

Innovair Slim 4 & 4+ wiring connecting guide



Scenario	<u>Controller</u>	<u>Indoor unit</u>	Connection between Indoor and outdoor	<u>Outdoor unit</u>
Scenario 1	Innovair Wired controller (Standard)	Innovair AHU	RS485: S1/S2	Innovair ODU
Scenario 2	24V Thermostat	Innovair AHU	RS485: S1/S2	Innovair ODU
Scenario 3	24V Thermostat	Innovair AHU	24V: R/C/B/Y1/Y2/G/W	Innovair ODU
Scenario 4	24V Thermostat	Innovair AHU	24V: R/C/B/Y1/Y2/G/W	The third-party ODU
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
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
Scenario 7	24V Thermostat	Innovair A-Coil + Single Stage Furnace (Dual Fuel)	RS485: S1/S2	Innovair ODU
Scenario 8	24V Thermostat	Innovair A-Coil + Two Stage Furnace (Dual Fuel)	RS485: S1/S2	Innovair ODU
Scenario 9	24V Thermostat	Innovair A-Coil + Single Stage Furnace (Dual Fuel)	24V: R/C/B/Y1/Y2/G/W	The third-party ODU
Scenario 10	Innovair Wired controller (Standard)	Innovair A-Coil + Blower	RS485: S1/S2	Innovair ODU

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

Innovair Wired
controller

HA/HB
+

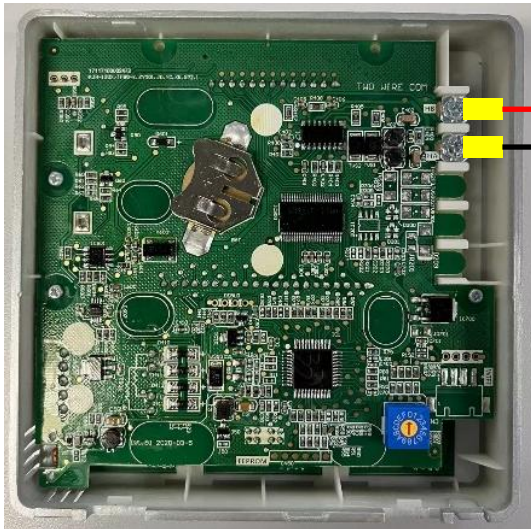
Innovair AHU Indoor
unit

S1/S2
+

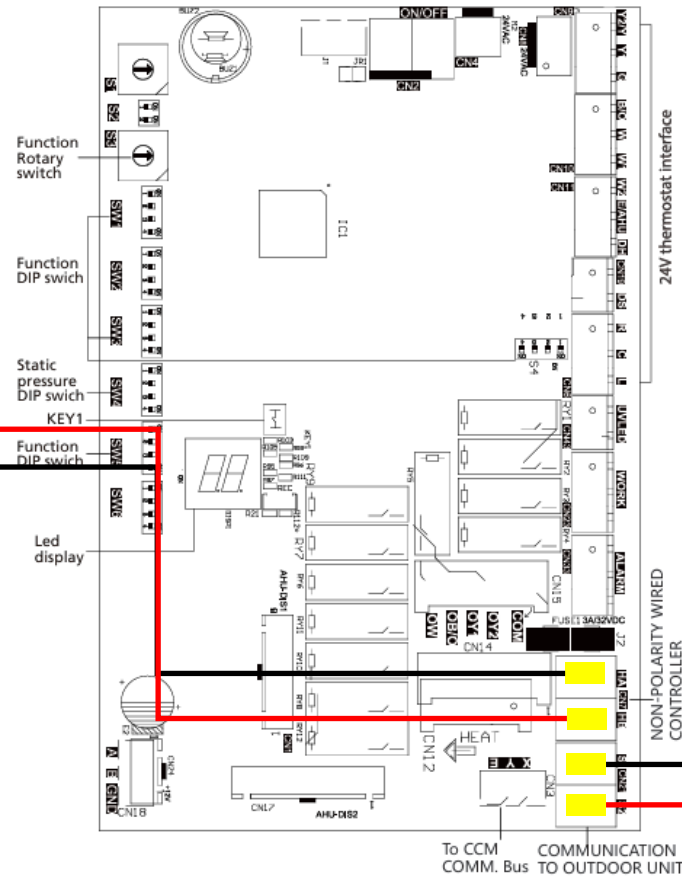
Innovair Outdoor
unit



Package with indoor unit



HA/HB

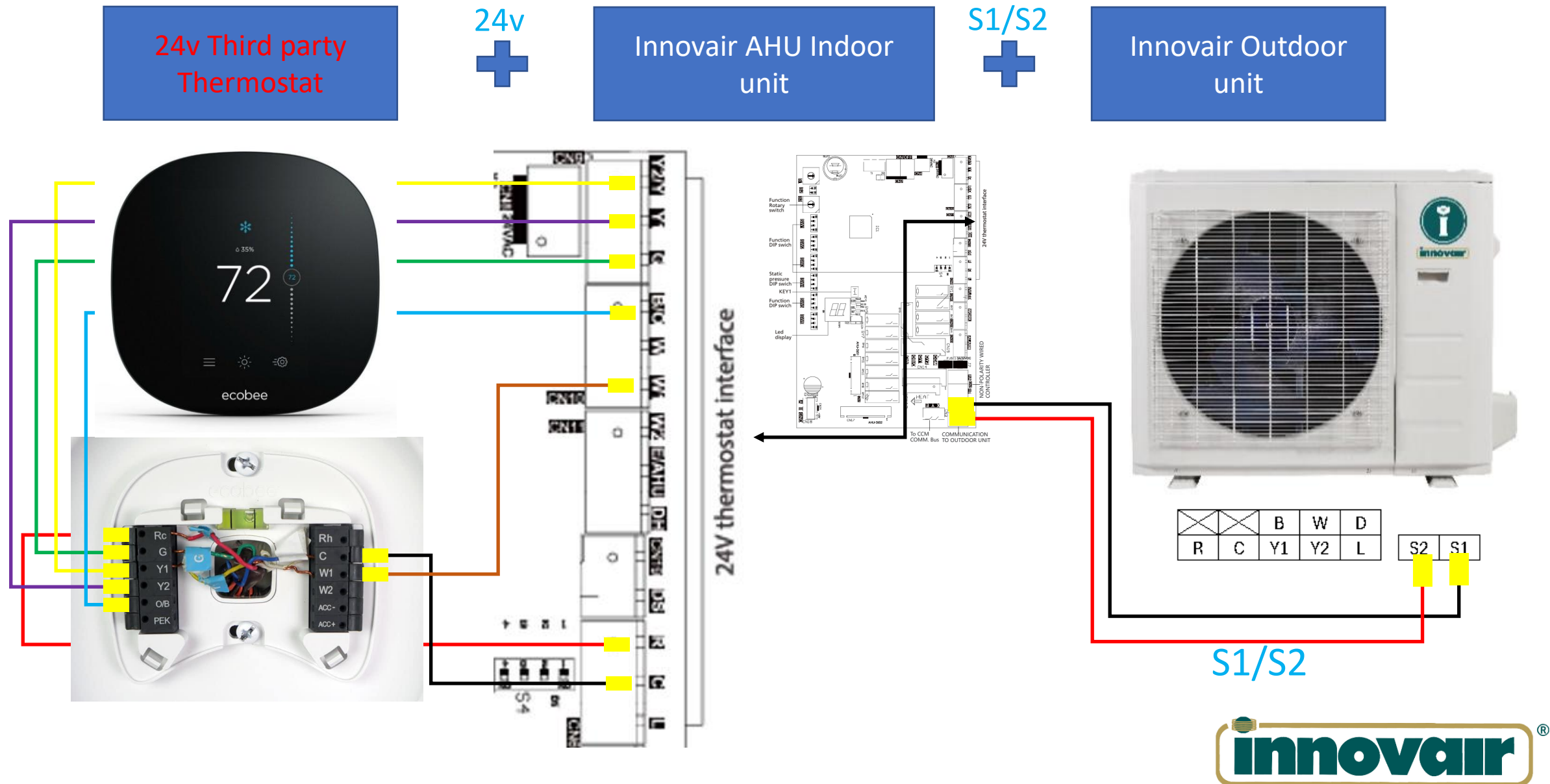


		B	W	D
R	C	Y1	Y2	L

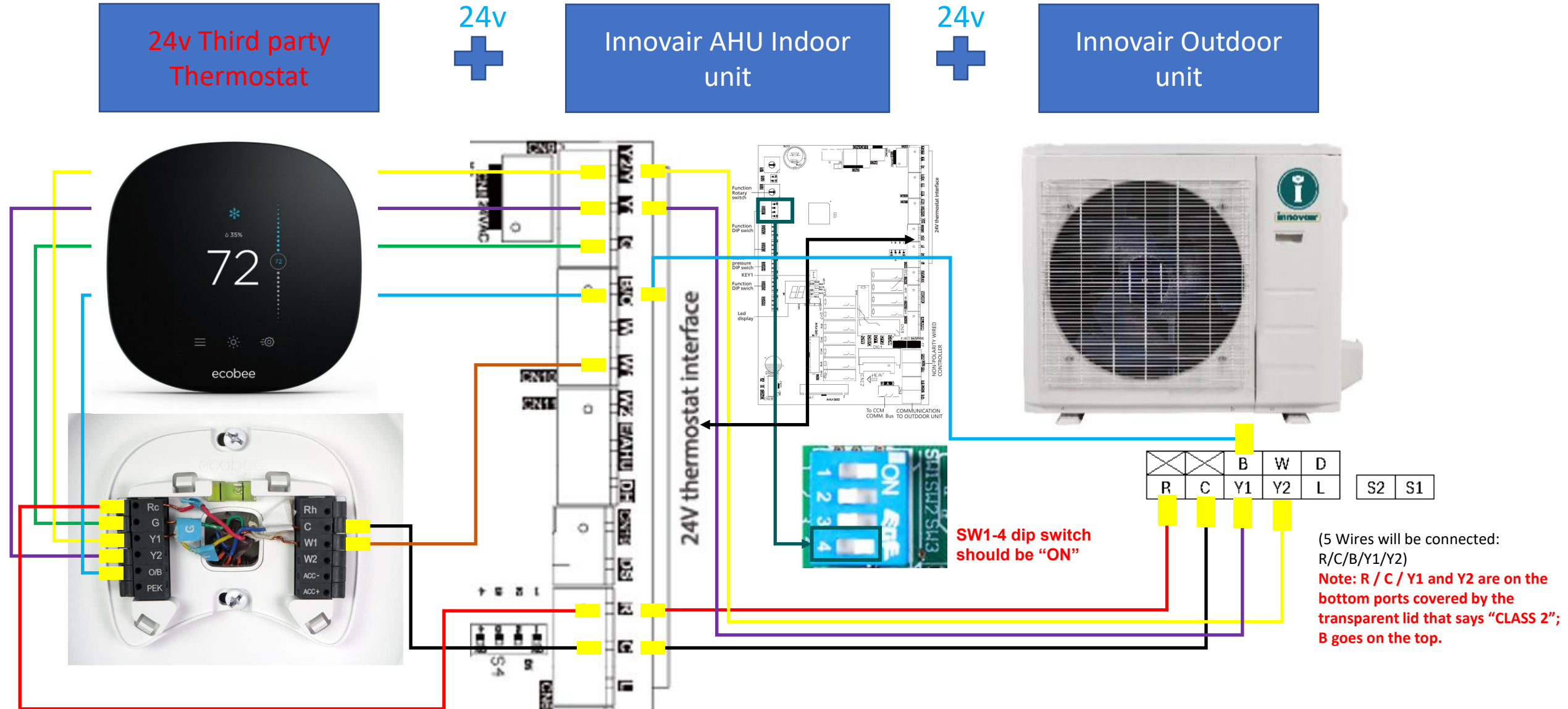
S2 S1

S1/S2

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



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



Scenario 4:

24v Third party Thermostat

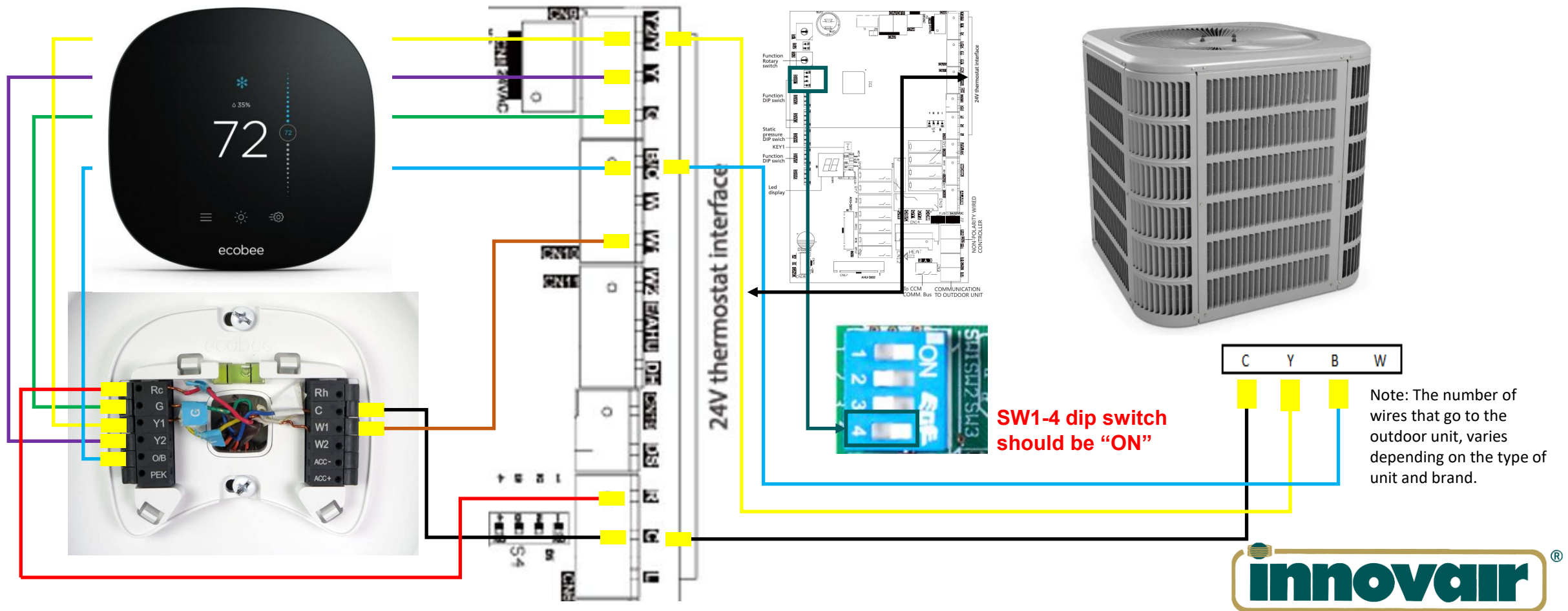
Ecobee 24V thermostat as an example

24v
+

Innovair (UNIVERSAL) AHU Indoor unit

24v
+

The third-party
R-454b Outdoor unit



Scenario 5:

24V Thermostat

Ecobee 24V thermostat
as an example



24V
+

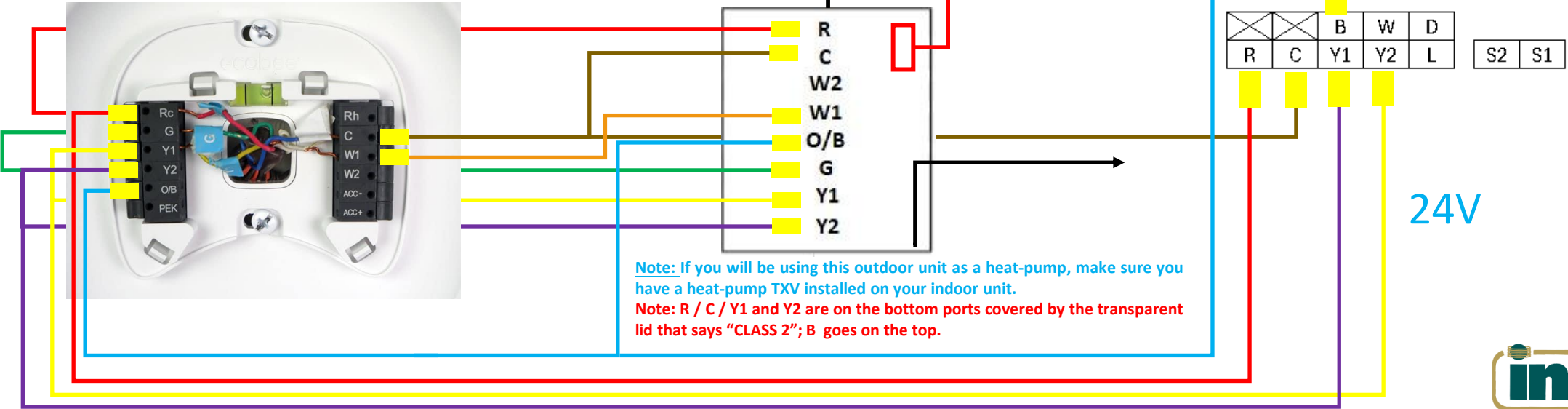
Third-party A2L
R-454b Indoor unit or
Furnace as a Heat-Pump



R-454b
Sensor

24V
+

Innovair Outdoor
unit



Scenario 6:

24V Thermostat

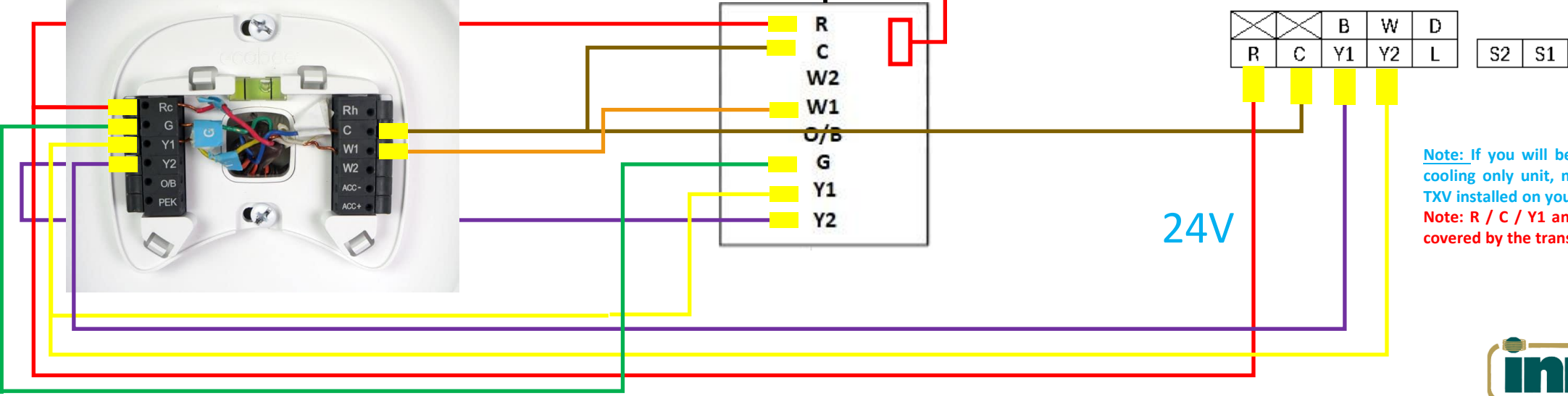
24V
+

Third-party A2L
R-454b Indoor unit or
Furnace as a Cool Only

24V
+

Innovair Outdoor
unit

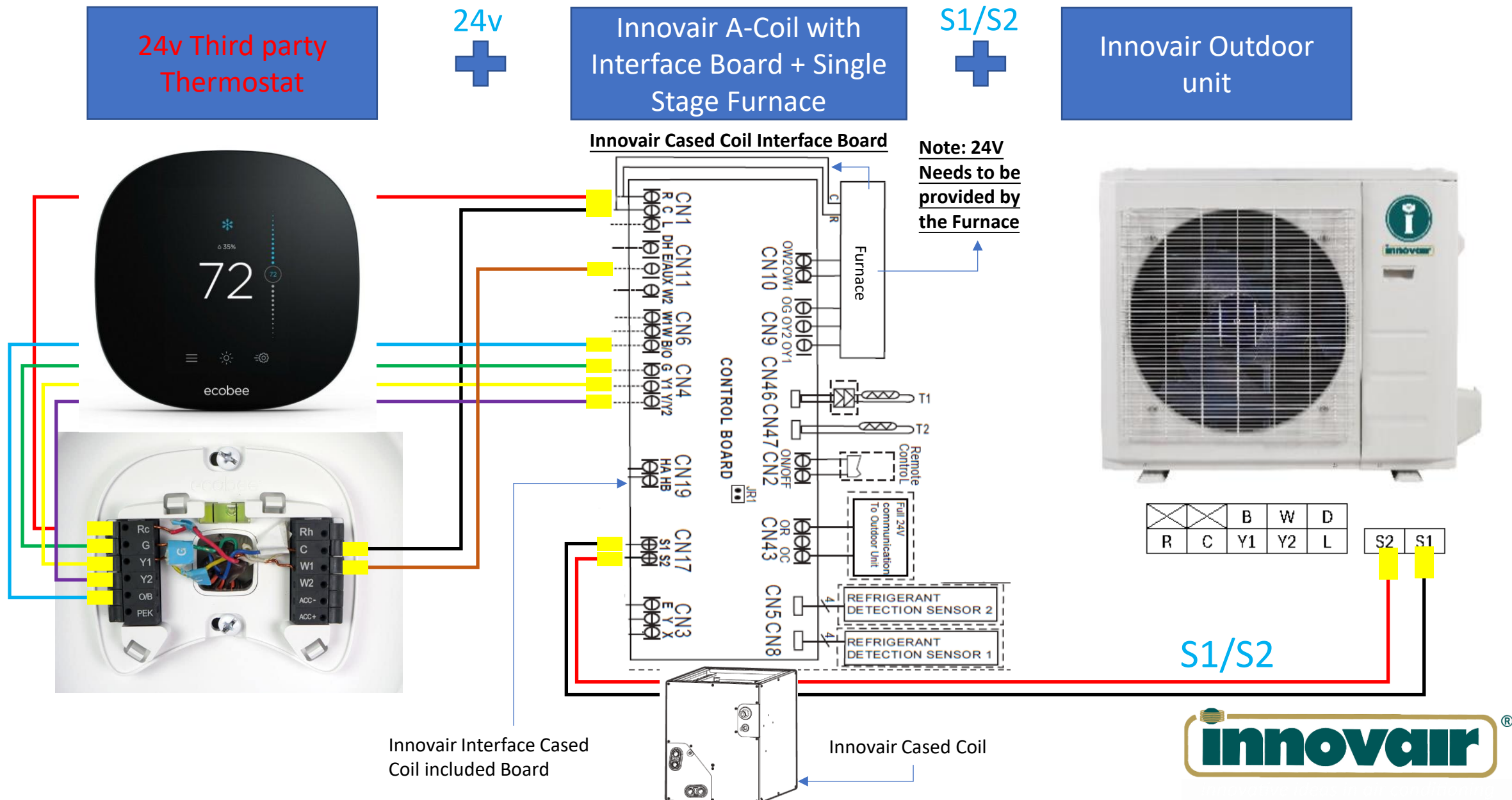
Ecobee 24V thermostat
as an example



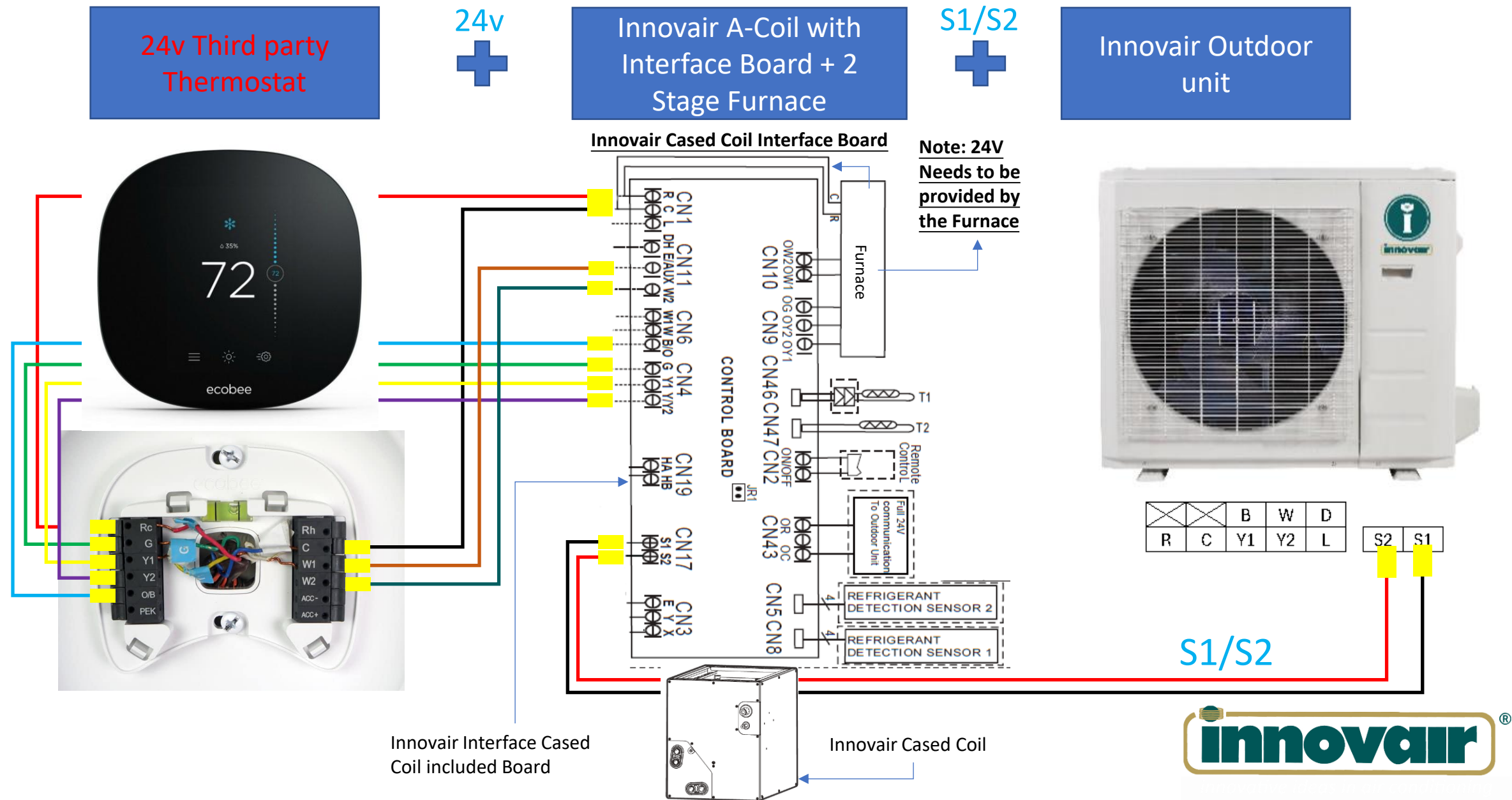
Note: If you will be using this outdoor unit as a cooling only unit, make sure you have at least a TXV installed on your indoor unit.
Note: R / C / Y1 and Y2 are on the bottom ports covered by the transparent lid that says, "CLASS 2".



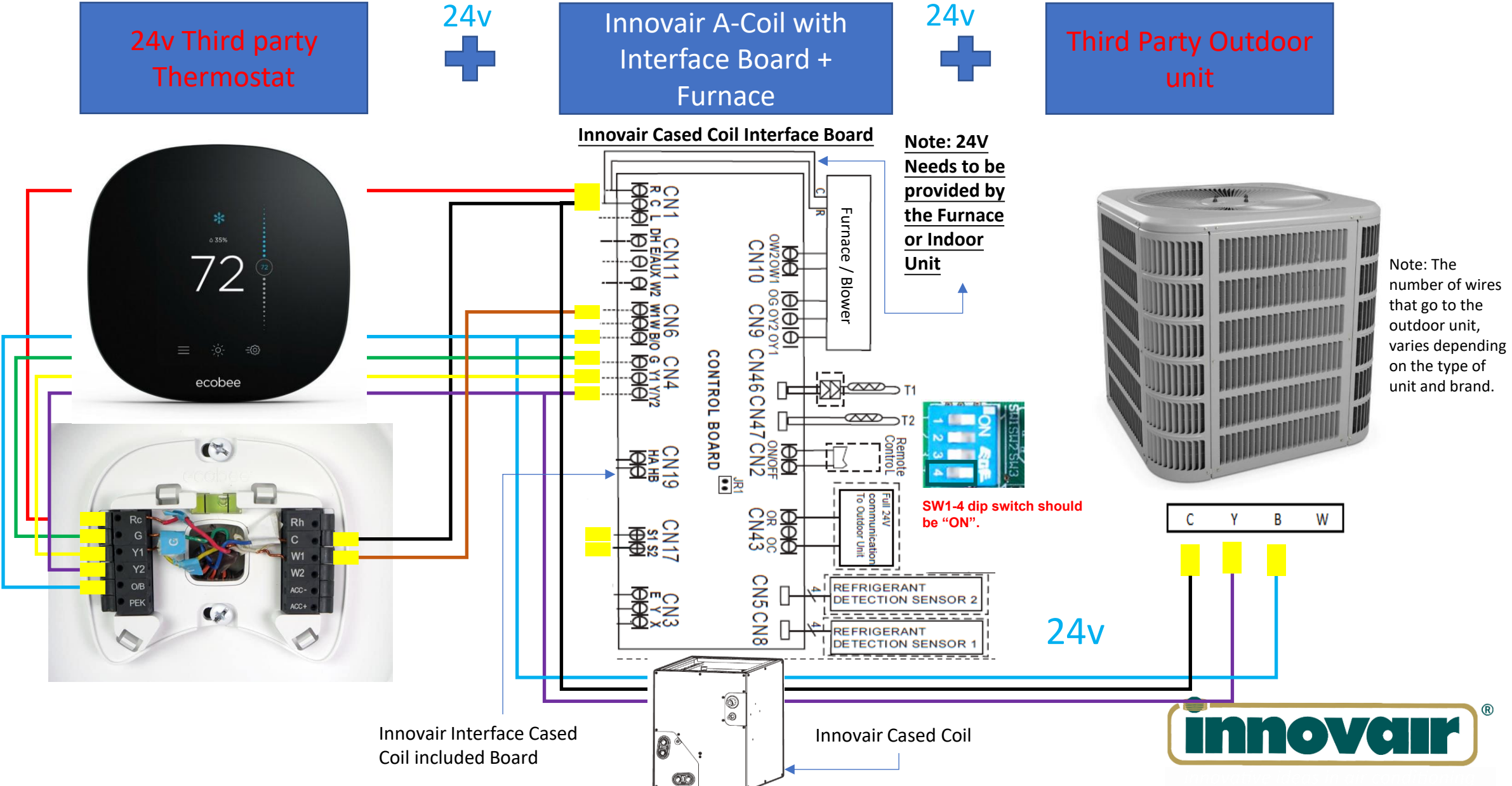
Scenario 7: A-Coil with Interface board + Single Stage Furnace with a communicating protocol between interface board and outdoor unit (Dual Fuel).

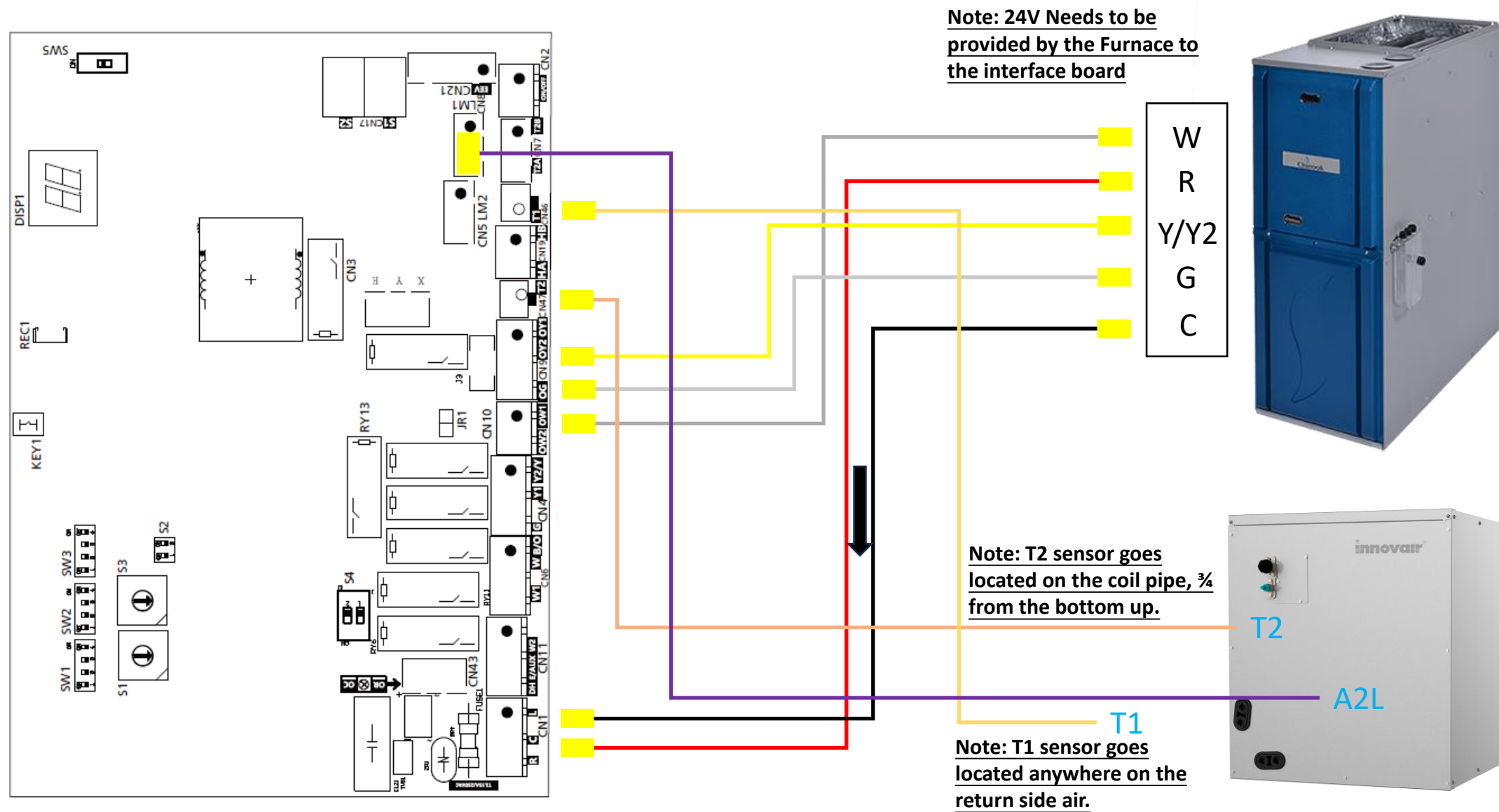


Scenario 8: A-Coil with Interface board + 2 Stage Furnace with a communicating protocol between interface board and outdoor unit (Dual Fuel).



Scenario 9: A-Coil with Interface board + Furnace with a 24v outdoor unit (Dual Fuel).





Note: Follow instruction on how to install the A2L sensor on next page.

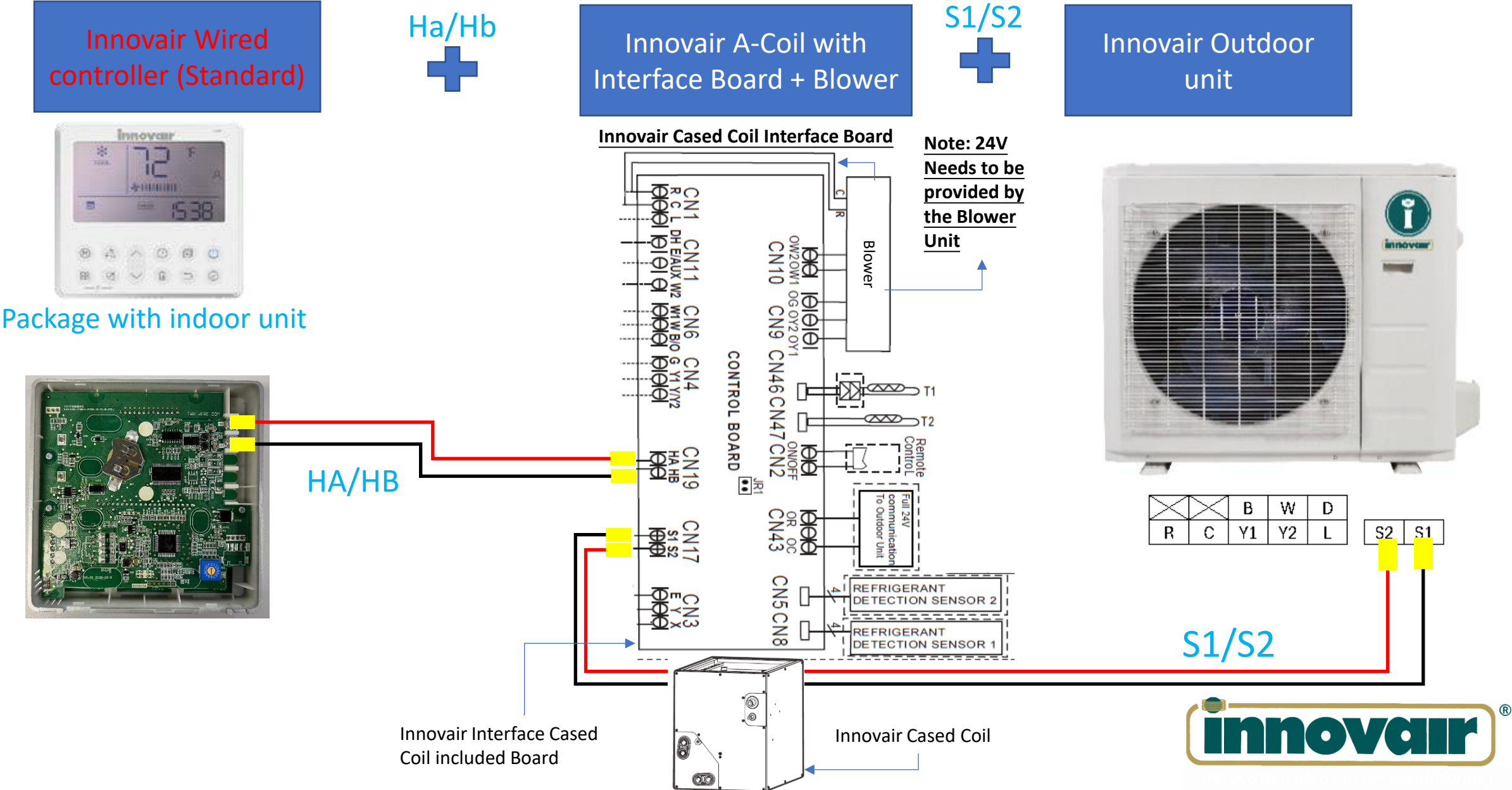
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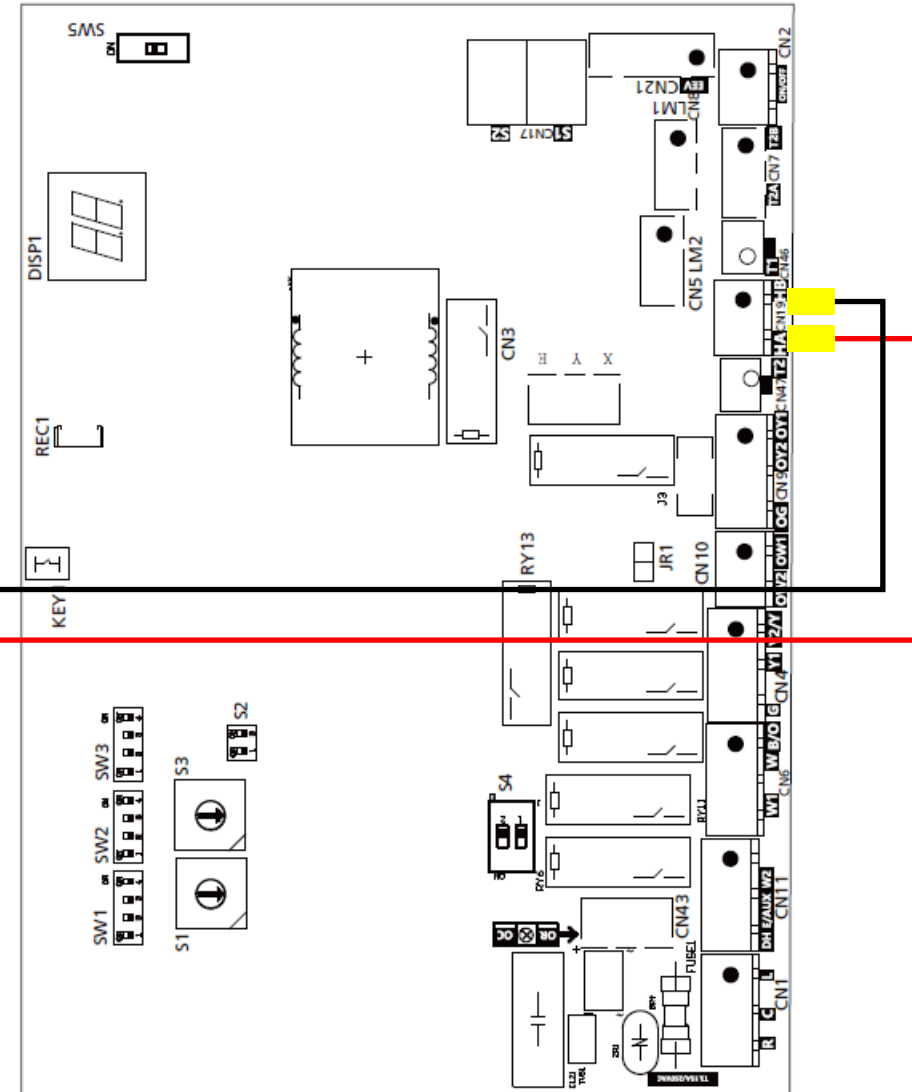


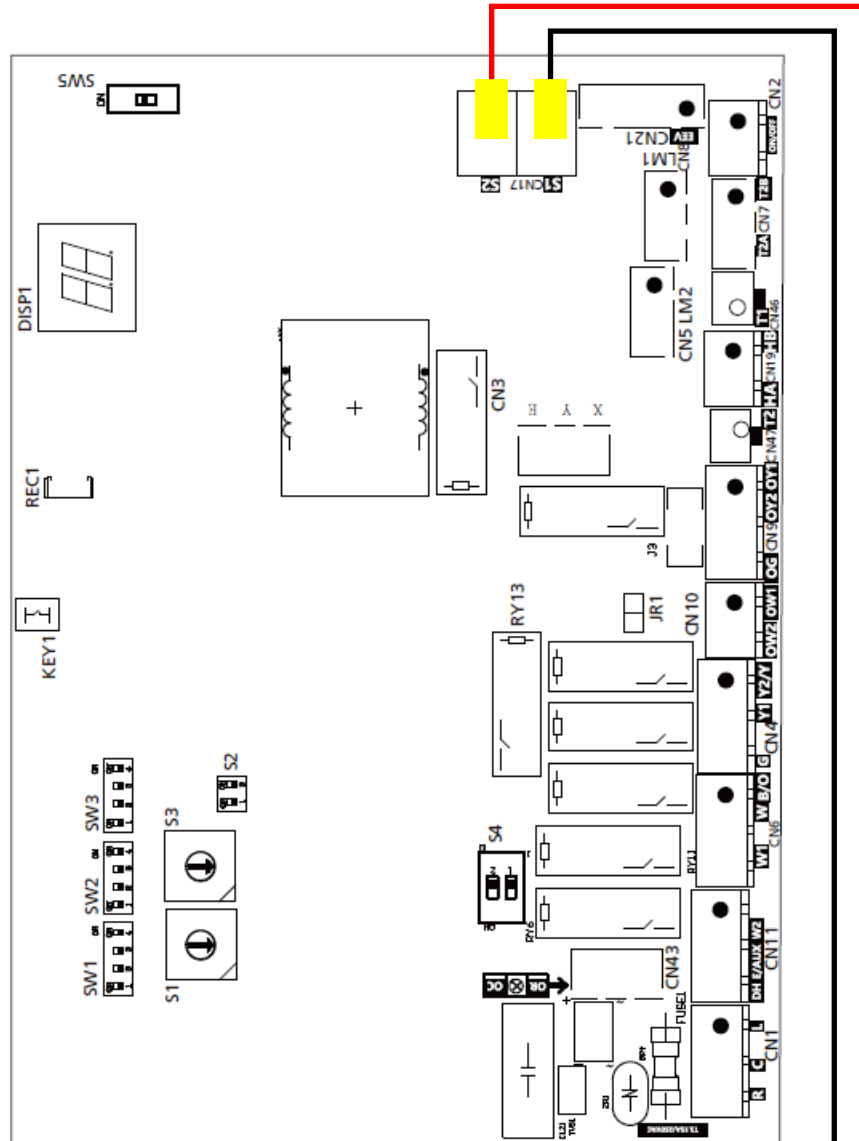
CODE	PART NAME
T1	ROOM TEMP . SENSOR CN46
T2	COIL TEMP .SENSOR CN47

Coil Pipe and Return Sensor to CN 47 & 46

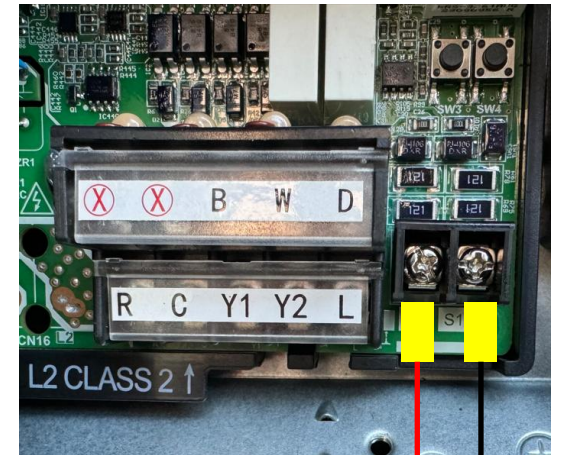
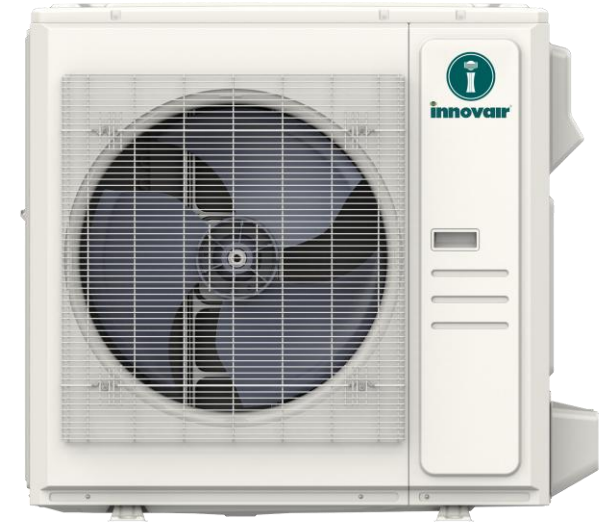
Scenario 10: A-Coil with Interface board + Blower with a communicating protocol between interface board and outdoor unit.





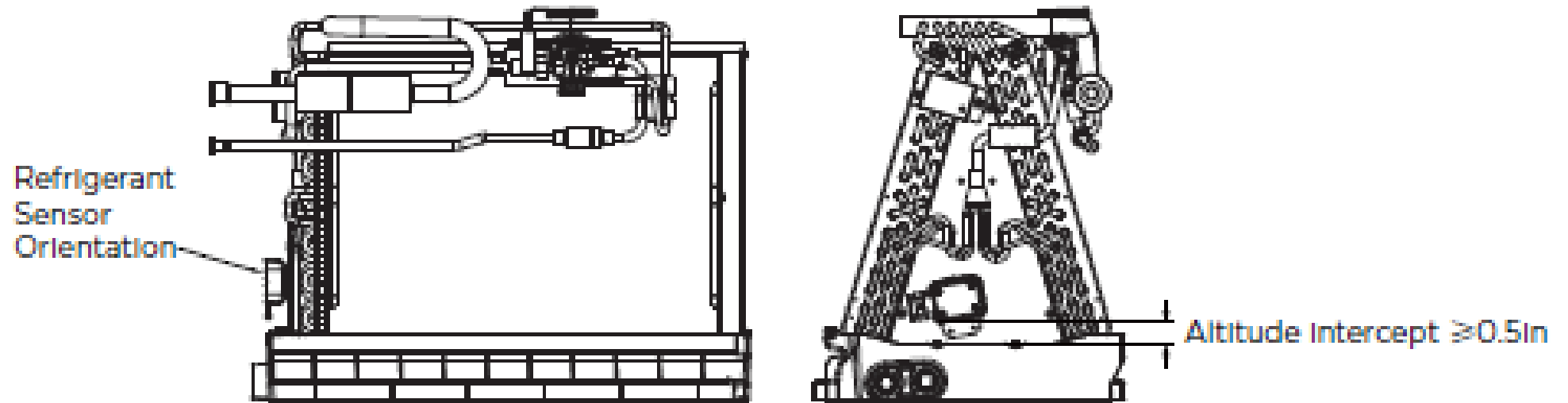


S1/S2





Select mounting positions adjacent to the drain pan assembly, elevated above the pan surface with sensing orientation directed toward the evaporator.





Sensor Mounting Orientation Requirements:

- Permitted configurations: vertical, horizontal, or inverted installation
- Prohibited orientation: sensing surface facing upward
- Minimum installation angle: $\geq 5^\circ$ from horizontal plane

