

GATEWAY CONTROLLER

INSTRUCTION MANUAL



Welcome to the Hydro-Rain Family

Congratulations on the purchase of the Gateway Controller

Time is money, so Hydro-Rain products are designed to save you both. Whether it is programming a controller, installing a device, or adjusting the system, Hydro-Rain products are simply faster and easier to use.

 The Gateway Controller must be installed by a trained professional.

B-hyve Ag

The B-hyve Ag app is designed for for both growers and dealers to easily manage connected irrigation controllers, users, and accounts.

Download the B-hyve Ag app to get started.



Need Help?

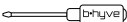
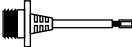
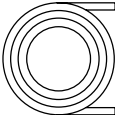
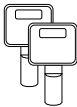
Contact B-hyve Ag Product Support : 1-801-407-5255

For help setting up or operating the Gateway Controller please call the Hydro-Rain Product Support team. Our friendly staff is here to assist with all the technical needs of the installer or maintenance crew.

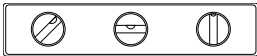
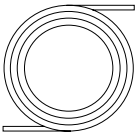
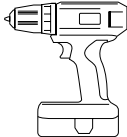
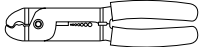
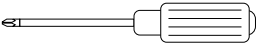
Getting Started

Prior to installing the new Gateway Controller, make sure the the product is intact and undamaged. If any parts are missing or broken please call 1-801-407-5255 as soon as possible.

Part List

	1x Gateway Controller		1x Screwdriver		2x Cable Gland
			4x Mounting Screws		1x Accessory Adapter
	1x 10ft (3.3m) antenna cable		1x CR2032 Cell Battery		
			1x Door Keys		

Recommended Tools

	Level		Miscellaneous Wire
	Power Drill		Wire Stripper
	Philips Screwdriver		

Mounting Options

Using the mounting holes located at the top and bottom of the controller, attach the unit to a pole, wall, or panel using the provided screws.

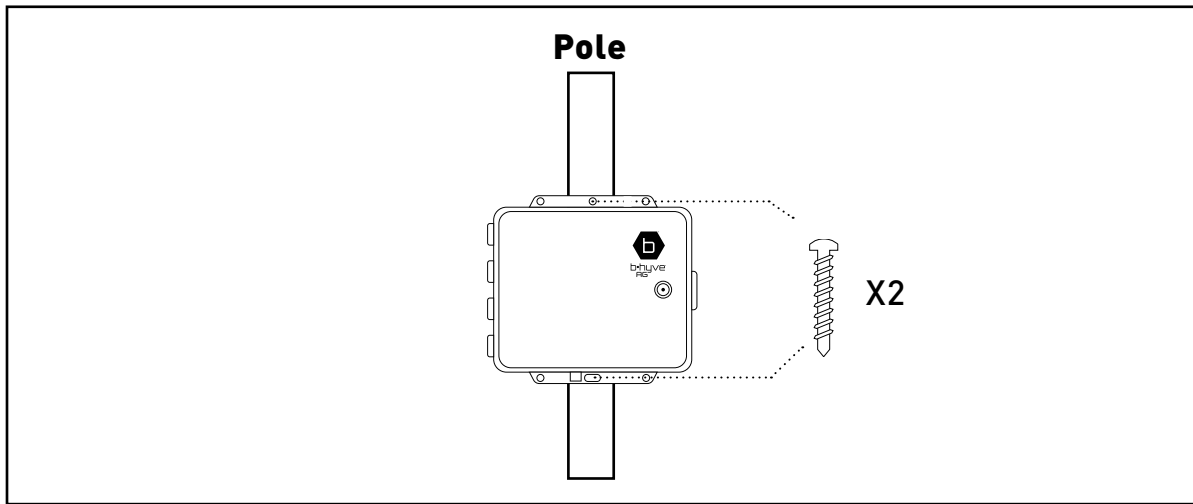


Figure 1a. Mounting the Gateway Controller to a Pole

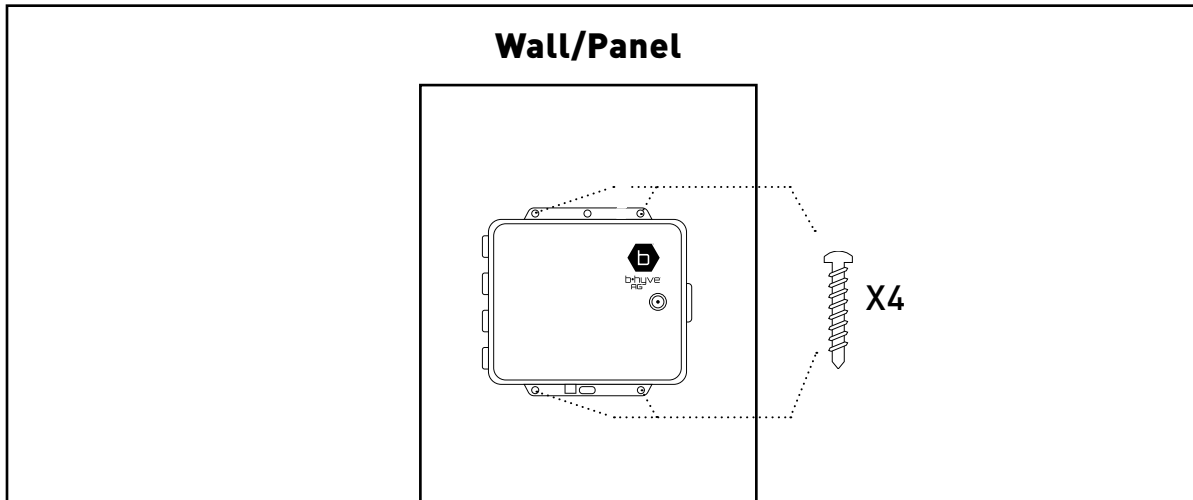
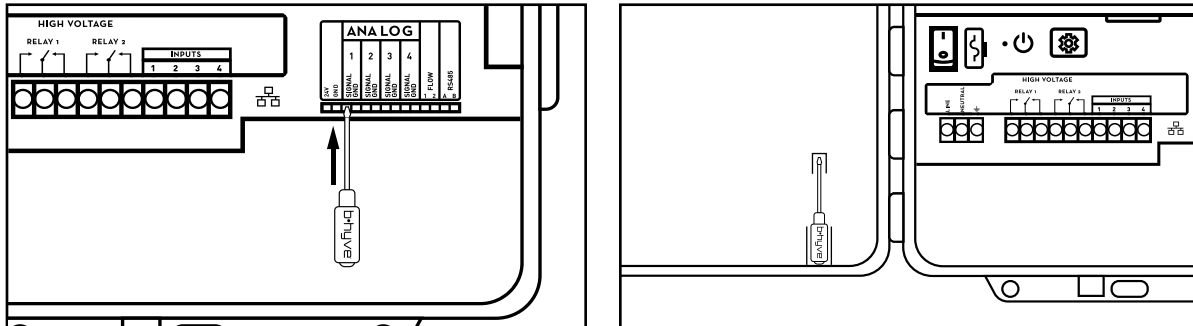


Figure 1b. Mounting the Gateway Controller to a Wall or Panel

Helpful Hints

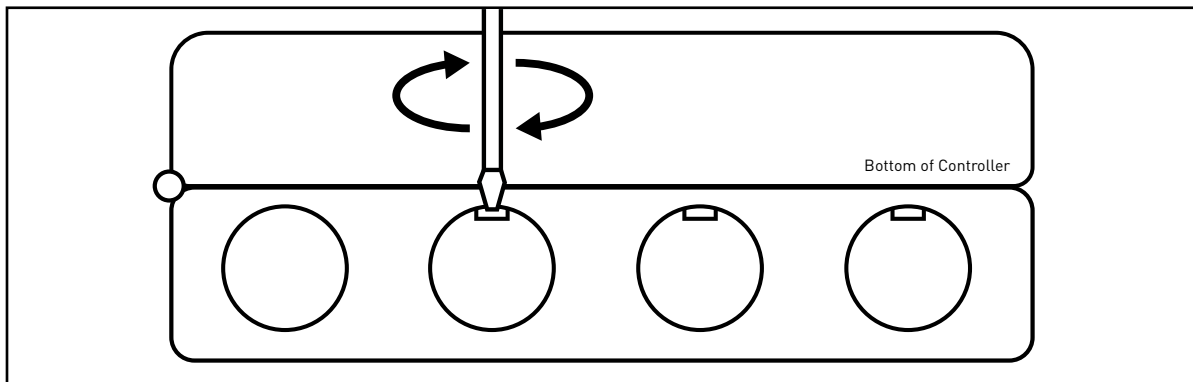
Mini Screwdriver

A mini screwdriver is provided to be used on the low-voltage green terminals. It can be housed in the provided slot on the door.



Knockout

The knockouts on the controller can easily be removed by inserting a flathead screwdriver into the slot and rotating.



Coil Cell Battery

Insert the provided coil cell battery into the designated slot on the Gateway Controller.

Accessory Adapter

An accessory adapter is provided to allow B-hyve accessories to be added to the Gateway Controller. There is no need to install the accessory adapter if accessories will not be added.

Step 1: Remove the far-right knockout on the Gateway Controller.

Step 2: Connect the accessory adapter into the 4-pin receptacle.

Step 3: Remove the paper on the accessory adapter and insert the accessory adapter into the far-right knockout.

Connectivity Options

The app will help you configure the connectivity during setup.

Cellular

Slide the B-hyve Cell Module into the cell module slot. (Fig. 3)
(Cell Module Sold Separately. SKU: 04450)

Wi-Fi

Ensure the Gateway Controller is within Wi-Fi range of the router, typically 150 ft. (Fig. 4)

i 5150-5250MHz Wi-Fi connections are not available in Canada if mounted outdoors.

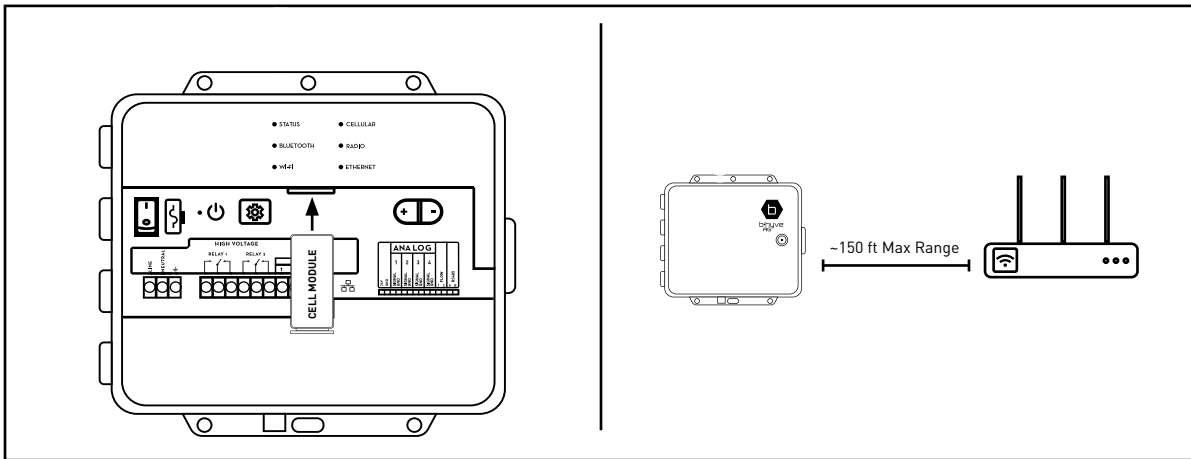


Figure 3. Adding a Cell Module

Figure 4. Wi-Fi Placement

Ethernet

Insert ethernet cable into the marked slot on the controller.

Client Radio*

Insert cable into the marked slot on the controller. (Client Radio Sold Separately)

* Requires AG-CPB (Sold Separately SKU: 25024)

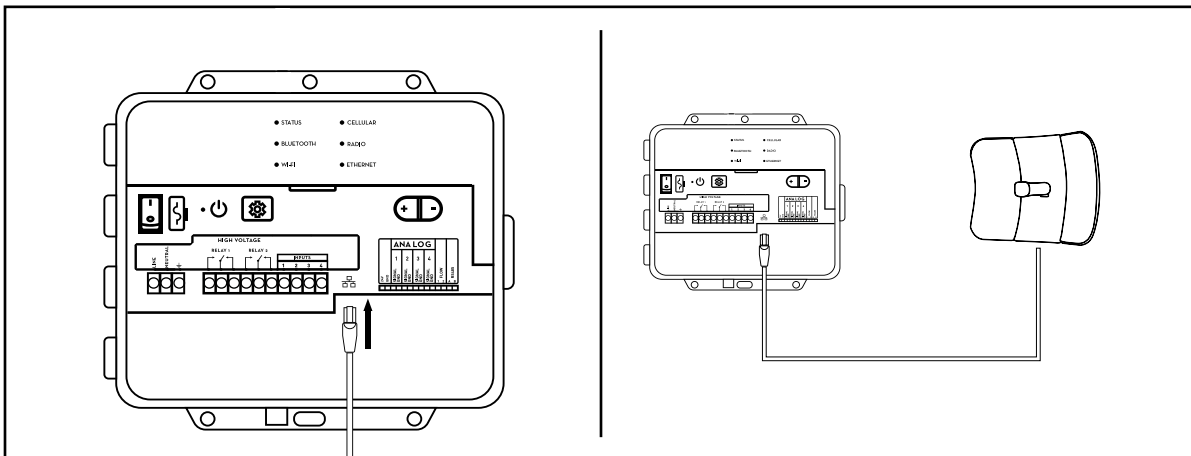


Figure 5a. Ethernet Connection

Figure 5b. Client Radio Connection

Wiring - Power Options

Line Power

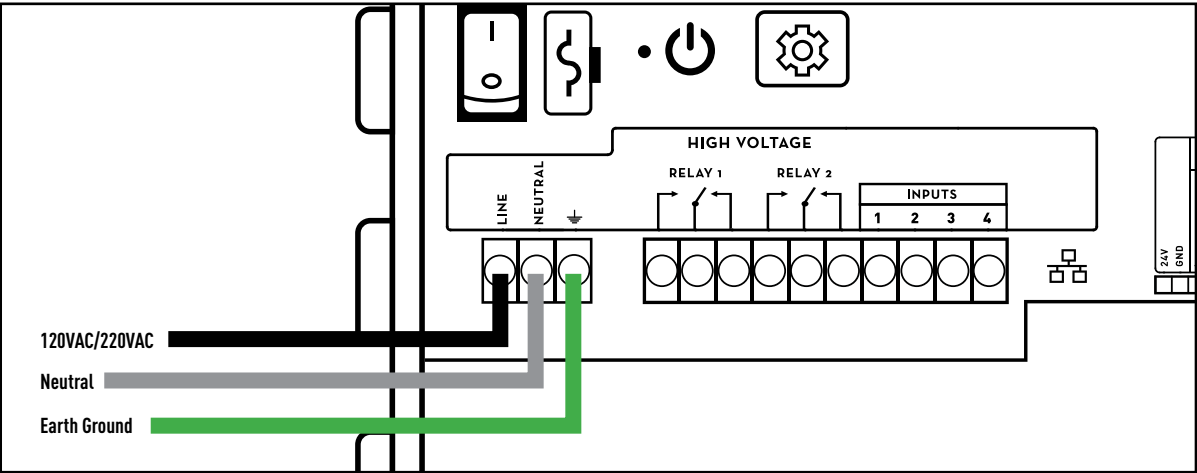


Figure 6. Wiring the Gateway Controller - Line Power

24VDC

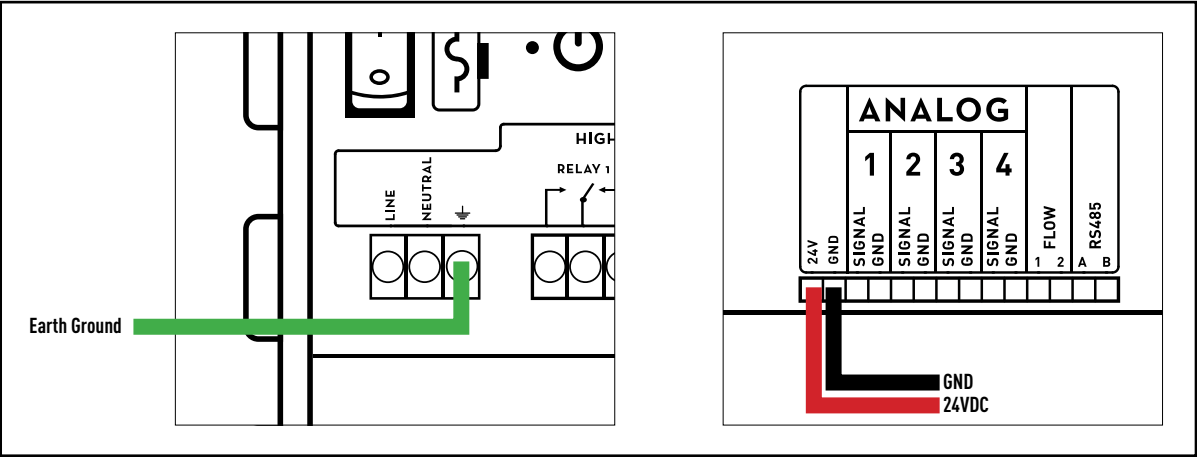


Figure 7. Wiring the Gateway Controller - 24VDC

Wiring - General



WARNING: TURN OFF THE POWER TO THE CONTROLLER BEFORE WORKING WITH THE TRANSFORMER AND WIRING. TURNING THE ON/OFF SWITCH DOES NOT TURN OFF THE POWER INTO THE TRANSFORMER. ALWAYS FOLLOW APPLICABLE ELECTRICAL CODES. ELECTRICAL WORK MAY REQUIRE A LICENSED ELECTRICIAN.

Pump

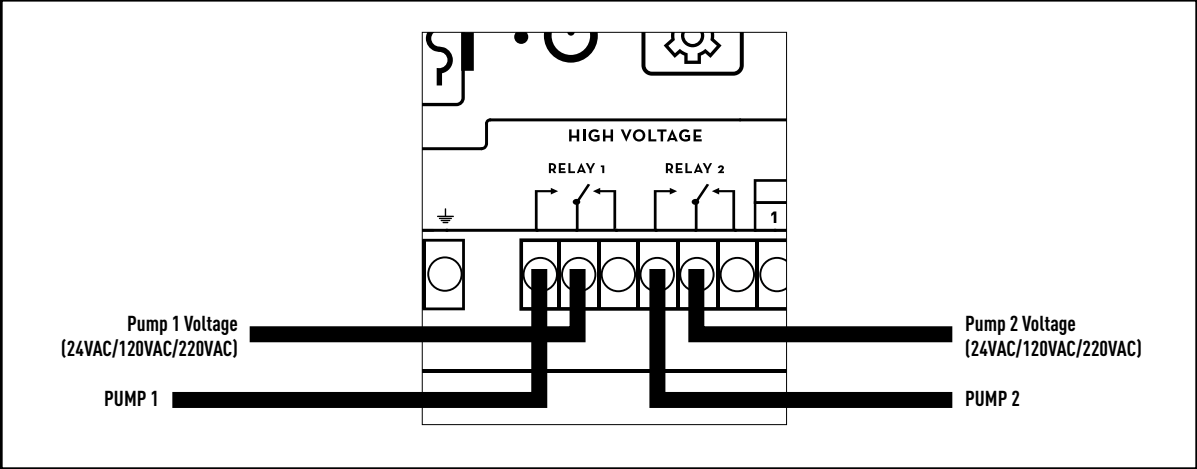


Figure 8. Wiring - Pump

The Gateway Controller relays are rated for up to 220VAC, 10amps, and single phase. For anything else, use a contactor.

Flow Meters

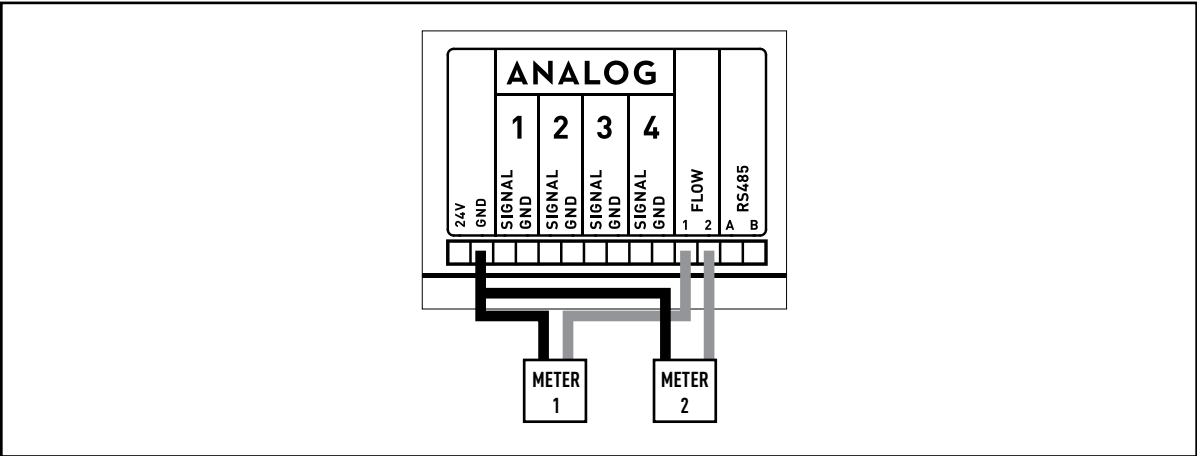


Figure 9. Wiring - Flow Meters

The Gateway Controller can read flow meters with a pulse output and has an 18V pull-up on the signal input.

Wiring - Transducers

Any combination of 0-10V or 4-20mA type transducers is acceptable.

Voltage

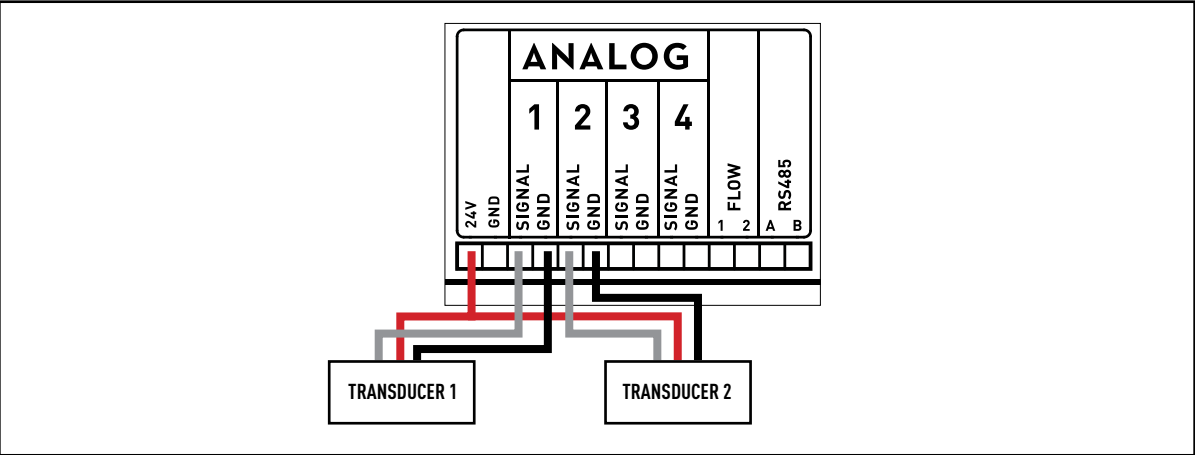


Figure 10. Wiring - Transducers - Voltage

The Gateway Controller accepts voltage inputs between 0-10VDC.

4-20mA

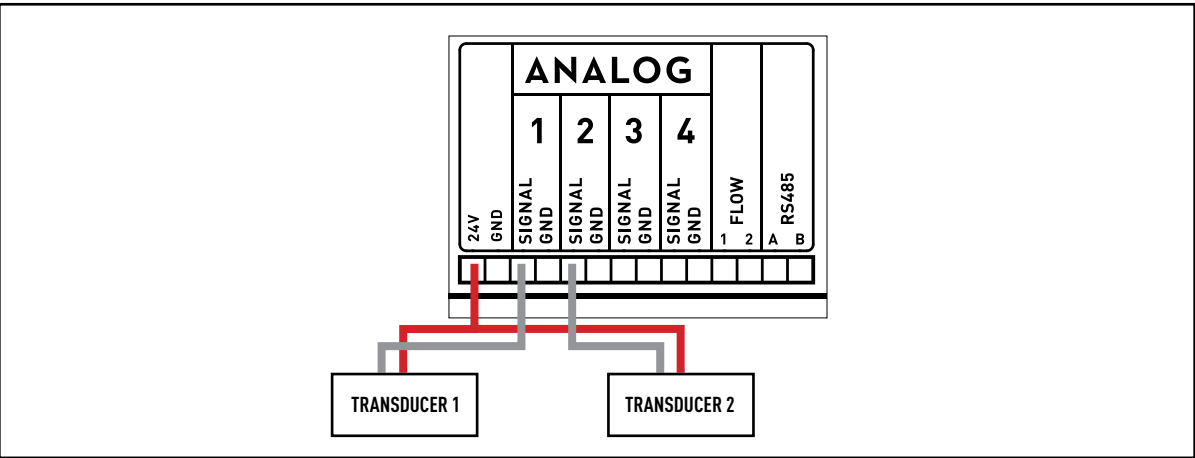


Figure 11. Wiring - Transducers - 4-20mA

Product Warranty

Hydro-Rain warrants to its trade customers that its products will be free from original defects in material and workmanship (commencing on the date of sale to the trade customer) for a period of three-years, or five, (for Premier Contractors). For customers outside of the United States, this warranty may vary by geographical location.

If there are further questions about installation, please contact Hydro-Rain via phone 1-888-493-7672 Monday-Friday MST from 7:00am to 7:00pm and Saturday-Sunday from 7 am to 5 pm.

Or try our website, www.hydrorain.com.

This warranty applies only to Hydro-Rain products, which are installed as specified and used as intended for commercial irrigation purposes. The warranty applies only to offered products, which have not been altered, converted, damaged, misused, or misapplied. This warranty does not cover products adversely affected by the system into which the products are incorporated, including improperly designed, installed, operated, or maintained systems or systems using water containing corrosive chemicals, electrolytes, sand, dirt, silt, rust, and scale. This warranty does not cover component failure caused by lightning strikes, electrical power surges, or damage caused by freezing environments. Hydro-Rain's liability is limited to the repair and/or replacement at Hydro-Rain's sole discretion, of products that are returned prepaid through the trade customer to the factory and found by Hydro-Rain to be defective, but in no event shall Hydro-Rain's liability exceed Hydro-Rain's selling price of the product. Hydro-Rain makes no other warranties, expressed or implied. No representative, agent, or distributor or other persons have the authority to waive, alter, or add to the printed provisions of this warranty, or make representation of warranty not contained herein.

FCC & IC Statement



This device complies with Part 15 of the FCC Rules and Industry Canada license exempt RSS standards. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device meets the FCC and IC requirements for RF exposure in public or controlled environments. The end user is advised to maintain a distance of 20 cm from the controller and any personnel to ensure compliance with RF exposure regulations.

This Class B digital apparatus complies with Canadian ICES-003

Déclaration de FCC et L'IC



Cet appareil est conforme à la section 15 de la Règlementation de la FCC et la norme RSS d'Industry Canada. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas causer d'interférences nuisibles, et (2) cet appareil doit tolérer toutes les interférences, dont les interférences pouvant causer un fonctionnement non désiré. Cet appareil numérique de classe B est conforme à la norme canadienne ICES-003.

Remarque: cet appareil été testé et déclaré conforme aux limites d'exposition pour les appareils numériques de classe B, selon la section 15 de la Règlementation de la FCC. Ces limites sont conçus pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet appareil produit, utilise et peut émettre de l'énergie radio fréquence et, si elle n'est pas installée et utilisée conformément aux instructions, peut causer des interférences nuisibles aux communications radio. Cependant, il n'est pas garantie que des interférences ne se produisent pas dans une installation particulière. Si cet appareil cause des interférences gênantes à la réception d'un signal radio ou de télévision, ce qui peut être déterminé en allumant et en éteignant l'appareil, l'utilisateur peut corriger les interférences en suivant une des mesures suivantes :

- Réorientez ou repositionnez l'antenne de réception.
- Augmentez la distance entre l'appareil et le récepteur.
- Branchez l'appareil dans une prise sur un circuit différent du circuit sur lequel le récepteur est branché.
- Consulter le revendeur ou un technicien radio/TV expérimenté pour obtenir de l'aide.

Cet appareil est conforme aux exigences de la FCC et de l'IC concernant l'exposition aux ondes dans un environnement public ou contrôlé. Il est conseillé à l'utilisateur final de maintenir une distance de 20 cm du contrôleur pour assurer la conformité aux réglementations d'exposition RF. Information de conformité pour le Canada

The Gateway Controller must be installed by a trained professional.

5150-5250MHz Wi-Fi connections are not available in Canada if mounted outdoors.

Le Contrôleur de passerelle doit être installé par un professionnel formé.
La connexion Wi - Fi 5150 - 5250 MHz n'est pas disponible au Canada si elle est installée à l'extérieur.

ANTENNA REQUIREMENT

This radio transmitter [3330A-GC1] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna Type	Manufacturer	Model Name	Gain (dBi)	Frequency Range (MHz)
PCB	Gardena Inc	GC1	2.82	2400MHz~2500MHz (For BT)
PCB	HEYUAN XUNWEI MICROWAVE COMMUNICATION CO.,LTD	ANT 2	2.4G WiFi:3.6 5G WiFi: 4.39	2400MHz~2500MHz 5000MHz~6000MHz (For WiFi)

Note: The LoRA function of this product has been software blocked, and customers cannot use this function

EU & UK Declaration of Conformity

Gardena, Inc.
North Salt Lake, UT 84054 USA
Declares under our sole responsibility, that the product:

GC1 Gateway Controller

Complies with the following:

European Directives 2014/53/EU with reference to the following standards:

ETSI EN & EN 300 220-1 V3.1.1 (2017-02)
ETSI EN & EN 300 220-2 V3.2.1 (2018-06)
ETSI EN & EN 300 328 V2.2.2 (2019-07)
EN 50665:2017
ETSI EN & EN 301 489-1 V2.2.3 (2019-11)
ETSI EN & EN 301 489-3 V2.1.2 (2021-03)
ETSI EN & EN 301 489-17 .2.4 (2020-09)
EN 55032:2015/A11:2020,
IEC & EN IEC 61000-3-2:2019/A1:2021
EN 61000-3-3:2013/A1:2019
EN 55035:2017/A11:2020
EN 60730-1:2016
EN 60730-2-7:2020



Specifications

Input – 120VAC 0.6A OR 240VAC 0.3A; 50/60Hz
Output – 120VAC 0.6A OR 240VAC 0.3A; 50/60Hz
IPX4 Rating

Temperature

Operating: 32-131° F [0-60° C]
Storage & transport: -14-158° F [-10-70° C]

Humidity Operating

Operating: 0-90%
Storage & transport: 0-90%

Battery Specifications

Controller requires a CR2032 Lithium battery (included)
To insert a new battery, the positive (+) must be on the left and the negative (-) must be on the right.

Antenna

Manufacture: Seeed Technology Co., Ltd
Part Number: 318020693
Gain: 8 dBi
Type: Dipole



CAUTION: DISPOSE OF USED BATTERIES ACCORDING TO THE BATTERY MANUFACTURER'S INSTRUCTIONS.



WARNING: RISK OF FIRE, EXPLOSION, AND ELECTRIC SHOCK. REPLACE BATTERY WITH CR2032 ONLY. USE OF A DIFFERENT BATTERY HAS THE POTENTIAL FOR A RISK OF FIRE, EXPLOSION, AND ELECTRIC SHOCK.



WARNING: DO NOT INGEST BATTERIES. CHEMICAL BURN HAZARD. KEEP BATTERIES AWAY FROM CHILDREN.



WARNING: THIS PRODUCT CONTAINS A LITHIUM BUTTON/COIN CELL BATTERY.



WARNING: IF A NEW OR USED LITHIUM BUTTON/COIN CELL BATTERY IS SWALLOWED OR ENTERS THE BODY, IT CAN CAUSE SEVERE INTERNAL BURNS AND CAN LEAD TO DEATH IN AS LITTLE AS 2 HOURS.



WARNING: BATTERY MUST BE REMOVED FROM THE CONTROLLER BEFORE IT IS SCRAPPED.

HYDRO-RAIN®

