



OMEGA

Quick Start Guide



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SAFETY

Before operating Omega, please read the safety section found in the Omega Installation and Operation Guide.



NOTE: This product conforms with FCC and CE regulations. Please see the installation and operation guide for more information.

INTRODUCTION

Omega Controller

Battery compartment

RS-485 connector¹

SIM card

Connection terminals

Power connector

Mounting bracket

SMA connector for external antenna²



¹ Available in Omega RS models only

² Not standard

Typical Connection Layout

The following can connect to the Omega controller's connection terminals:

- Latch output connection terminals:
 - Latch solenoids - irrigation valves and master valve
 - Latch relay - water pumps
- Digital input connection terminals:
 - Water meters
 - Dry contact and open collector digital sensors

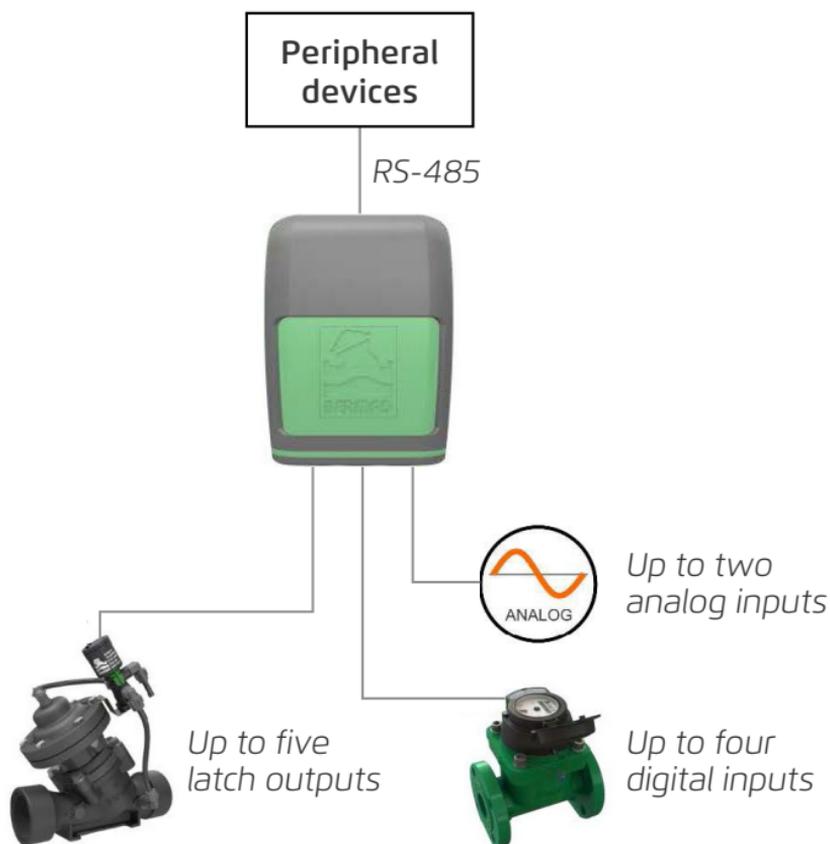


Tip: When installing open collector sensors, verify the polarity matches what is marked on the Omega connector board.

- Analog input connection terminals:
 - Analog sensors



NOTE: Omega Modbus protocols are written specifically for RS-485 communication with peripheral device solutions offered by BERMAD.

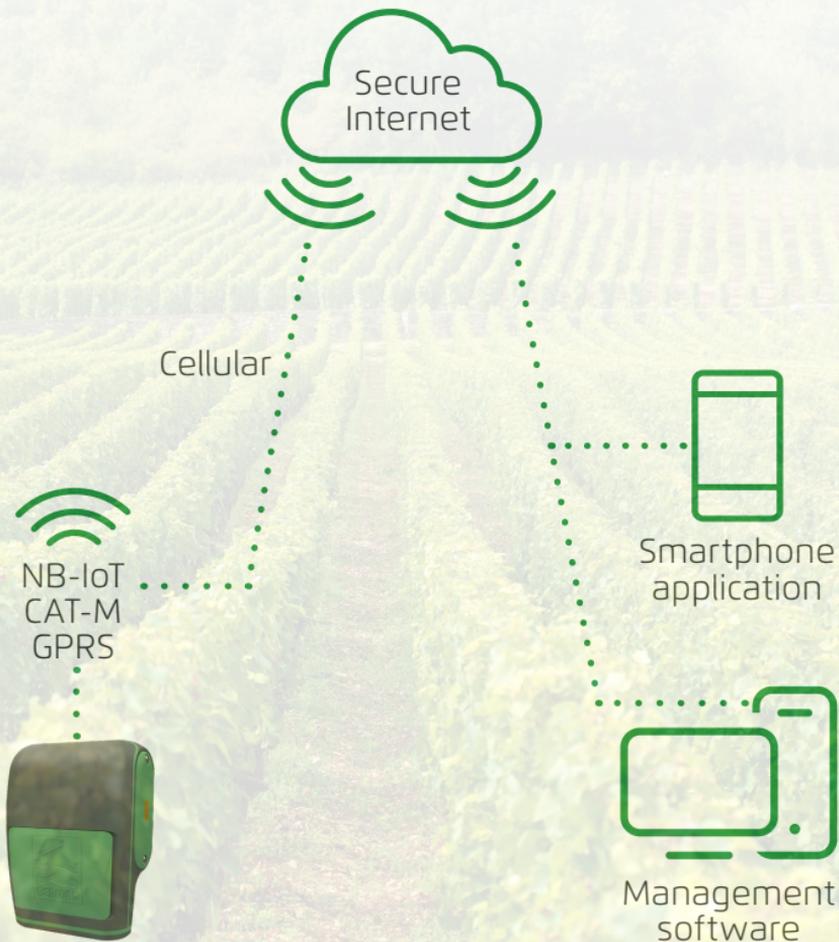


Cloud Management System

BERMAD Cloud provides a centralized web-based user interface for the Omega controller, allowing for anywhere-anytime management and real-time visual monitoring of the irrigation system using a PC, tablet, or smartphone.

BERMAD Cloud offers the following benefits:

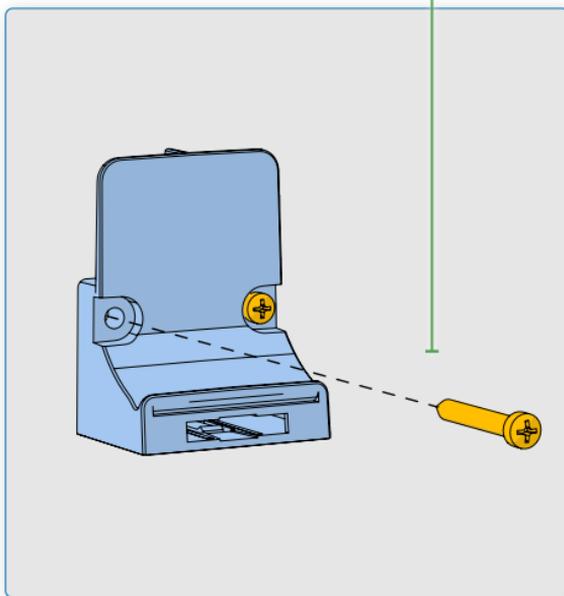
- Password protected login
- Dynamic dashboard
- Irrigation management and monitoring tools
- Alert controls
- Log information and report generation



MOUNTING OMEGA

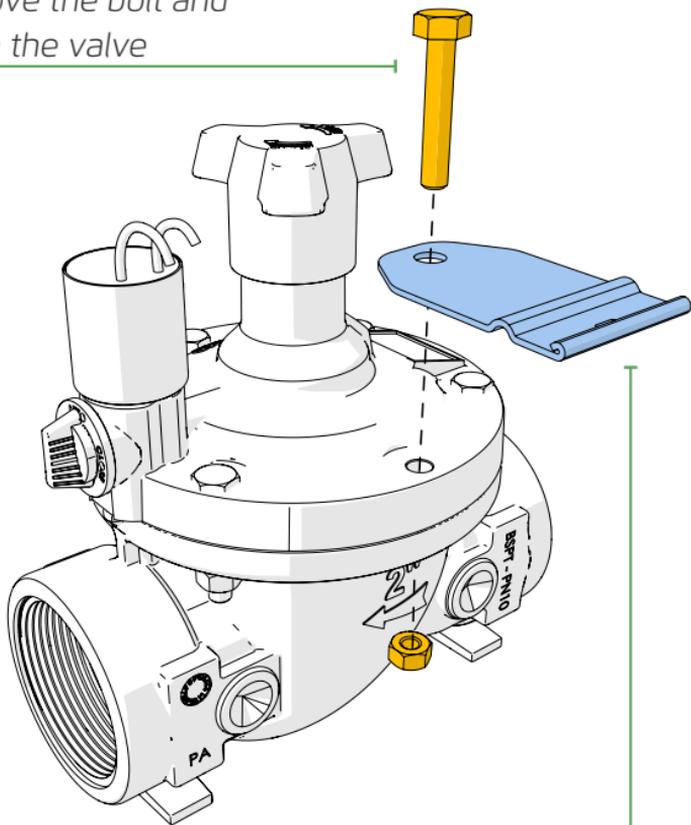
Wall Mounting

- 1.** *Attach the mounting bracket to the wall using two screws*



Valve Mounting

1. Remove the bolt and nut from the valve

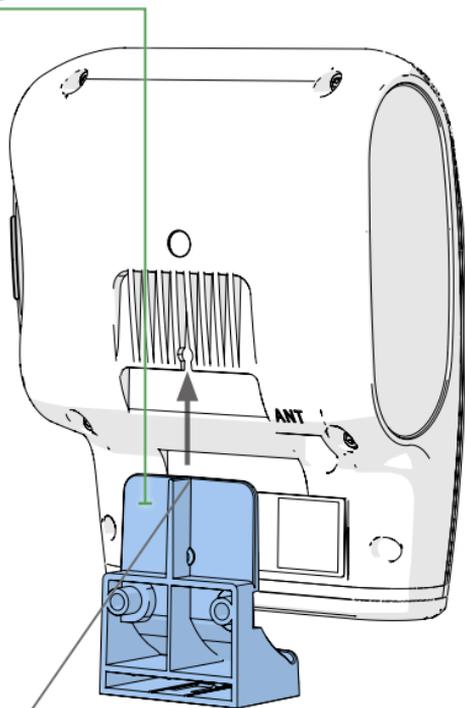


2. Attach the bracket adapter plate to the valve using the bolt and nut which were removed

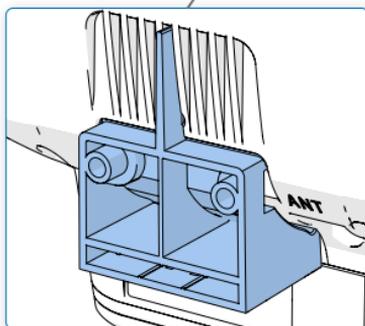


NOTE: The bracket adapter plate provided by BERMAD is designed for horizontal installations, and is suitable for the BERMAD 200 series valves without further need for adjustments.

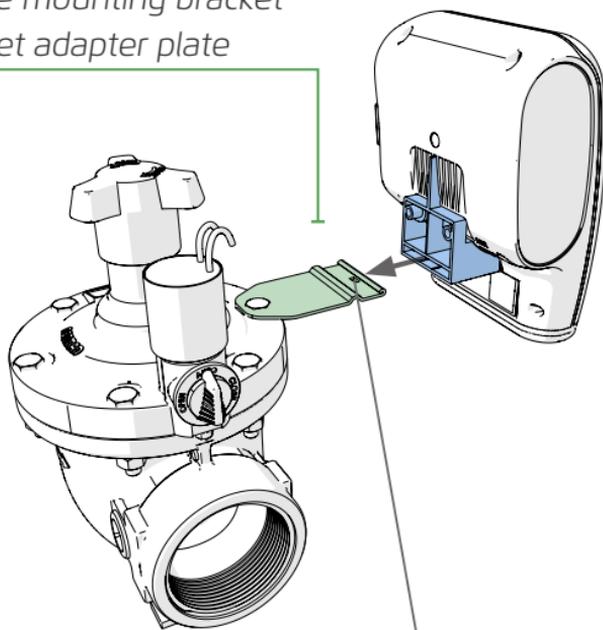
3. Insert the mounting bracket into the Omega controller



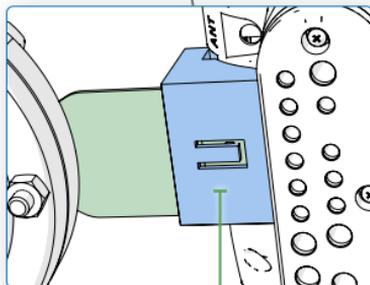
4. Verify the bracket is fully inserted into the controller slot



5. Position the mounting bracket onto the bracket adapter plate

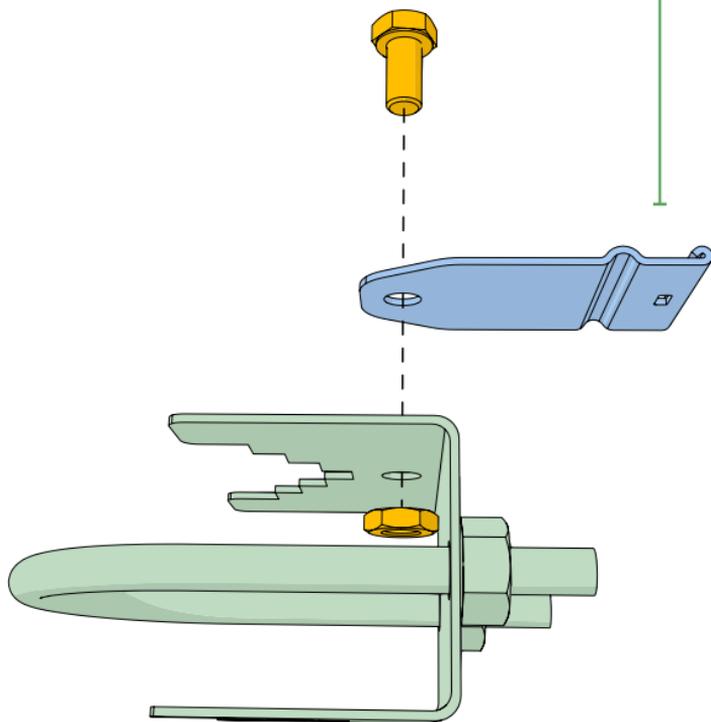


6. Verify the bracket adapter plate clicks in place and is securely fastened to the mounting bracket

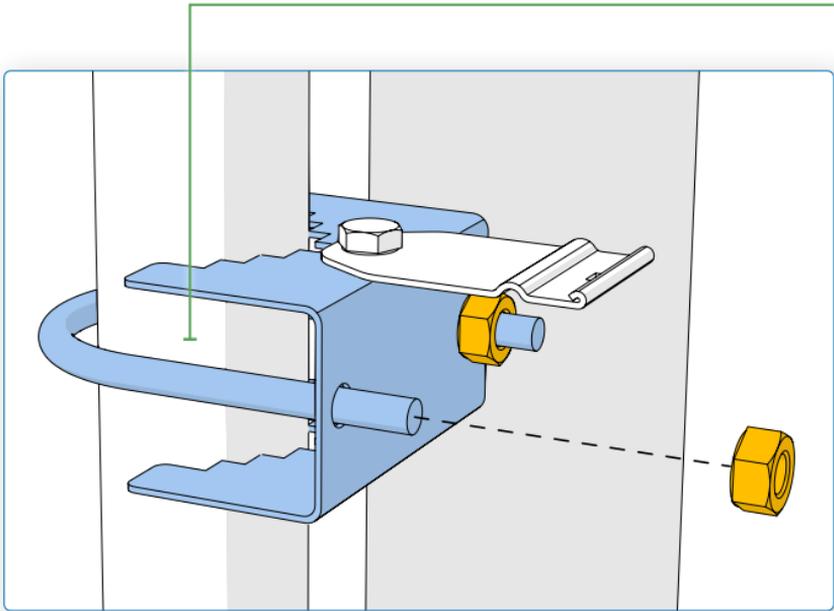


Pole Mounting

1. Attach the bracket adapter plate to the U-clamp using a bolt and nut

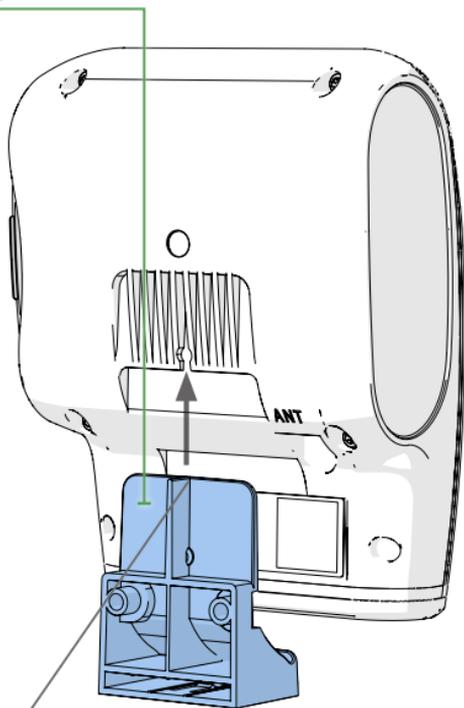


2. Attach the U-clamp to the pole using two nuts

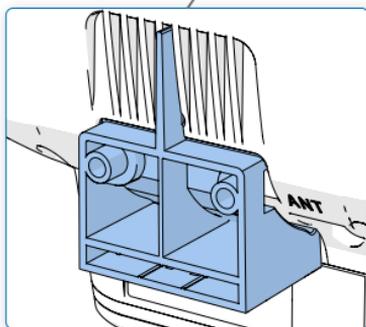


NOTE: The U-clamp is an optional accessory that must be ordered separately. The U-clamp provided by BERMAD fits 1" (DN25) to 1½" (DN40) pole diameters (BERMAD item #3009600001_U-KIT).

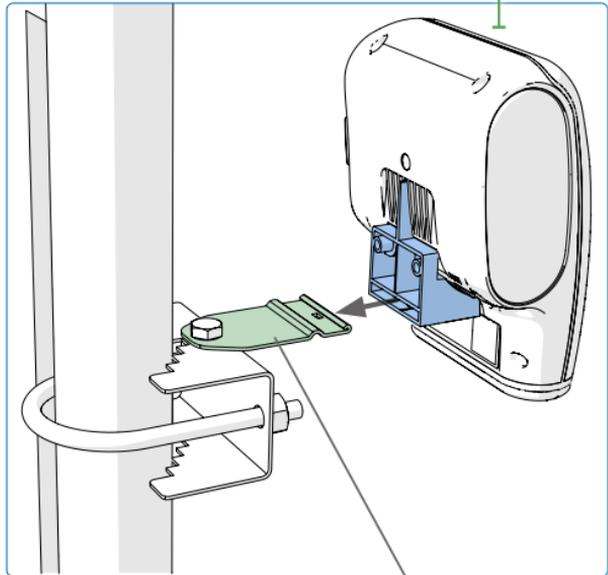
3. Insert the mounting bracket into the Omega controller



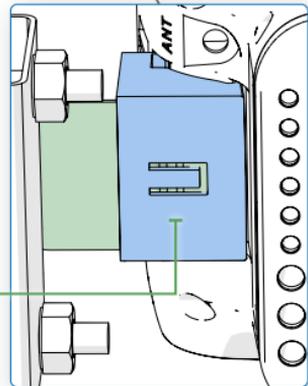
4. Verify the bracket is fully inserted into the controller slot



5. *Position the mounting bracket onto the bracket adapter plate*



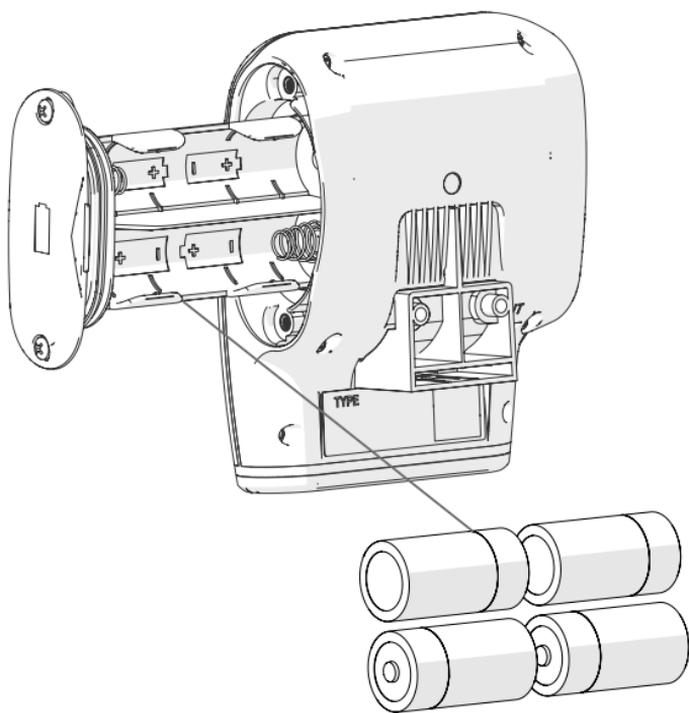
6. *Verify the bracket adapter plate clicks in place and is securely fastened to the mounting bracket*



POWERING OMEGA

Battery Power Supply

The Omega controller is powered by four LR-14 (C-size) alkaline batteries



Insert four batteries according to the orientation shown in the battery compartment



NOTE: In offline mode, the controller's low power consumption enables it to run on battery power for a long time.



Tips:

- For best performance in outdoor installation, use batteries with an operating temperature range of -18° to 55° C or greater.
- Check batteries periodically, and replace them before irrigation season starts

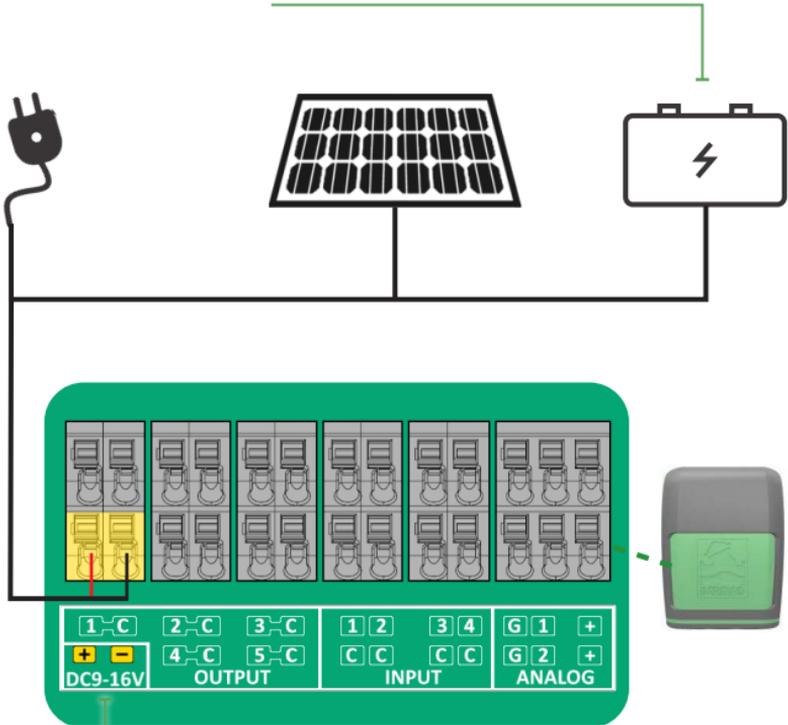


CAUTION: Running the Omega controller on battery power in online mode shortens battery life significantly.

External Power Source

The Omega controller can be powered by electrical grid power, external high-capacity batteries, or solar panels.

Verify the power supply provides 9-16 VDC/1 A



Verify the external power source polarity matches the polarity marked on the connector board



NOTE: An external power supply is necessary if operating the Omega controller in online mode for an extended amount of time.



CAUTION:

- Connect the power cable to the Omega power connectors before turning on the power source.
- The Omega controller must first be unplugged from the external power source before disconnecting the power supply cables from the power connectors.

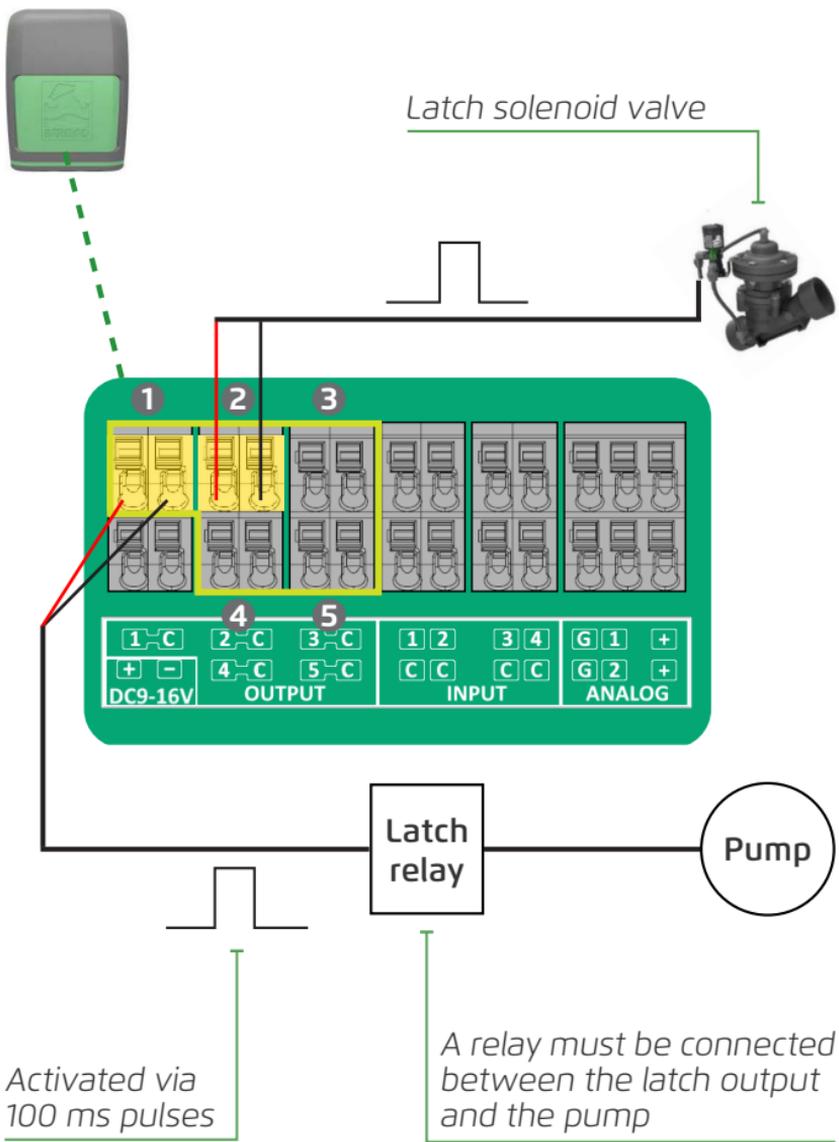
CONNECTING PERIPHERALS

Latch Output Connections

Up to five devices (such as valves and water pumps) can be connected to the Omega controller latch outputs.



NOTE: The Omega RS model features up to four latch outputs and one RS-485 Modbus.



Digital Input Connections

Up to four devices (such as water meters and digital sensors) can be connected to the Omega controller digital inputs.

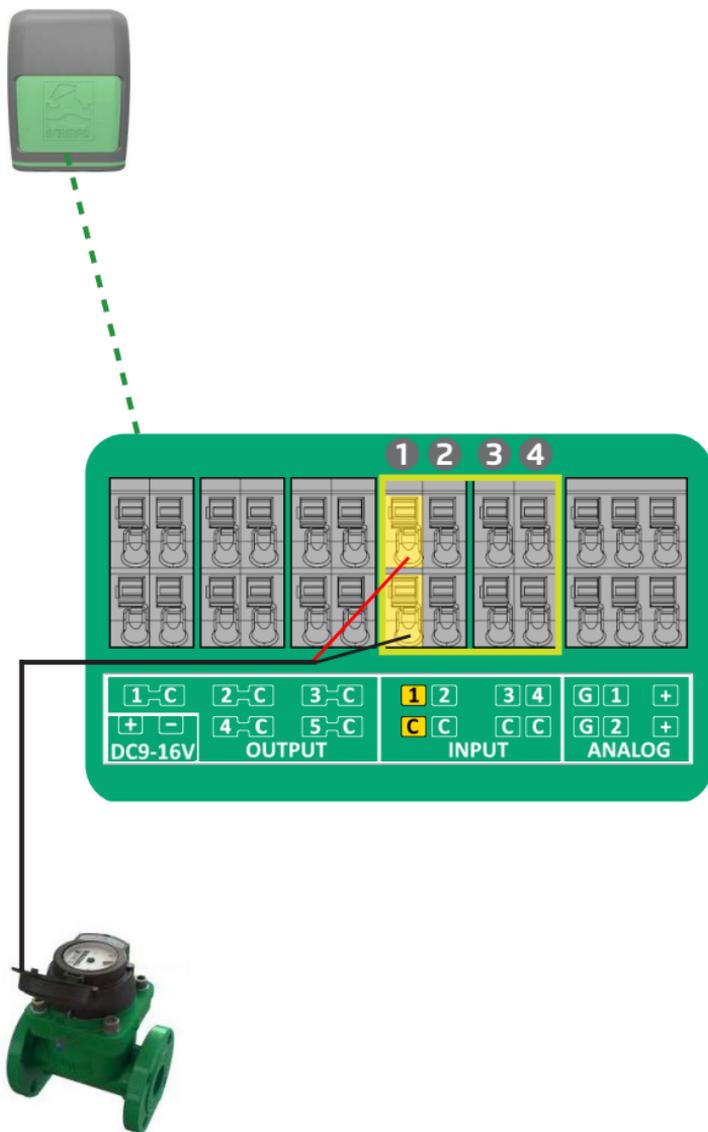


NOTE: Digital inputs can be connected to devices with one of the following outputs:

- Dry contact
- Open collector



CAUTION: Ensure the open collector connects according to the input polarity marked on the connector board.



Analog Input Connections

Up to two devices (such as the following types of analog sensors) can be connected to the Omega controller analog inputs.



NOTE: The controller supports both analog voltage (0-10 V) and analog current (4-20 mA) sensor.

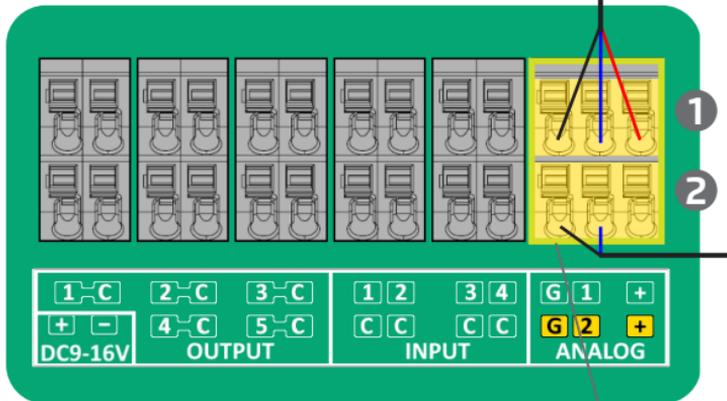


CAUTION: Ensure setting the correct analog protocol before connecting the sensor.

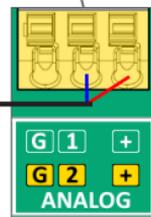
Two-wire active analog sensor (connected to an external power source)



Three-wire passive analog sensor (powered by the Omega controller)



Two-wire passive analog sensor



COMMUNICATING VIA RS-485 CABLE

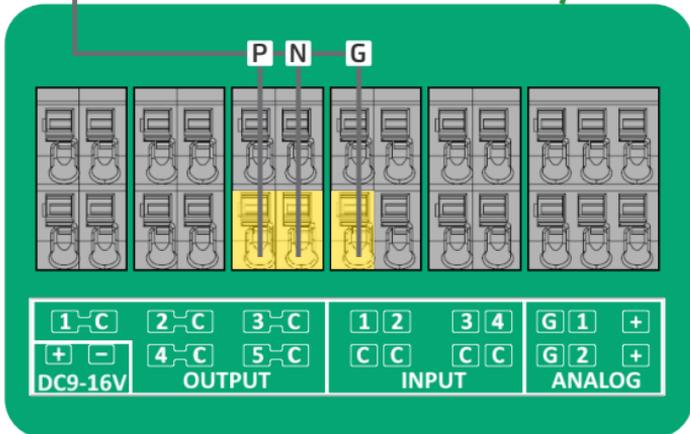
Additional peripheral equipment can be connected either wired or wirelessly to the Omega controller using an RS-485 cable.



NOTE: Omega Modbus protocols are written specifically for RS-485 communication with peripheral device solutions offered by BERMAD.

Peripheral devices

RS-485



RS models only



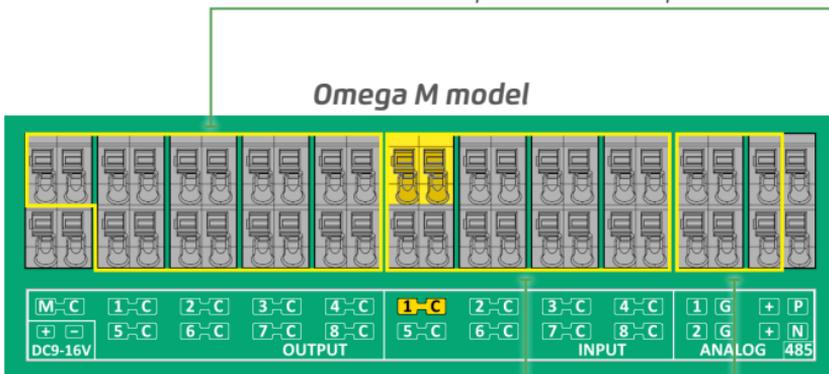
NOTE: Ground (G) is optional and is connected only when needed.

OMEGA M & OMEGA L CONTROLLERS

Output, Input, and Analog Connections

The Omega M and Omega L controllers include the following options for connecting to peripheral devices:

Up to nine output devices



Up to eight digital input devices

Up to two analog input devices



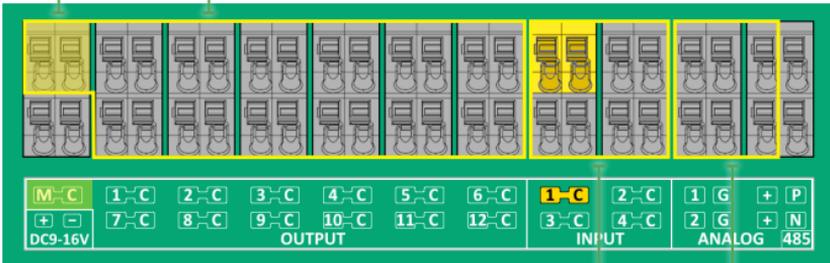
NOTE: For more info on connecting peripheral devices, see the section "Connecting Peripherals" above.



NOTE: M-C is the default connection for a master valve. If there is no master valve, an additional valve can be connected here.

Up to thirteen output devices

Omega L model



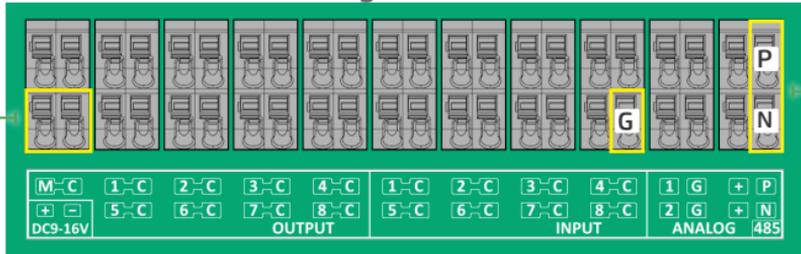
Up to four digital input devices

Up to two analog input devices

Power and Communication Connections

Omega M and Omega L controllers are connected to an external power source and an RS-485 communication cable in the following locations:

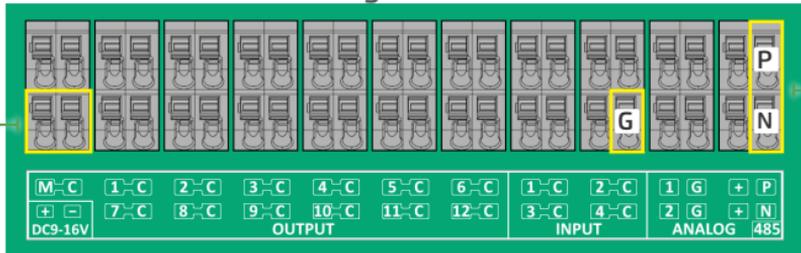
Omega M model



External power source

Communication via RS-485 cable

Omega L model



NOTE: Ground (G) is optional and is connected only when needed.

MANAGING PROJECTS AND CONTROLLERS

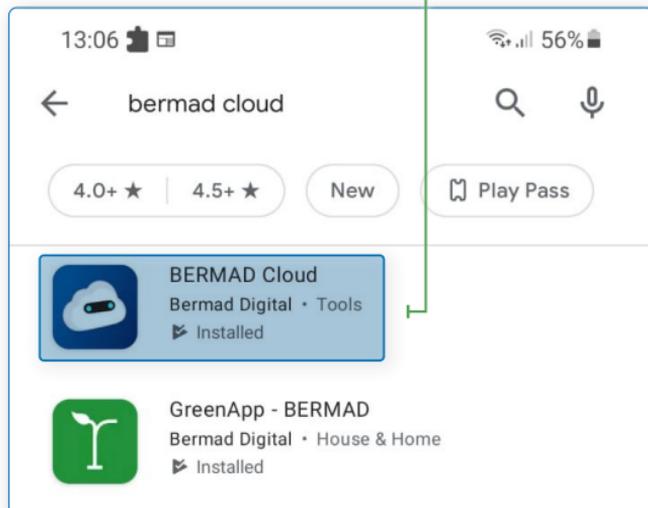
Downloading BERMAD Cloud App

Perform the following steps to download the BERMAD Cloud application:

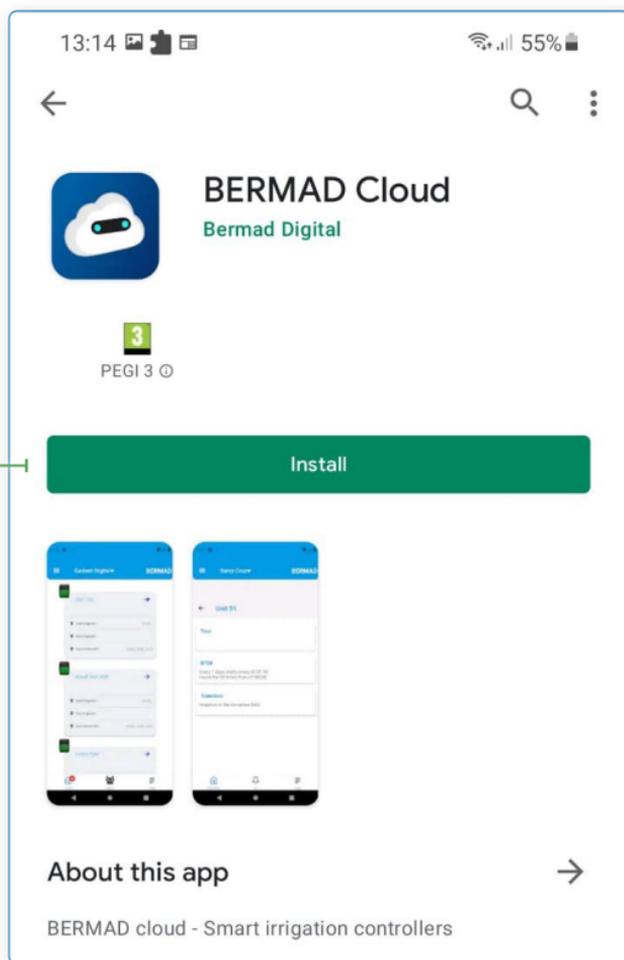
1. Go to the relevant app store



2. Search for the **BERMAD Cloud** app and select it from the list



3. Tap *Install*



Registering

Perform the following steps to register as a new user:

- 1.** *Open the BERMAD Cloud app, or type **cloud.bermad.io** in the Internet browser address bar. The BERMAD Cloud login window is displayed*

BERMAD Cloud

E-mail

Password

[show password](#)

Login

[new user - click here to sign up](#)

- 2.** *Click **sign up**. The registration window opens*



NOTE: The registration process can also be completed in the BERMAD Cloud application.

3. Type first and last name and e-mail

4. Type a password, then type it again to confirm

5. Select the relevant options

6. Click **Sign Up**

←

First Name

Last Name

E-mail

Password

Confirm password

Timezone
Asia/Jerusalem

week's first day:
Sunday

Language
English

system units
Metric

Flow unit
Cubic Meter Per Hour (m³/h)

By clicking Sign Up, you agree to our [Terms](#) and Cookies

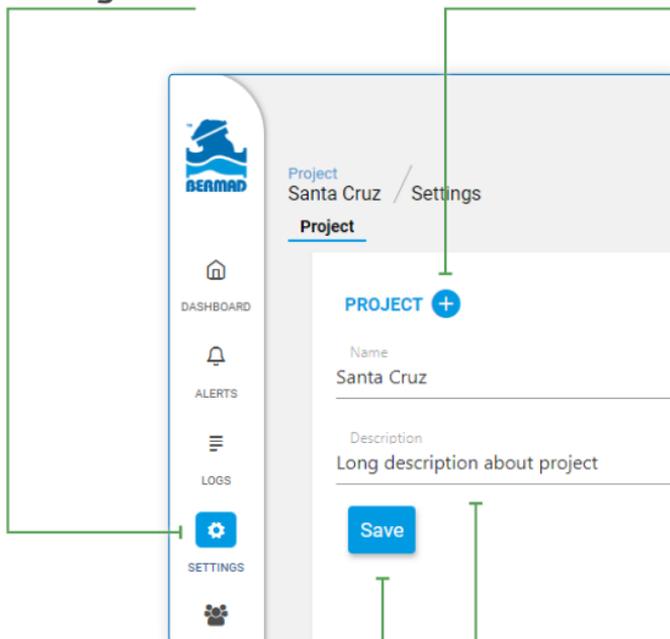
Sign Up

Creating a project

Perform the following steps to create a project:

1. Click the **Settings** icon

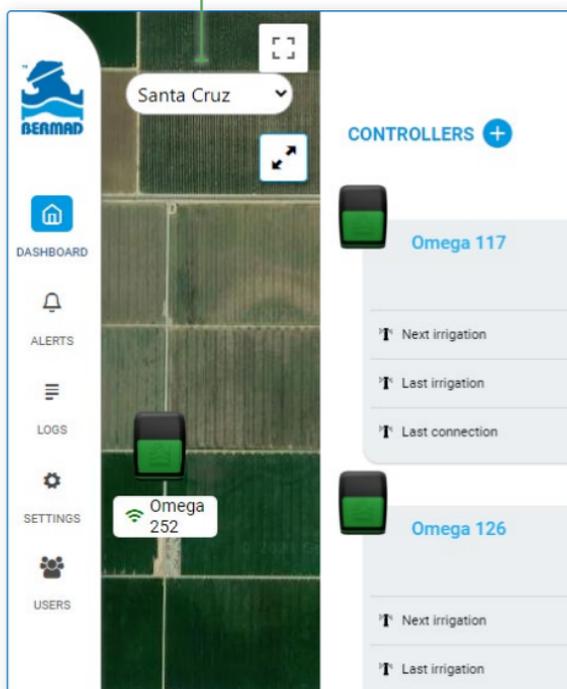
2. Click the **+** icon to add a new project



4. Click **Save**. The new project is added to the list of projects

3. Type the project name and description

5. Click the dropdown menu to select and display a project



Adding controllers

Perform the following steps to add a new controller to the selected project:

1. *Verify the relevant project is selected*

2. *Verify that **Dashboard** is selected*

3. *Click the **+** icon to add a new controller*



7. *At the end of the new controller definition process the new controller is added to the display*

4. *The Cloud Assistant opens.*
Click **Add New Controller**

The screenshot shows a mobile application interface for irrigation control. At the top, there is a blue header with a bell icon, a circular profile icon labeled 'TN', and the text 'Good morning Tim Niceman'. Below the header, the main area is titled 'Santa Cruz' with a subtitle 'Santa Cruz long description about something'. A circular progress indicator shows '20%' and 'Connected controllers 1 / 5 Last 24 Hours'. Three controller cards are visible: 'Omega 139', 'Omega 121', and 'Omega 252'. Each card displays 'Next irrigation', 'Last irrigation' (with a date and time), and 'Last connection' (with 'Long time ago'). A 'Cloud Assistant' chat window is open at the bottom right, showing a greeting 'Hello! How can I help you?' and a button labeled 'add new controller'. Below the chat window is a text input field with the placeholder 'Type the message ...' and a microphone icon.

5. *The Cloud Assistant displays questions which guide the user through the new controller definition process*

6. *Type answers to the questions*

Notes



Irrigation



www.bermad.com

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