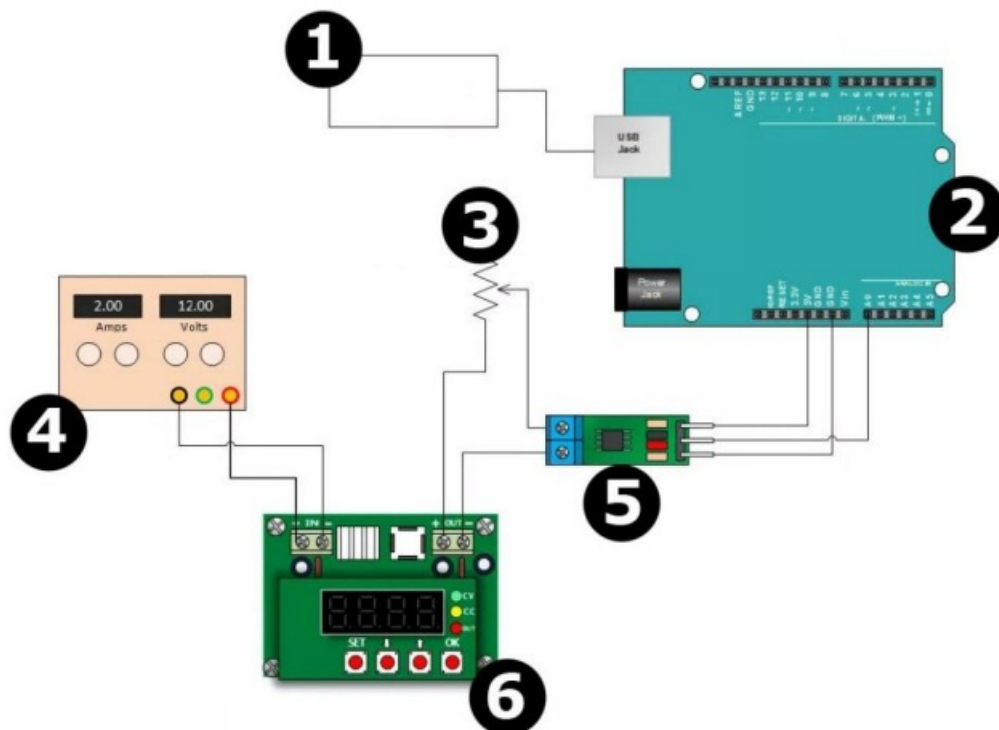
- **dimensions:** 31 x 13 x 12 mm

## Pin Layout



1. load positive
2. VCC – 5 V
3. load negative
4. ground
5. analogue output

## Example



1. computer
2. Arduino® UNO
3. 10 Ω potentiometer rated for 3.16 A
4. DC power supply
5. ACS712 module

## 6. step-down constant current, constant voltage power supply

### Code Begin

#### Measuring Current Using ACS712

- `const int analog = A0;`
- `int mVperAmp = 100; // use 100 for 20A Module and 66 for 30A Module`
- `int RawValue= 0;`
- `int ACSoffset = 2500;`
- `double Voltage = 0;`
- `double Amps = 0;`


```
void setup(){  
  Serial.begin(9600);  
}  
void loop(){
```

- `RawValue = analogRead(analog);`
- `Voltage = (RawValue / 1024.0) * 5000; // Gets you mV`
- `Amps = ((Voltage – ACSoffset) / mVperAmp);`
- `Serial.print("Raw Value = "); // shows pre-scaled value`
- `Serial.print(RawValue);`
- `Serial.print("\t mV = "); // shows the voltage measured`
- `Serial.print(Voltage,3); // the '3' after voltage allows you to display 3 digits after decimal point`
- `Serial.print("\t Amps = "); // shows the voltage measured`
- `Serial.println(Amps,3); // the '3' after voltage allows you to display 3 digits after decimal point`
- `delay(2500);`

\*\*\*\*\*Code End\*\*\*\*\*



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### Documents / Resources

	<a href="#">WHADDA ACS712 Current Sensor</a> [pdf] User Manual ACS712, Current Sensor, ACS712 Current Sensor, Sensor
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### References

-  [Whadda - Exciting Electronics](#)

-  [Arduino - Home](#)
-  [Arduino - Home](#)

Manuals+.