



Innovair Slim 24 wiring connecting guide



Scenario	Controller	Indoor unit	Connection between Indoor and outdoor	Outdoor unit	Innovair AHU DIP switch		Innovair ODU DIP switch
					SW1-1	SW1-4	S1-2
Scenario 1	Innovair Wired controller (Standard)	Innovair AHU	RS485: S1/S2	Innovair ODU	OFF (Default)	OFF (Default)	OFF (Default)
Scenario 2	24V Thermostat	Innovair AHU	RS485: S1/S2	Innovair ODU	ON	OFF (Default)	OFF (Default)
Scenario 3	24V Thermostat	Innovair AHU	24V: R/C/B/Y1/Y2/G/W	Innovair ODU	ON	ON	ON
Scenario 4	24V Thermostat	Innovair AHU	24V: R/C/B/Y1/Y2/G/W	The third-party ODU	ON	ON	n/a
Scenario 5	24V Thermostat	The third-party AHU / Furnace / A-COIL as a Heat-Pump	24V: R/C/B/Y1/Y2/G/W	Innovair ODU	n/a	n/a	ON
Scenario 6	24V Thermostat	The third-party AHU / a Furnace / A-COIL as a Straight Cooling	24V: R/C/B/Y1/Y2/G/W	Innovair ODU	n/a	n/a	ON

Innovair Slim 24 New & Previous Outdoor low voltage connection ports

Old Version



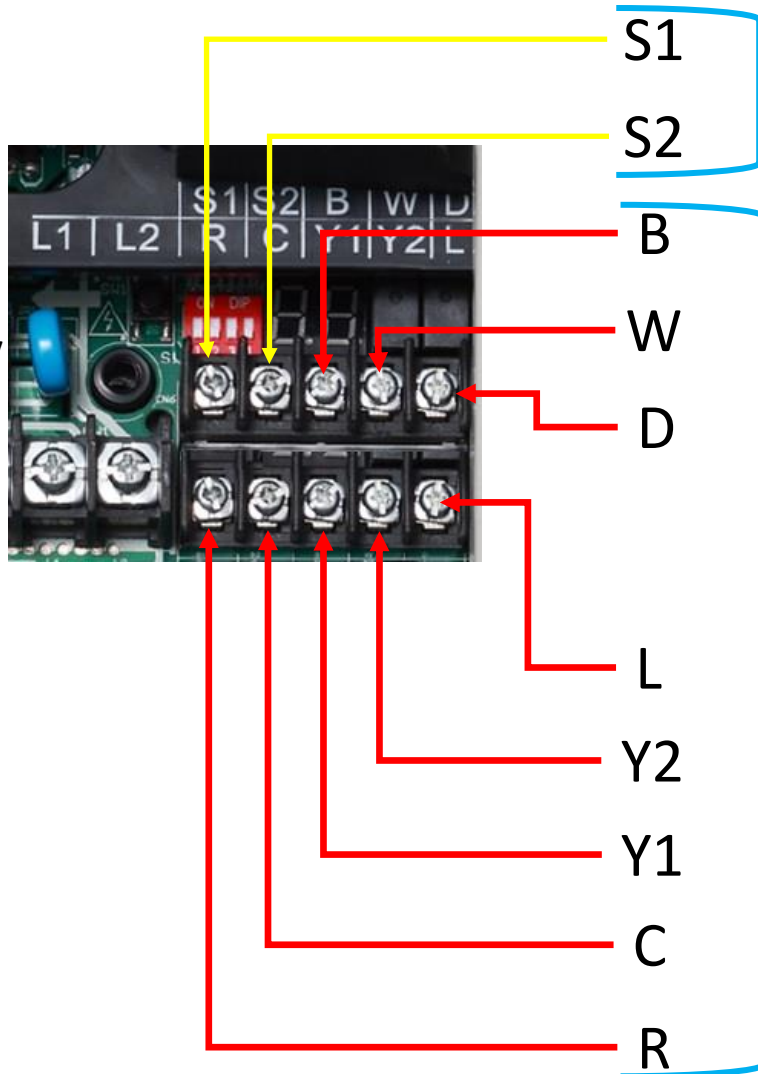
New Version



Innovair Slim 24 wiring connecting guide



Innovair
Outdoor 24V
Board



Only for Scenario 1 & 2

For Scenario 3, 4, 5 & 6

NEST 1st Gen Thermostat

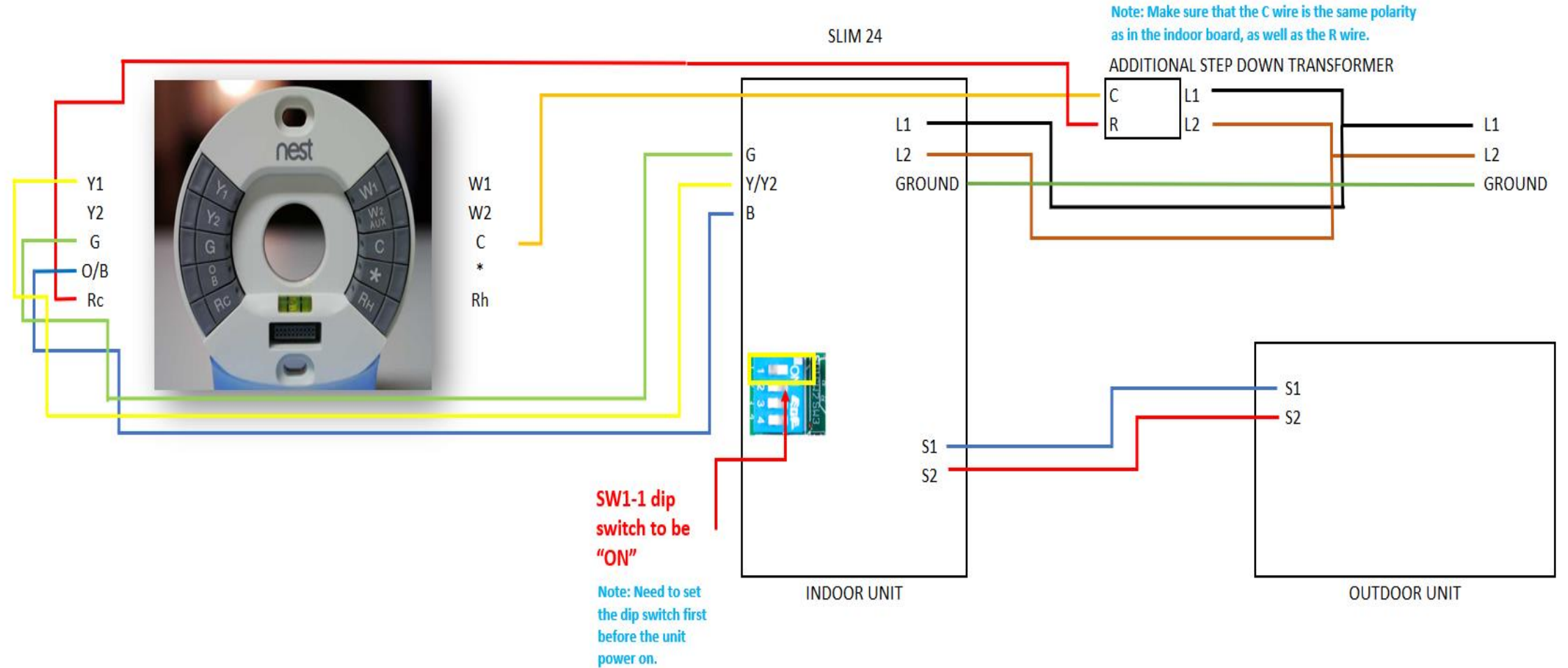


Step-down Transformer



Note: If you are going to be using a NEST thermostat, make sure to add a dedicated step-down transformer from 230V to 24V. You may wire the R and C that come from the thermostat to the 24V from the transformer. The other wires can go to the 24V terminal on the air handler.

Innovair Slim 24 NEST wiring guide



Scenario 1: Standard (You will get the highest efficiency with this setup)

Innovair Wired controller (Standard)

HA/HB
+

Innovair AHU Indoor unit

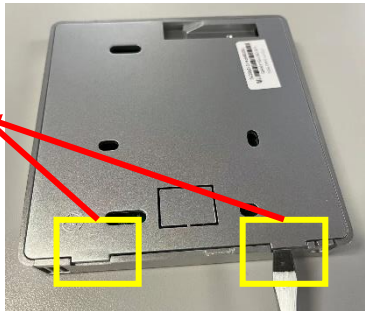
S1/S2
+

Innovair Outdoor unit

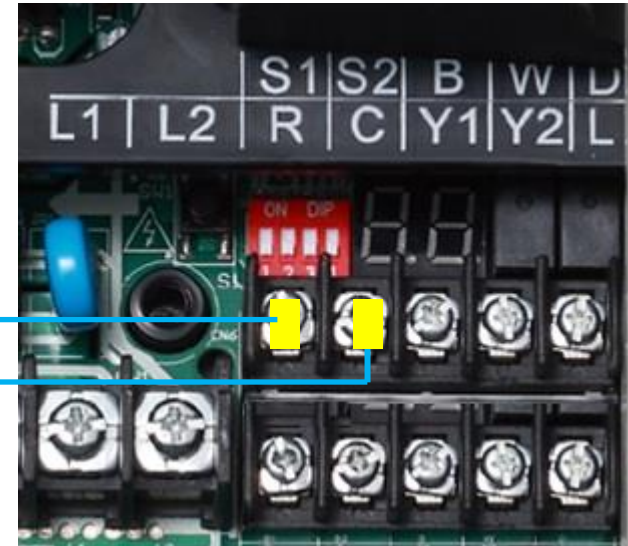
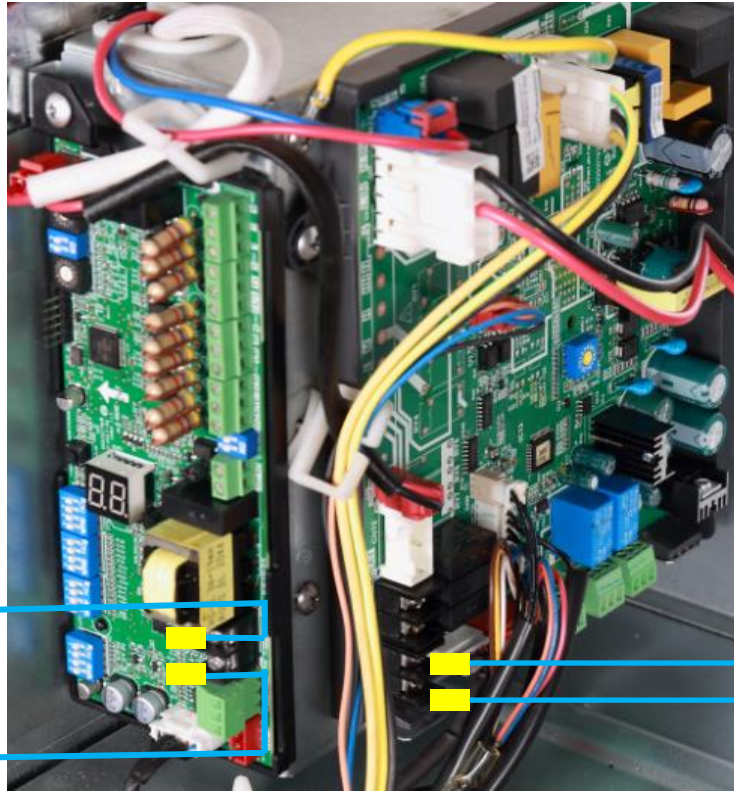


Package with indoor unit

Open the rear cover



HA/HB



S1/S2

(2 Wires will be connected: S1/S2)



Scenario 2: This scenario works similar as scenario 3 with the advantage of digital communication between Indoor & Outdoor.



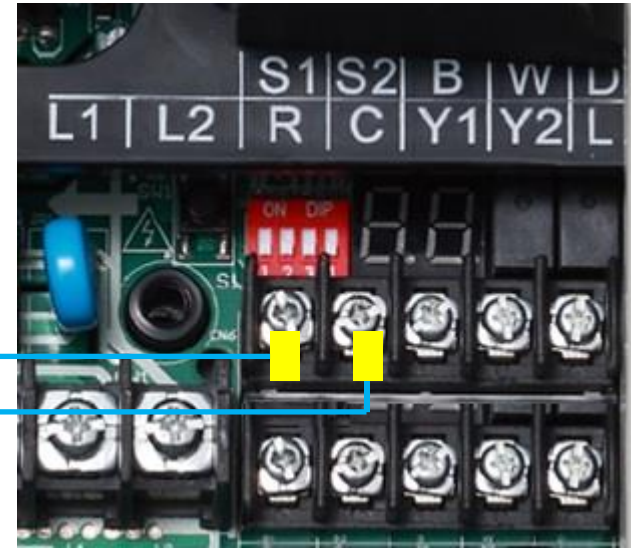
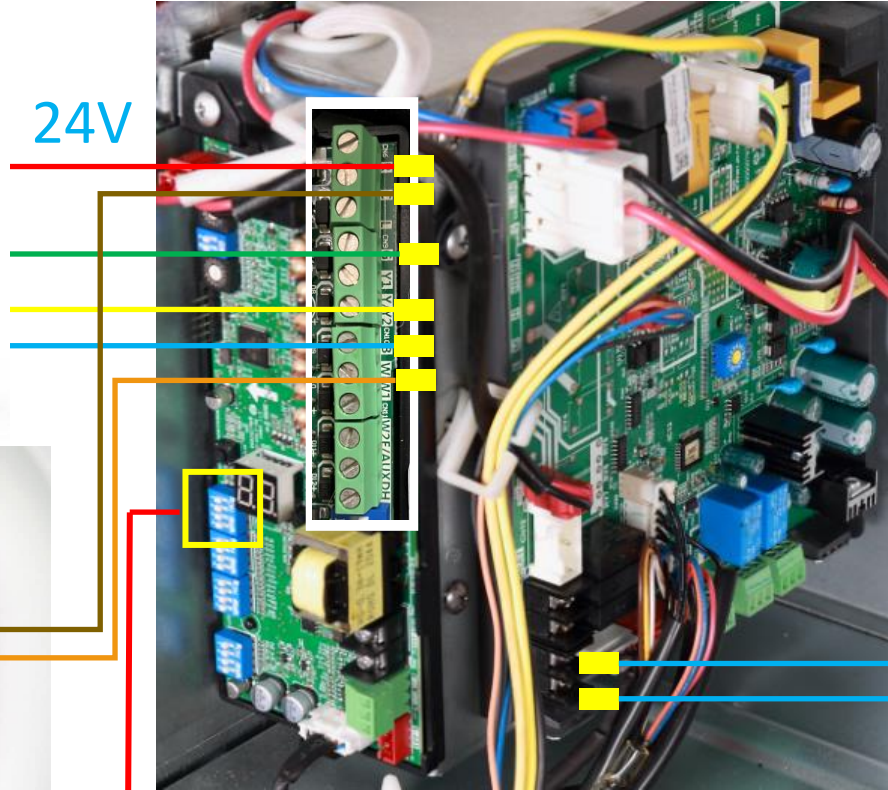
24V Thermostat

24V
+

Innovair AHU Indoor unit

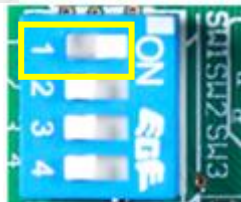
S1/S2
+

Innovair Outdoor unit



S1/S2
(2 Wires will be connected: S1/S2)

Ecobee 24V thermostat as an example



SW1-1 dip switch to be "ON"

Note: Need to set the dip switch first before the unit power on.



Scenario 3: This scenario works similar as scenario 2 without the digital communication between Indoor & Outdoor.



24V Thermostat

24V +

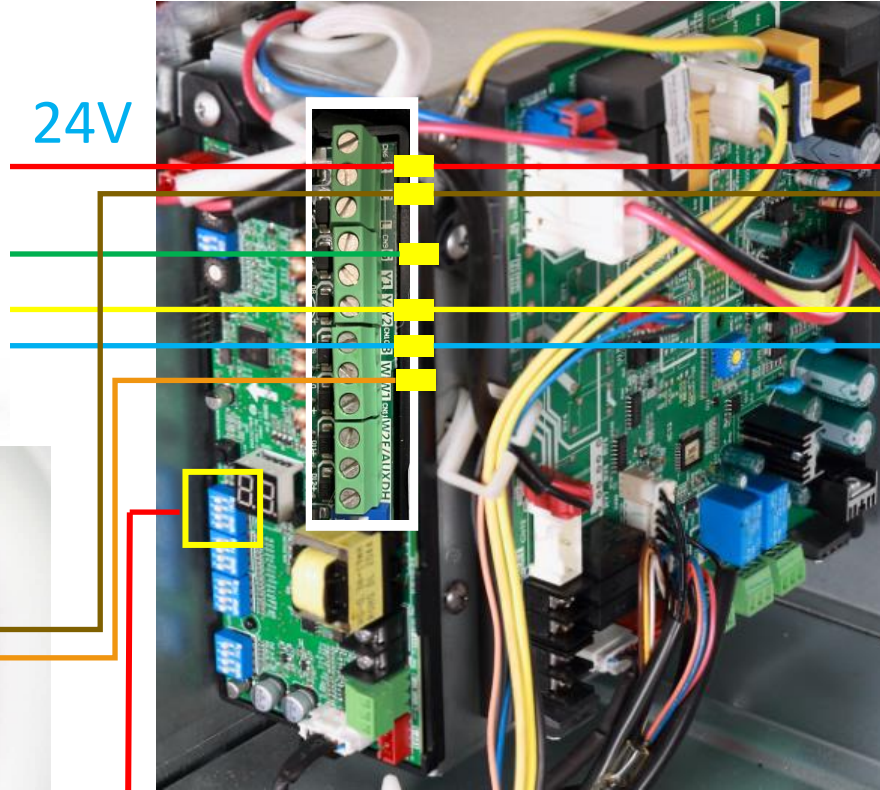
Innovair AHU Indoor unit

24V +

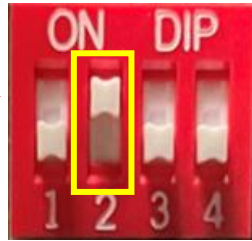
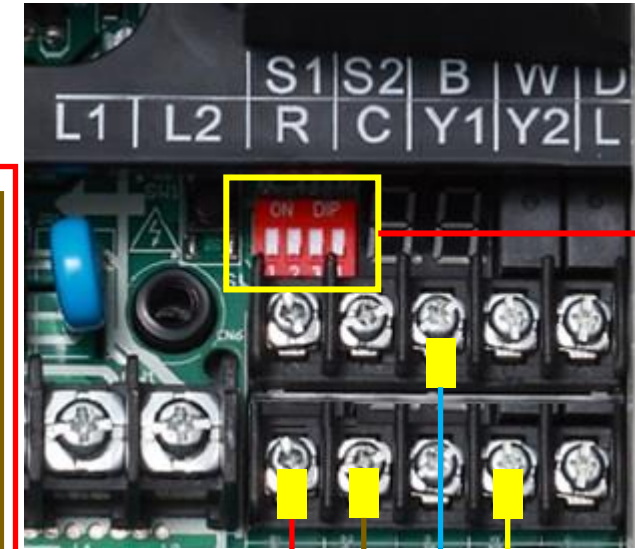
Innovair Outdoor unit



Ecobee 24V thermostat as an example



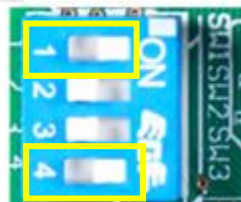
24V



S1-2 dip switch to be "ON"

(5 Wires will be connected: R/C/W/B/Y2)
 Note: R / C / and Y2 are on the bottom ports covered by the transparent lid that says "CLASS 2"; B and W go on the top.

Note: Need to set the dip switch first before the unit power on.



SW1-1 dip switch to be "ON"

SW1-4 dip switch to be "ON"



Scenario 4:

24V Thermostat

24V
+

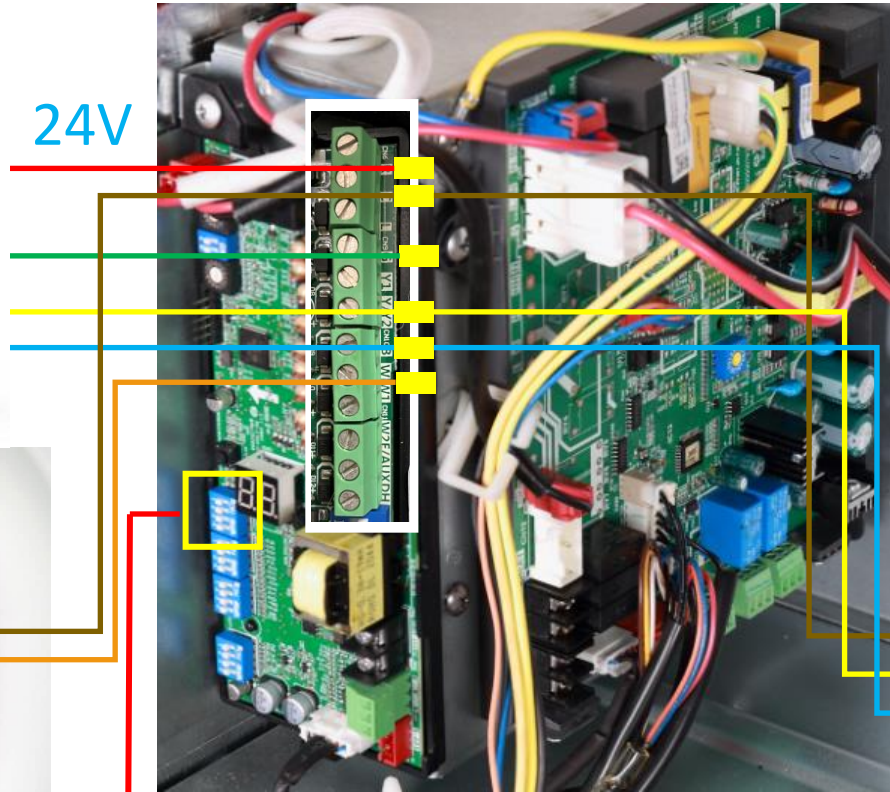
Innovair AHU Indoor unit

24V
+

The third party
Outdoor unit



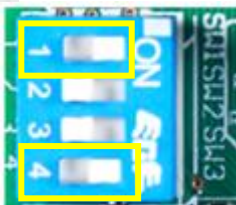
Ecobee 24V thermostat as an example



24V



C Y B W



SW1-1 dip switch to be "ON"

SW1-4 dip switch to be "ON"

Note: Need to set the dip switch first before the unit power on.



Scenario 5:

24V Thermostat

24V +

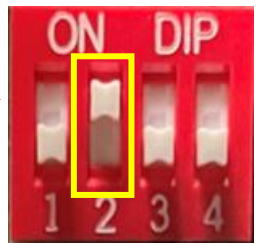
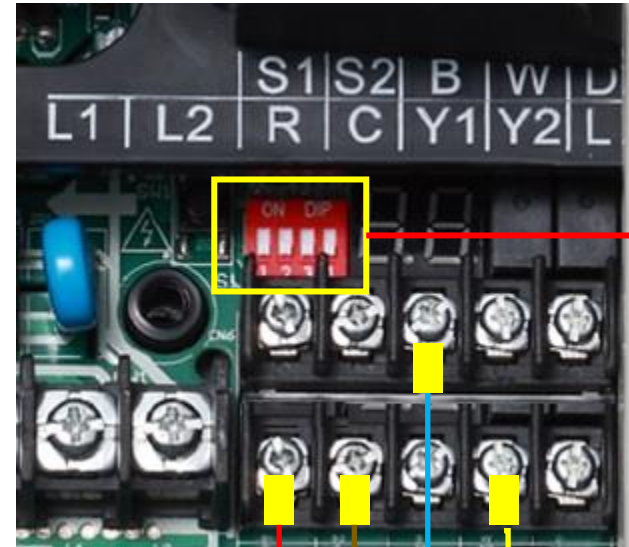
The third-party Indoor unit or Furnace as a Heat-Pump

24V +

Innovair Outdoor unit



Ecobee 24V thermostat as an example



S1-2 dip switch to be "ON"

Note: Need to set the dip switch first before the unit power on.

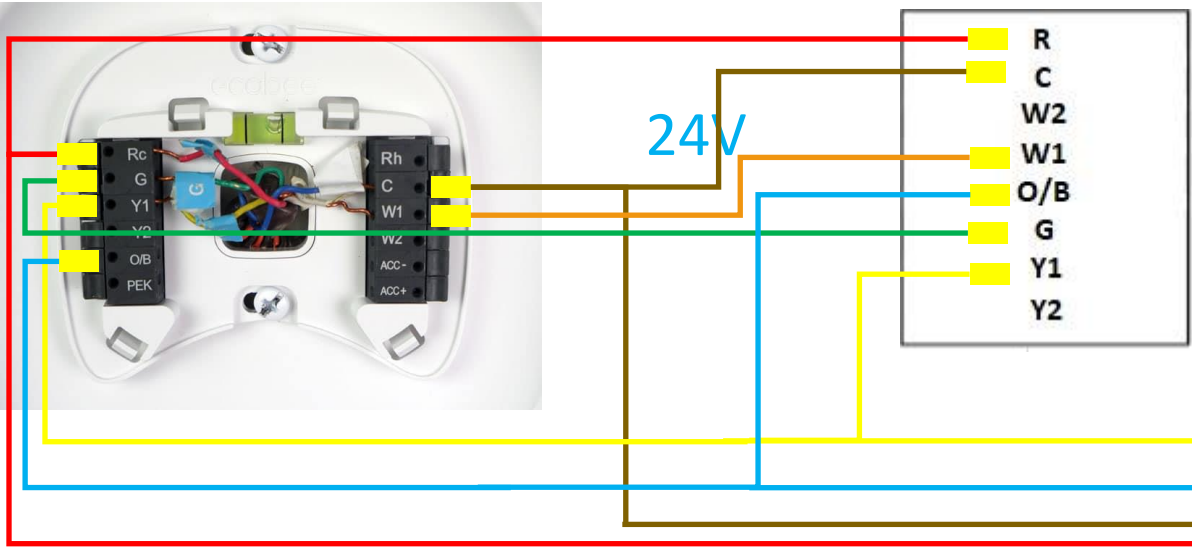
Note: If your Indoor or thermostat does not have a Y2 or require to wire on Y1, connect it to Y1 and on the outdoor it must go on Y2.

24V

(5 Wires will be connected: R/C/W/B/Y2)

Note: If you will be using this outdoor unit as a heat-pump, make sure you have a heat-pump TXV installed on your indoor unit.

Note: R / C / and Y2 are on the bottom ports covered by the transparent lid that says "CLASS 2"; B and W go on the top.



Scenario 6:

24V Thermostat

Ecobee 24V thermostat as an example



24V +

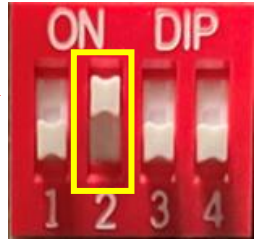
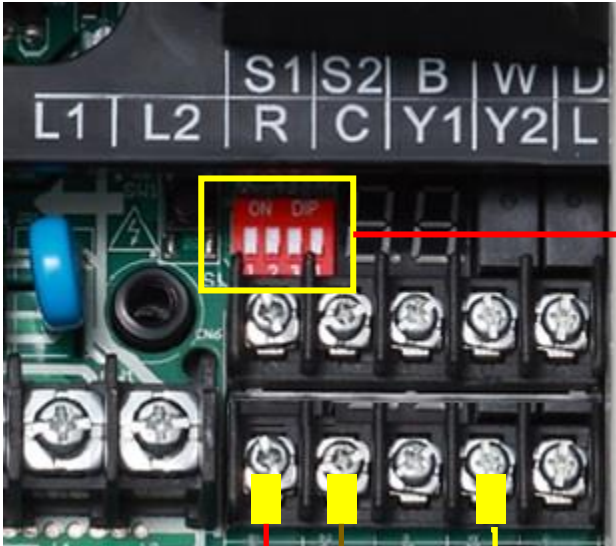
The third-party Indoor unit or Furnace as Straight Cooling



Note: If your Indoor or thermostat does not have a Y2 or require to wire on Y1, connect it to Y1 and on the outdoor it must go on Y2.

24V +

Innovair Outdoor unit



S1-2 dip switch to be "ON"

Note: Need to set the dip switch first before the unit power on.

24V

(3 Wires will be connected: R/C/Y2)
 Note: If you will be using this outdoor unit as a cooling only unit, make sure you have at least a TXV installed on your indoor unit.
 Note: R / C / and Y2 are on the bottom ports covered by the transparent lid that says "CLASS 2".

