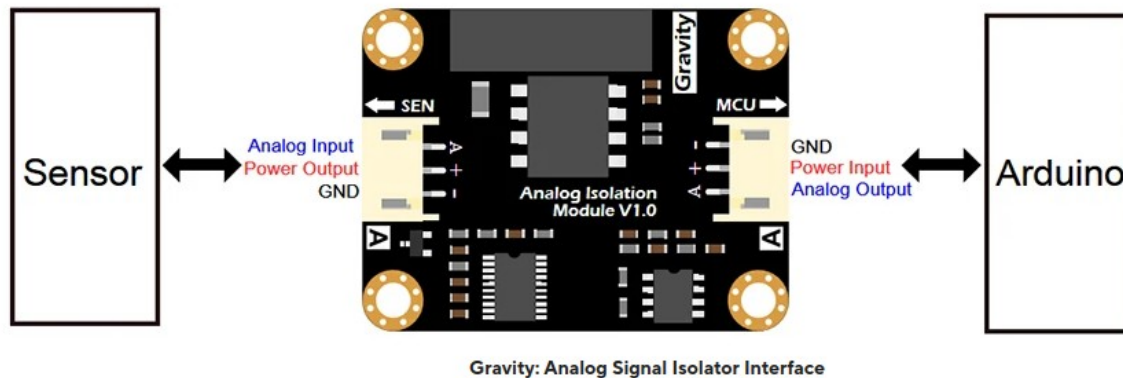


Parts list.

These are the components I used. Descriptions as on website making search easier.

Supplier: Ali Express Drawing part no. PN_01
DFRobot Gravity series Analog Signal Isolator 5.0V with isolated power for prevent sensor signal interference in measurement.
** Necessary to prevent ec signal amplifier influencing pH signal.



Supplier: Ali Express Drawing part no. PN_02
6 Head Ultrasonic Mist Maker Fogger Stainless Steel Air Humidifier Garden/Rockery/Pool Fog Sprayer Generator 220V.
Number oh heads can change depending on tent size.



Supplier: Ali Express Drawing part no. PN_03
ESP32-CAM WiFi Module ESP32 serial to WiFi ESP32 CAM Development Board 5V For
Bluetooth with OV2640 Camera Module Nodemcu.



Supplier: Ali Express Drawing part no. PN_04
ESP32 Development Board Breakout Board GPIO 1 into 2 for 38 Pin ESP-32S ESP32
Development Board ESP8266 ESP-12E.



Supplier: Ali Express Drawing part no. PN_05
DS1820 Stainless steel Waterproof DS18B20 1m 2m thread temperature probe temperature sensor
18B20 cable For Arduino.



Supplier: Ali Express Drawing part no. PN_06
USB Isolator 1500V Isolator ADUM3160 Module Coupling Protection Board USB to USB
Isolation with USB 2.0.

** Necessary to keep programming PC usb outlet ground noise from interfering with ph sensor and amplifier signal.



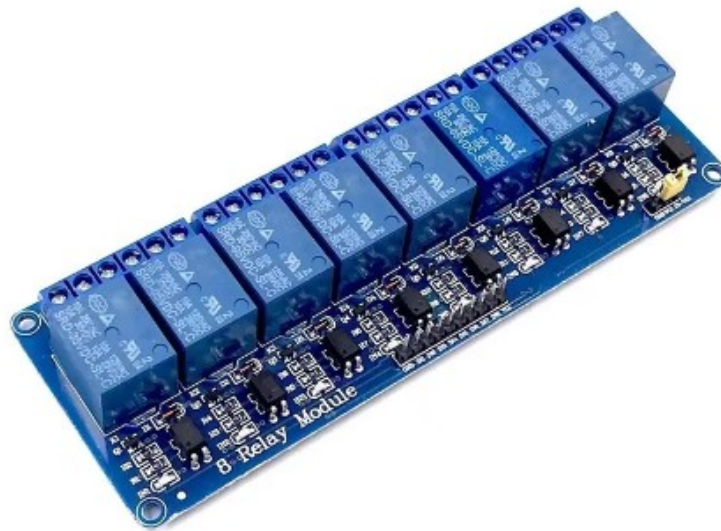
Supplier: Ali Express Drawing part no. PN_07
Ultra-quiet DC 12V 3M 240L/H Brushless Submersible Aquarium Solar Water Pump High Quality Mini Electric Submersible Waterpump.
** Used to pump water from the humidifier tank to the main tank to replenish water when drip irrigation used. My humidifier water supply is via a ball valve which controls the level from mains water.



Supplier: Ali Express Drawing part no. PN_08
SGP41 SGP40 SGP30 Air Quality Sensor Digital TVOC Detection Chip.



Supplier: Ali Express Drawing part no. PN_09
Relay Module Optocoupler Relay 5V Relay Output 8 Channel Trigger Board Shield Compatible with Arduino.



Supplier: Ali Express Drawing part no. PN_10
5V 2 Channel Solid State Relay Module SSR G3MB-202P 240V 2A Output With Resistive Fuse For Arduino.
** used to switch humidifier and extraction fan as PID output can have short on and off times which can cause wear on the relay contacts.



Supplier: Ali Express Drawing part no. PN_11
Level Sensor PP Float Switch Hight Alarm 300MM Wire Length Water Tank Level Switch.



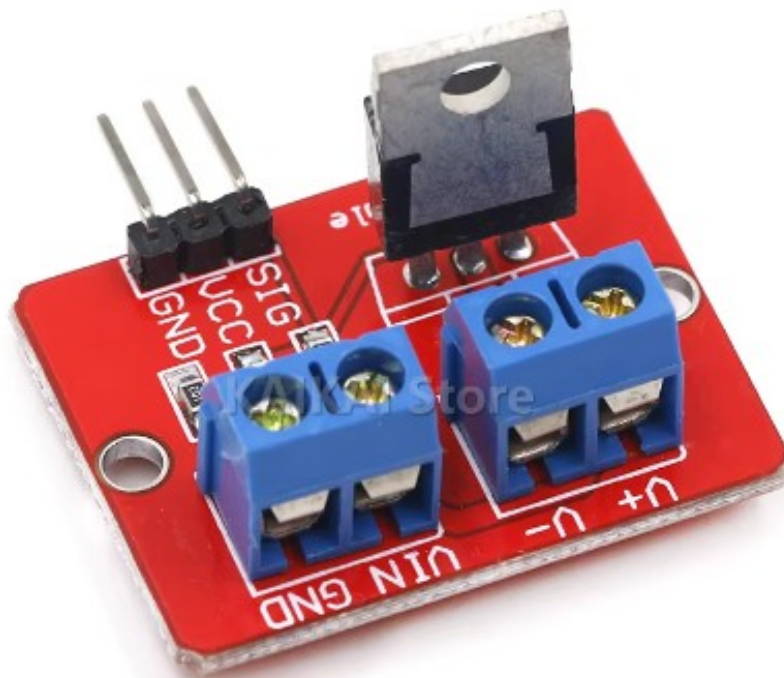
Supplier: Ali Express Drawing part no. PN_12
ESP32 Development Board Type-C CP2102 WIFI Bluetooth Module Dual Core Wireless Module
ESP-32 ESP-WROOM-32 Expansion Board 38Pin.



Supplier: Ali Express Drawing part no. PN_13
DHT22 Digital Temperature and Humidity Sensor Temp Humidity Monitor Sensor Module
AM2302 Replace SHT15 SHT11 for Raspberry Pi.



Supplier: Ali Express Drawing part no. PN_14
0-24V Top Mosfet Button IRF520 MOS Driver Module For Arduino.
** Some cheaper versions dont respond to low input signals so peristaltic pumps are not able to
acheive low speeds.



Supplier: Amazon Australia Drawing part no. PN_15
TEEMO Aquarium Submersible Water Pump: 2500L/H 45W Quiet Adjustable with 1.9M Power Cord for Hydroponics .



Roll over image to zoom in

Supplier: Amazon Australia Drawing part no. PN_16
Gravity: Analog AC Current Sensor (20A) - AC Current Signal Conversion Module and Open Type AC Transformer Probe Included.



Supplier: Amazon Australia Drawing part no. PN_17
Peristaltic Pump, DC 12V Micro Peristaltic Pump, No Valve Silicone Tube Dosing



Supplier: Amazon Australia Drawing part no. PN_18
MARS HYDRO 2024 New TS1000 150 Watts LED Grow Lights for Indoor Plants, Patented Reflector Dimming Daisy Chain Sunlike Full Spectrum Growing Lamps for Seedlings Veg Bloom n 3x3 Grow Tent Greenhouse



Supplier: Amazon USA Drawing part no. PN_19
TDS (Total Dissolved Solids) Meter Sensor Compatible with Raspberry Pi/Arduino Board. for Liquid Quality Analysis.

** A few items with similar descriptions were not stable. The TDS signal range is in millivolts so accuracy is required. This items is very stable.



DIY More online shop Drawing part no. PN_20
PH4502C PH 4502C Liquid PH Value Detection Detect Sensor Module Monitoring Control For Arduino.

** pH signal even more critical then TDS and this amplifier combined with Blue Labs Probe proved the most stable and reliable. Dont be fooled by many look alike. Tried at least 3 before finding this one.



Supplier <https://growshop.co.nz/>
Bluelab Replacement pH Probe.

Drawing part no. PN_21

This is a New Zealand product but should be available internationally.



Supplier <https://growshop.co.nz/>

Drawing part no. PN_22

Grow Tent Hulk Silver 2000 x 2000 x 2000mm.
should be available internationally.



Supplier <https://growshop.co.nz/>

Drawing part no. PN_23

100mm Plastic Duct Booster Inline Fan - 130 Cubic Metres Per Hour.
should be available internationally.



Supplier: Ali Express

Drawing part no. PN_24

YF-B3 Brass 15Mm Hall Flow Sensor 1/2" Male Thread Turbine Liquid Water Copper Flow
Sensor

