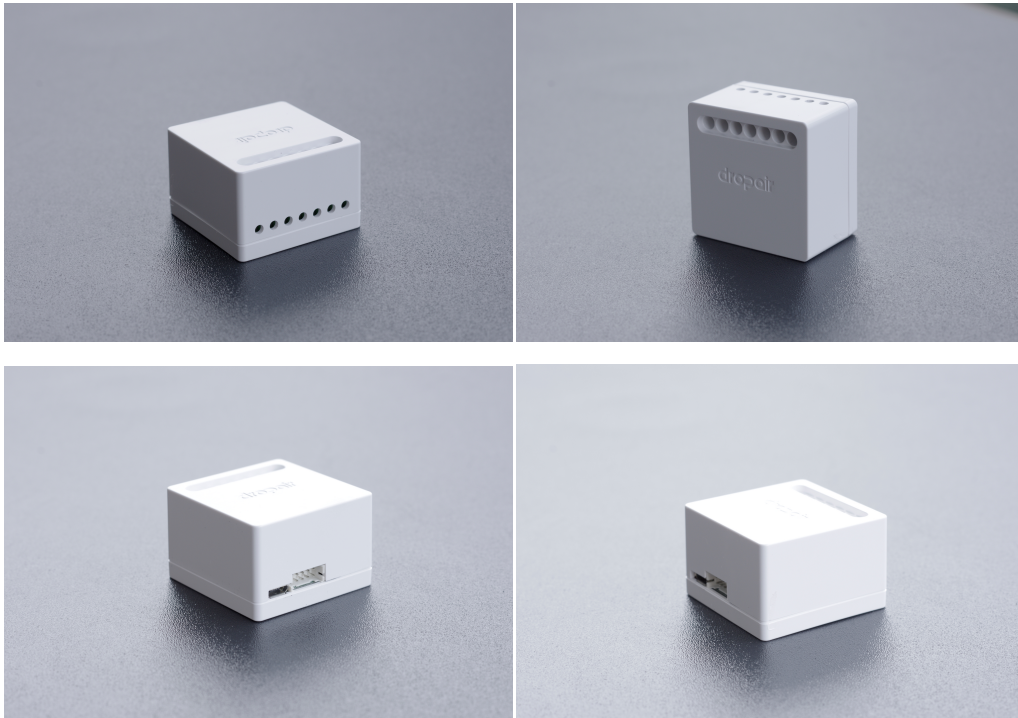


Dropair Pro7

Pro Installation & Configuration Guide



Last updated: Nov. 10 2020

Version: 1.2

General Information

Attention

Please read the following information carefully before you start to install. Improper installation can result in electric shock or damage to the equipment.

1. Please check the label on the adapter and confirm if the adapter model matches your Fan Coil Unit (FCU). The hardware and firmware for different types of FCU are not universal.
2. There has the offered cable, please check the labels and confirm if it matches your intelligent thermostat.
3. Before installation, the power to adapter needs to be shut down until all connections are complete.
4. Test the existing thermostat to confirm the air conditioner is intact before installation.
5. The connection between the adapter and the indoor unit uses the official standard control interface, which will not change or break anything in the air conditioner. So don't worry about using the Dropair adapter to lose your air conditioner warranty.
6. If the customer worries about that the air conditioner supplier will pick up the third-party equipment for refusing warranty, please remove the Dropair adapter temporarily after you determine that the air conditioner has issue, and then restore the original thermostat to the original condition before request service support. After the air conditioner problem is resolved, restore.
7. Adapter is a customized product. If you have any questions or special requirements, please do not hesitate to connect with us. Facebook/Twitter: @dropairs. Email: fandesk@gmail.com.

Compatibility

The Pro7 adapter can control AC motor and the on/off valve or modulation valve.

Minimum Requirements - the following must be in place for Dropair to be compatible:

	Model Name	Pipes	Motor	Valve
FCU	Pro7-AC	2 or 4	AC	On/off, 2 or 3wires
	Pro7-DC	All series	AC	Modulation

Connections:

- 7 connections for FCU
- One connector and wire for intelligent thermostat

Product Requirements:

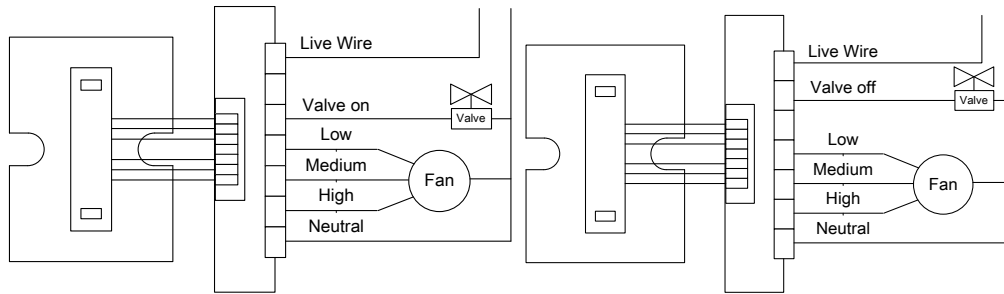
- AC24 intelligent Thermostat
- 100-240V power supply
- AC motor FCU

Checking Compatibility - How to tell if Pro7 will work with AC

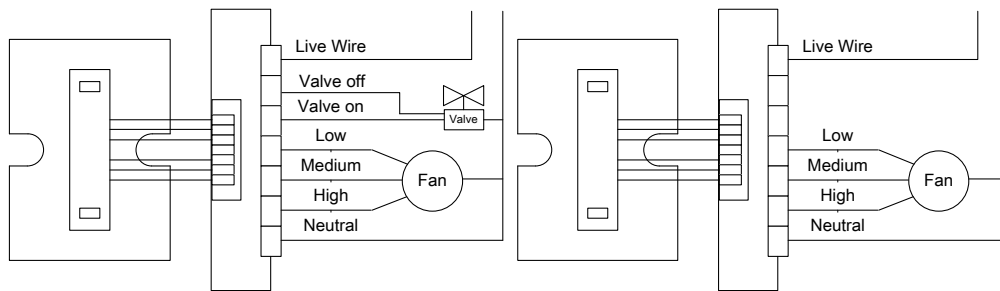
Follow the steps below to see if you can control air conditioner with Pro7.

1. Check if the air conditioner is the chilling water system or refrigerant system. If the indoor unit is controlled by 2-4 wires DC voltage thermostat, it is refrigerant system; you need to use the Mini6 series adapter. If 100-240V thermostats have controlled the indoor unit; it needs next checking to confirm.
2. If the air conditioner is the chilling water system. You need to check the original thermostat to confirm the valve is the on/off valve or modulation valve.
3. If the motor is the 0-10V DC controlled motor, please use the Pro6X adapter.
4. If the valve is the modulation valve, you need to check if the original thermostat has the same ports as the adapter. If it is not the same, you need to simply change the purpose of the original cable.
5. Confirm that the FCU motor and valve current ranges are within the adapter load range.

If the original thermostat diagram is one of the 8 types, the Pro7 will can be used:

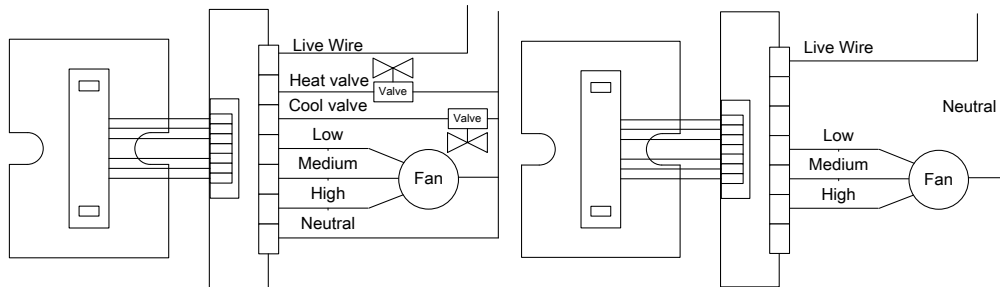


2-wire normally closed on/off valve FCU 2-wire normally opened on/off valve FCU



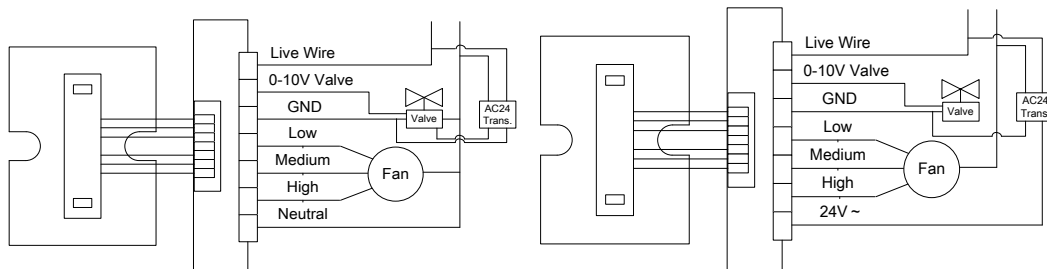
3-wire on/off valve FCU

no valve FCU



4-pipe on/off valve FCU

Single Live Wire Thermostat FCU



modulation valve FCU Low vol. thermostat

modulation valve FCU

Technical Specification

Model name	Pro7-AC, Pro7-DC	Input Voltage	100-240 volts, 50/60Hz
Item Weight	58g	DC Output Voltage	DC 0-10V
Product Dimensions	43(L)x 43(W) x 28(H) mm	AC Output Voltage	AC24V, 60Hz
Motor	100-240V, 3A	Wattage	0.8 watts
Valve	100-240V, 80mA	Torque	0.4 N.m
Color	White	Type of Bulb	LED
Material	ABS+PC FR3010	Indicator color	Red, Green
Shape	cuboids	Warranty	2-year limited

Installation & Setup

Installation Overview

Installation of Dropair adapter consists of the basic steps listed below. They are explained in more detail below and on the pages that follow. The first step is to confirm compatibility, is listed here but explained in detail previously in this guide.

1. Confirm compatibility.
2. Test the existing thermostat.
3. Power off the FCU.
4. Wire the control cable to adapter.
5. Connect to the smart thermostat.
6. Switch Power back on.
7. Test intelligent thermostat.

Installation Process

Step1 Confirm compatibility

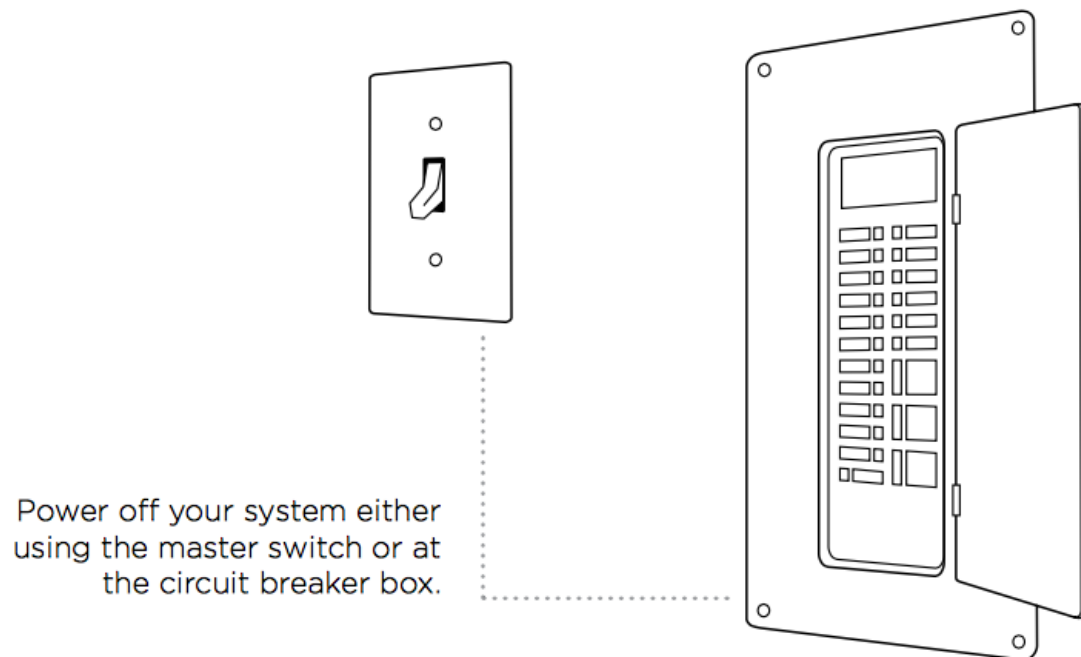
See page 3 for details.

Step2 Test the existing thermostat

Turn on the original thermostat to check that the air conditioner system is intact.
After testing.

Step3 Power off the FCU

Locate the electrical panel and identify the breaker that controls the circuit on which the indoor unit is wired. This is to protect yourself and the device. If you can't determine the circuit, turn off the main circuit breaker after getting permission from your customer. Confirm the power is off by attempting to activate the original thermostat.

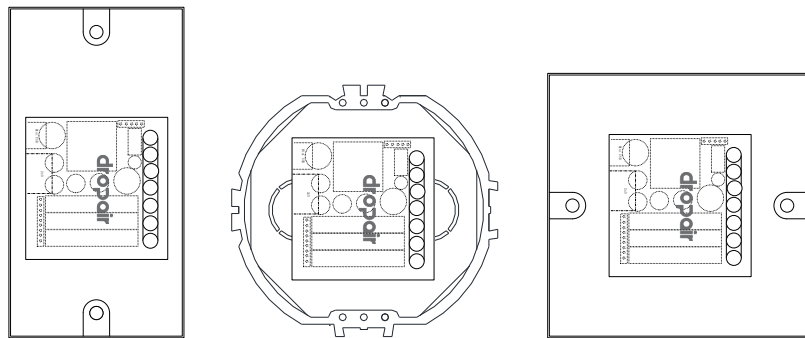


Step4 Wire the control cable to adapter

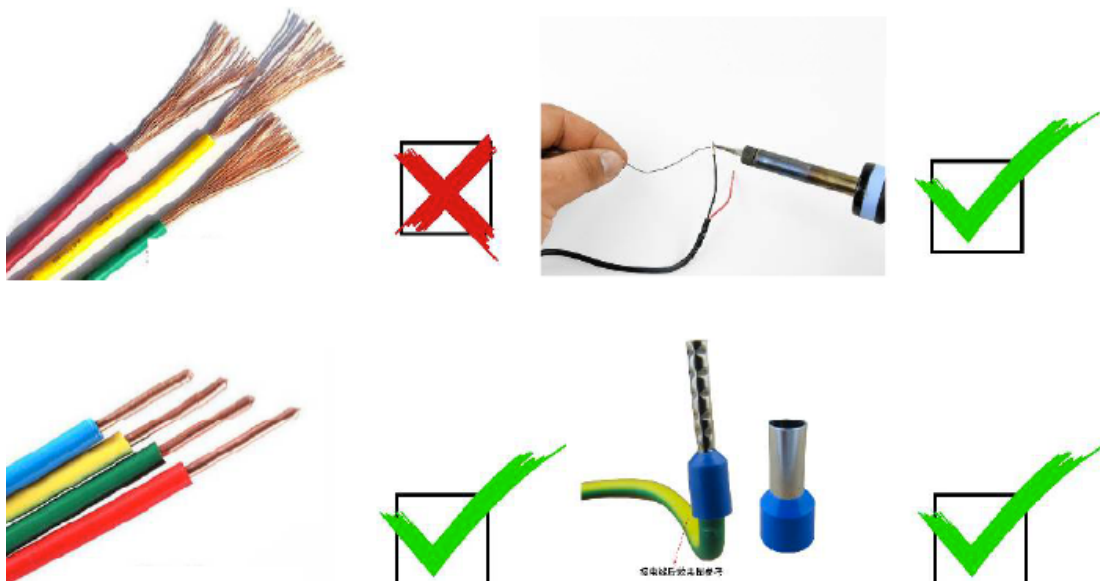
Remove the cover from your old thermostat. Most snap off easily but some of them maybe attached by screws.

Look at the wires coming out of the wall. Take a picture for reference.

Using the old thermostat base as a guide, label each wire going into your old thermostat with the provided stickers.



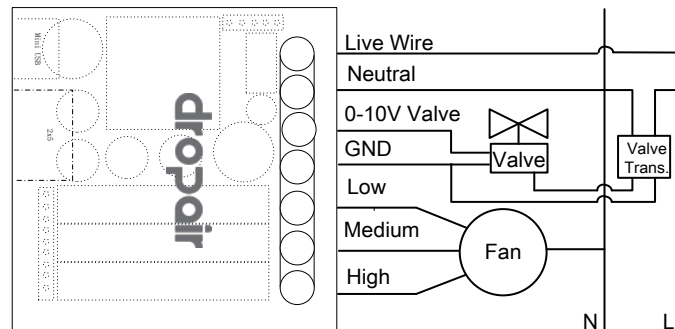
Connect control cable to adapter's ports. It must be a single strand of hard wire 0.3-1.0 mm² (22-17AWG) or multiple strands of tin or the use of tubular terminal, as shown in the following figure. When you screw, the torque must not exceed 0.4 N.m



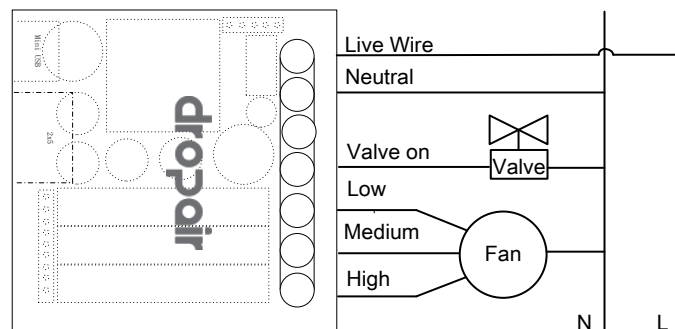
The adapter has the AC24 power inside; so do not need the additional transformer.

If you want to control two or more indoor units, you need to purchase Dropair Sync.

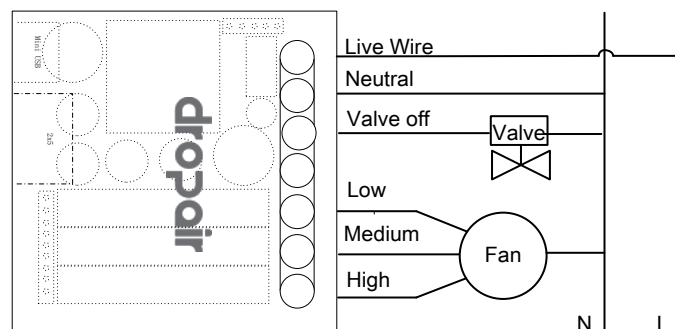
Pro7-DC connects with the AC motor and 0-10v modulation valve.



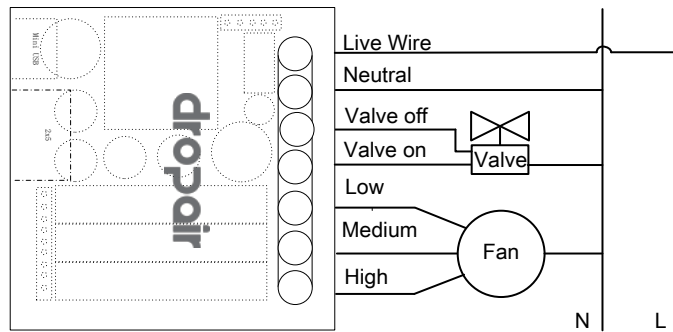
Pro7-AC connects with the AC motor and 2-wire normally closed on/off valve.



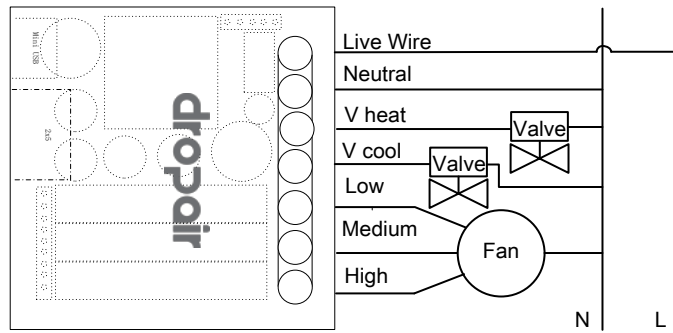
Pro7-AC connects with the AC motor and 2-wire normally opened on/off valve.



Pro7-AC connects with the AC motor and 3-wire on/off valve.



Pro7-AC connects with the 4 pipes AC motor and on/off valve.



Step5 Connect to the intelligent thermostat

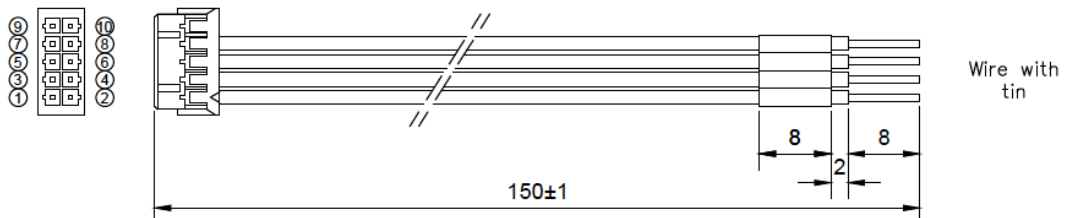
Connect the adapter to the AC24 smart thermostat, such as Nest Thermostat, Ecobee, and Lyric using the offered cable. Every wire has different color and the label on it.

HOUSING:
HX20016-10Y(PHD) P2.0mm

Wires: AWG22#

Heat
shrinkable
sleeve label

TERMINAL:
HX20016-PT(PHD)



Attention: Sometimes you need to change the position from the W2 wire or * wire when you want to used for different intelligent thermostat. The Nest Learning Thermostats use the * wire, and the Ecobee, Control4, Lyric thermostats use the W2.

The firmware for different intelligent thermostat is universal.

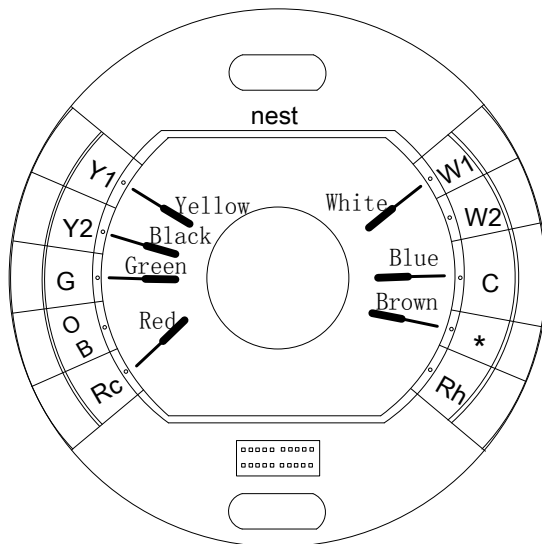
If your air conditioner system does not have heating function, do not need to connect the W1 and W2.

Offered cable's color definition:

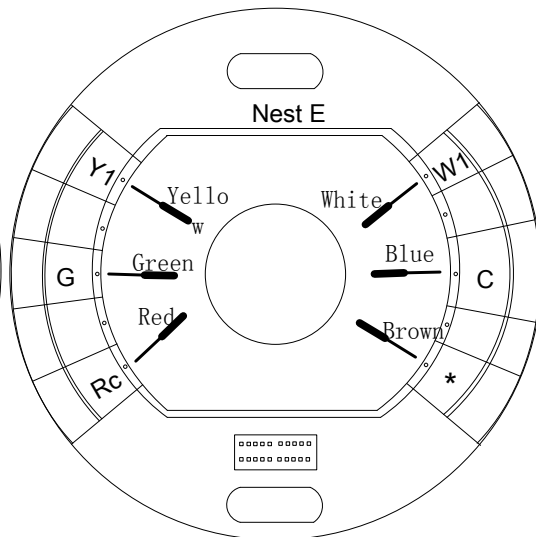
Color	Brown	White	Brown	Yellow	Black	Green	Blue	Red
Def.	W2	W1	*	Y1	Y2	G	C	Rc
Order	6	7 (N/A)	4	5	8	3	2	1

Connect to Nest Base

Nest Learning Thermostat 2nd or 3rd



Nest Thermostat E

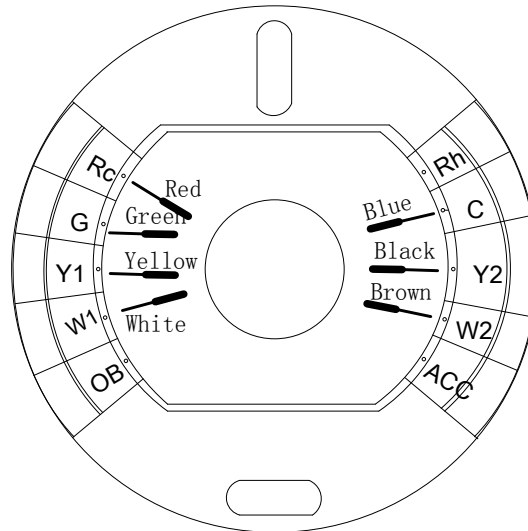


Set * to G3 and Y2 to G2 when the thermostat is initialized.

Set * to Y2 in summer and to W2 in winter to get auto two fan speed.

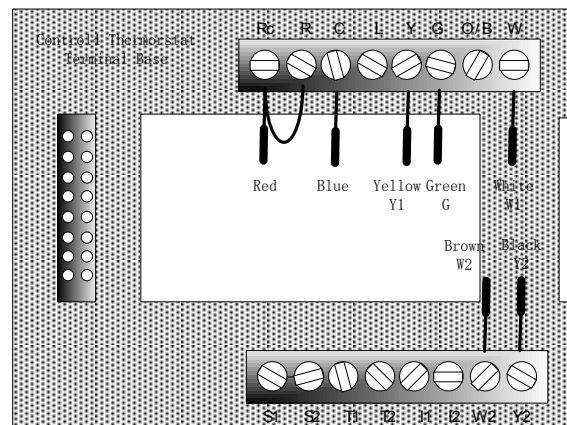
Connect to the Ecobee and Lyric

Ecobee/Lyric Thermostat



You can get two automatic fan speeds. If do not need, remove the Y2 and W2.

Connect to the Control4 Aprilaire thermostat.



You can get two automatic fan speeds. If do not need, remove the Y2 and W2.

Step6 Switch power back on

The adapter always has two normal LED indicate lights.

Red indicates AC24 power light status. If the red light does not run on, please check the power supply of the adapter.

The green led light indicates the status of the nest input signal, flashing indicates no signal input, and long light indicates signal input. If the thermostat works on cooling, fan or heating mode, the green led will light on.

Step7 Test intelligent thermostat

Refer to the installation guide of thermostat to fix the thermostat on the wall and finish the thermostat initialization settings. If the air condition can be controlled now, Congratulation!

Trouble Shooting

If there has no AC24V output, please check if there has red indicator light. If there has no red indicator light, please check the power supply.

If the intelligent thermostat is in cooling mode, the green light is still blink, not always on, please the check wires which connect with thermostat wire base.