Bluelab Power Relay R4
Manual

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PLEASE FOLLOW THE MANUAL STEP BY STEP BEFORE FIRST USE

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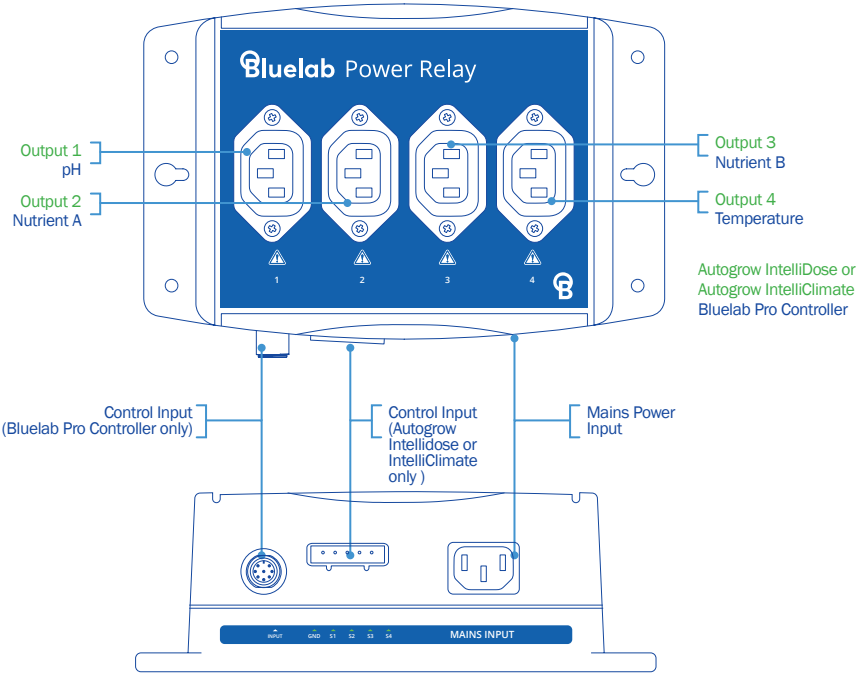
1.0 Introduction & Overview

1.1 Introduction

The Bluelab Power Relay is an electronically controlled mains switching box that is designed to activate mains powered equipment via control signals from Bluelab and Autogrow control devices. The Bluelab Power Relay is ideal for use when using third party mains powered pumps, heaters and coolers that are controlled by the Bluelab Pro Controller, Autogrow IntelliClimate, or Autogrow IntelliDose.

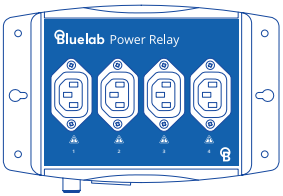
1.2 Features

Bluelab Power Relay R4 110V	4 x IEC mains outputs (15A maximum total output load)	90~-120VAC, 50/60Hz compatible
Bluelab Power Relay R4 240V	4 x IEC mains outputs (10A maximum total output load)	220~-240VAC, 50/60Hz compatible
Compatable with the Bluelab Pro Controller, Autogrow IntelliClimate, and Autogrow IntelliDose		Allows Autogrow IntelliClimate to control up to 4 of the following additional outputs. Light bank 1, Light bank 2, Extractor Fan 1, Extractor Fan 2 (or Aircon), Humidifier, Dehumidifier, CO2 injector, Heater
Allows Autogrow IntelliDose to control an irrigation pump		Allows operation of external mains operated dosers and temperature control systems when connected

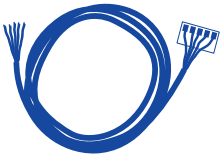


1.3 What's in the box?

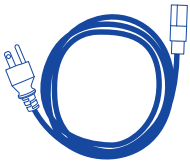
Please check and verify the box contents match the below list:



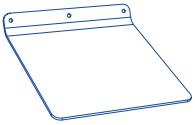
Bluelab Power Relay R4



Input cable



1x Mains INPUT power cord IEC C13 female type[2]
(country specific supplied)



Water cover



4x Mains OUTPUT power cord IEC C14 male type[2]
(country specific supplied)



7x mounting screws

[2]Actual product supplied may differ from the images above due to variation in the plugs required for the specific region the product is supplied to.

1.4 Product documentation

Documentation for this product consists of a printed user manual that is supplied with the product as well as being available electronically from the Bluelab website: **bluelab.com**

This documentation contains the latest product safety information at the time of publication. The information in this documentation is subject to change. For the most up-to-date documentation please visit our website **bluelab.com**

Safety symbols used in this documentation & product labelling:

WARNING

1 **Warning**

Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

CAUTION

2 **Caution**

Indicates a potentially hazardous situation which, if not avoided, could result in damage to the product or equipment it is connected to.

3 **! symbol**

The '!' icon on the Bluelab Power Relay R4 indicates possible sources of electrical shocks and/or risk of danger. Refer to specific areas of this product manual for more information related to these sources.

1.5 Safety information

The Bluelab Power Relay R4 has been designed and tested in accordance with the IEC 61010-1:2010 standard, and has been supplied as new, in a safe condition.

This manual contains information and warnings that must be observed to keep the Bluelab Power Relay R4 in a safe condition and ensure safe operation.

In order to use the Bluelab Power Relay R4 correctly and safely, read and follow the precautions below and follow all the safety instructions and/or warnings given throughout this manual that relate to the specific features of the Bluelab Power Relay R4. In addition, follow all generally accepted safety practices and procedures required when working with and around electricity.

WARNING

To avoid possible electric shock, personal injury or death, read the following before installing and using the Bluelab Power Relay R4.

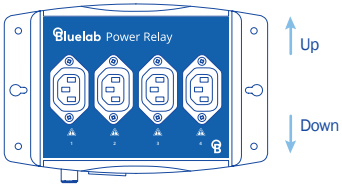
- Use the Bluelab Power Relay R4 only as specified in this manual or the protection provided by this product might be impaired.
- Inspect the Bluelab Power Relay R4 before using it. Do not use the Bluelab Power Relay R4 if it appears damaged.
- Inspect all connected cables before using the Bluelab Power Relay R4. Do not use them if any insulation is damaged or metal is exposed. Replace damaged cables before using the Bluelab Power Relay R4.
- Do not use this Bluelab Power Relay R4 if it operates abnormally. Protection may be impaired. If in doubt have the Bluelab Power Relay R4 serviced.
- Whenever it is likely that safety protection has been impaired, make the Bluelab Power Relay R4 inoperative and secure it against any unintended operation.
- Have the Bluelab Power Relay R4 serviced only by qualified service personnel.
- Do not apply more than the rated voltage, as marked on the product, between the power terminals or between any power terminal and earth ground.
- Always use the power cables that are appropriate for the voltage and outlet of the country or location in which the product is being used.
- Never operate the Bluelab Power Relay R4 with the case removed or open.

2.0 Installing the Bluelab Power Relay

2.1 Mounting the Bluelab Power Relay

The Bluelab Power Relay is designed to be mounted to a wall or solid mounting surface using the fasteners provided.

1. The Bluelab Power Relay should be mounted in the direction indicated in this diagram.

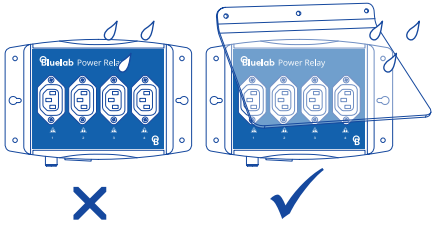


WARNING

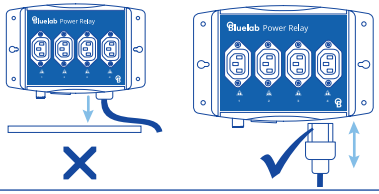
To avoid possible electric shock, personal injury or death, do NOT install this product while it is connected to a mains power supply.

CAUTION

To avoid possible damage to this product, ensure that the provided water cover is installed correctly with the mounting screws provided in a damp environment.



2. Ensure that once mounted the mains input connector is able to be removed easily and that it is NOT obstructed.

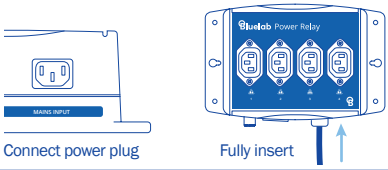


2.2 Connecting to a mains power source

WARNING

To avoid possible electric shock, personal injury or death, connect the factory supplied three-conductor mains power cable to a properly grounded power outlet. If a two-conductor mains power cable is used, or if this Bluelab Power Relay R4 is connected to a non-grounded power outlet then ensure that the equipment connected to the Bluelab Power Relay R4 does not require a ground connection.

1. The mains power source is connected to this product by connecting the factory supplied three-conductor mains power cable to connector (IEC C13 female type) on the bottom side of the product.



2.3 Connecting to external equipment

This product is designed to activate various mains powered equipment such as pumps, heaters, and coolers via inputs from a Bluelab Pro Controller, Autogrow IntelliClimate, or Autogrow IntelliDose.

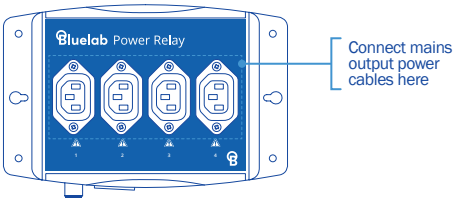
WARNING

To avoid possible electric shock, personal injury or death, only use the factory supplied cables to connect to external devices.

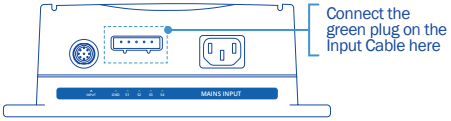
CAUTION

To avoid possible damage to the Bluelab Power Relay R4 ensure that the total maximum load of the connected external equipment is not more than 15 Amps if using a Power Relay R4 110V and 10 Amps if using a Power Relay R4 240V.

1. Connect external equipment into one or all four of the power sockets on the Bluelab Power Relay R4.



2. If using the Power Relay R4 with an Autogrow IntelliClimate or Autogrow IntelliDose, Connect the input cable into the corresponding input connector on the underside of the Bluelab Power Relay R4. Push the green plug fully into the connector.

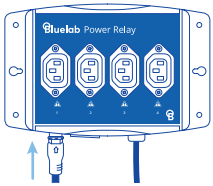


3. The opposite end of the Input Cable will need to be wired into the Autogrow IntelliClimate or Autogrow IntelliDose depending on what additional controller output functions are desired. (Refer to Autogrow IntelliClimate or Autogrow IntelliDose user manuals for controller output designations.

4. If using the Power Relay R4 with a Bluelab Pro Controller, connect the Bluelab Dosing Cable (sold seperatey) into the corresponding input connector on the underside of the Bluelab Power Relay R4. Push and screw the collar fully into the connector. This cable will connect to the Bluelab Pro Controller output.



Line up pins

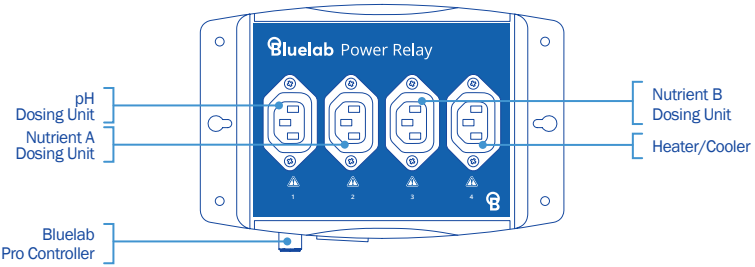


Push & screw

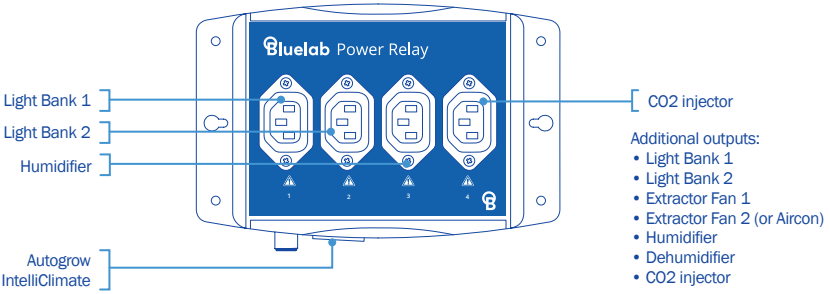
2.3 Connecting to external equipment continued

Examples of how to set up the Bluelab Power Relay R4 are illustrated below.

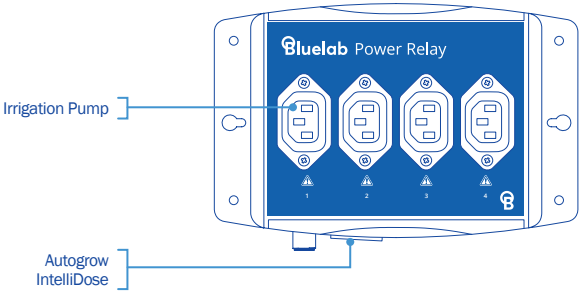
1. How to connect other dosing units to a Bluelab Pro Controller:



2. How to connect additional equipment to a Autogrow IntelliClimate:



3. How to connect additional equipment to a Autogrow IntelliDose:



3.0 Equipment Maintenance & Cleaning

3.1 Cleaning & equipment check

WARNING

To avoid possible electric shock, personal injury or death, read the following before attempting any maintenance or cleaning:

- Disconnect the Bluelab Power Relay R4 from the mains power source before carrying out any maintenance or cleaning.
- Maintenance on the Bluelab Power Relay R4 should only be caried out by approved personnel.
- Under no circumstance should the Bluelab Power Relay R4 be modified.
- Never get water inside this product.
- Only use factory supplied mains cables, replacements can be purchased from **bluelab.com**

1. If the Bluelab Power Relay R4 requires cleaning, wipe it with a cloth that is lightly dampened with water or a mild detergent. Do NOT use solvents.
2. Regularly inspect the connected cables for signs of damage. Do not use them if any insulation is damaged or metal is exposed. Replace damaged cables before using the product.
3. Connected equipment should undergo separate maintenance to ensure that it is safe to use as specified by the manufacturer of the equipment.

4.0 Troubleshooting & Specifications

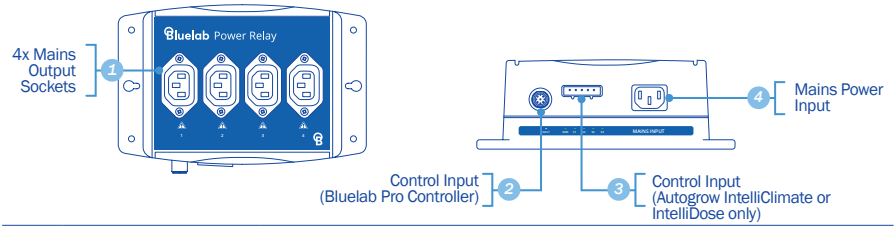
4.1 Troubleshooting guide

WARNING

To avoid possible electric shock, personal injury or death, disconnect the Bluelab Power Relay R4 from the mains power source before performing any maintenance.

TROUBLE	REASON	CORRECTION
Connected equipment is not dosing as I expect	Connectors are not fully inserted.	Check that all connectors are fully inserted into the correct positions.
	Connectors and/or cables are damaged.	Inspect the connected cables for signs of damage. Replace as required.
	Connected equipment is faulty.	Undergo checks to ensure that all connected equipment is operating correctly and safely, as specified by the manufacturer of that specific equipment.
	The circuit breaker on the Power Relay R4 has been tripped.	Disconnect Bluelab® Power Relay R4™ from the mains power source and then disconnect any other cables. Reset the circuit breaker (located on the right hand side of the product) by pushing the circuit breaker button to reset it (Excessive current load has caused the circuit breaker to trip - determine source of the excess current load and rectify). Once rectified, re-connect all required cabling to the Bluelab Power Relay R4, and re-connect to the mains power source.
	Bluelab Power Relay R4 is faulty.	Return or replace Bluelab Power Relay R4.

4.2 Technical specifications



1 Bluelab Power Relay R4 output sockets	Power Relay R4 110V	Power Relay R4 240V
Type	IEC C13 female mains OUTPUT socket	
Output voltage range	90 - 120 V~ (same as input voltage applied at 4)	220 - 240 V~ (same as input voltage applied at 4)
Output frequency range	50 - 60 Hz (same as input voltage applied at 4)	
Total rated load	15A (maximum total load for all sockets) Circuit breaker current rating 15A (Push to reset)	10A (maximum total load for all sockets) Circuit breaker current rating 10A (Push to reset)

2 Control input (for Bluelab Pro Controller)	
Type	M12 type connector in an 8 female pin configuration
Input voltage range	24 Vdc (maximum)
Input frequency range	n/a
Total rated load	20 mA (maximum)

3 Control input (for Autogrow IntelliClimate or IntelliDose)	
Type	5 pole straight male plug, 5.08mm pitch
Input voltage range	24 V ac/dc (maximum)
Input frequency range	n/a
Total rated load	1.2A (maximum)

4 Mains power input	Power Relay R4 110V	Power Relay R4 240V
Type	IEC C14 male mains INPUT socket	
Output voltage range	90 - 120 V~	220 - 240 V~
Output frequency range	50 – 60 Hz	
Total rated load	15A (maximum)	10A (maximum)

Bluelab Power Relay R4 environmental	
Operating Temperature	0°C to 50°C
Storage Temperature	-20°C to +80°C
Operating Humidity	< 90% (Relative humidity: non-condensing)
Storage Humidity	< 95% (Relative humidity: non-condensing)
Enclosure Rating	Designed to meet IP43, when ALL the mains output plugs are in place. Water cover provided to give extra protection
Certifications	RCM, CE, UKCA, UL, FCC, IC, IEC 61010-1:2010

Mains Cable Packs

Replacement mains cable packs are available with country specific fittings. Each pack contains 1x mains input cable and 4x mains output cables.

Bluelab US Cable Pack
Part number: PPCNA

Bluelab EU Cable Pack
Part number: PPCEU

Bluelab UK Cable Pack
Part number: PPCUK

Bluelab AUS/NZ Cable Pack
Part number: PPCNZ



PPCNA shown above

Dosing Cable

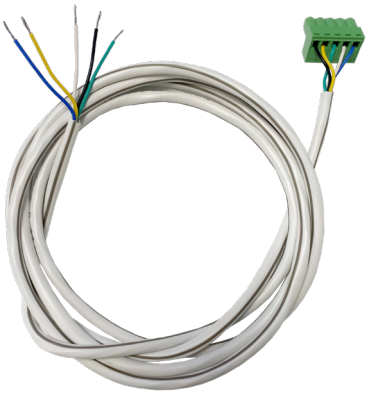
Bluelab Dosing Cable
Part number: 500005

Sold seperately, and required for integration with the Bluelab Pro Controller



Input Cable

Autogrow Input Cable
Part number: M-000764



2-YEAR LIMITED WARRANTY

2-Year limited warranty for the Bluelab Power Relay R4.
Details available at www.bluelab.com/product-warranty



lets talk.

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