# Controls

## 37MU(R,H)A & Crossover Applications

### General Installation Notes:

- Indoor unit is NOT powered from outdoor unit.
- O/B Energized on Heating.
- Y2 Terminal at outdoor unit can be utilized instead of Y1 for faster ramp up rate, diagrams to follow.
- For FT5 applications – Recommend "HP-EFF" setting on Easy Select Board.
- Must use dual fuel thermostat for all furnace combinations. Simultaneous Heat Pump and Furnace operation not permitted.
- No wiring diagrams shown will operate a Furnace during Defrost.
- For Furnace applications – Indoor Fan will NOT shut off during Defrost unless a relay is added.
- Furnace applications require outdoor sensor or Wi-Fi weather data.

37MURA* 18, 24, 30, 36, 48, 60K
37MUHA* 18, 24, 30, 36, 48K

37MUHA 60K

*NOTE: Single Fan ODU height varies by capacity



| Air Handlers | Gas Furnaces C / B |
|---|---|
| FE5B | 59MN7C / 987M |
| FT5 | 59TN6C / 926S |
| FJ5 | 59CU5B / 986T |
| FG5 | 59TP6C / 926T |
| F55 | 59SP6B / 926S |
| FMA5X | 59SC6A / 916S |
| FMU(C)5X | 59SC2E / 912S |
| FMU(C)5Z | 59SU5 / 935S |
| FMA5L | 58TN0B / 880TB |
| **Coils** | 58CU0B / 830CB |
| CVAVA | 58TP0B / 821TB |
| CVAMA | 58SP0B / 820SB |
| CAAMP | 58SC0B / 800SB |
| CSAHP | 58SB0B / 912S |
| | 58SU0B / 830SB |
| | **Oil Furnaces Hi (M) / Lowboy (L)** |
| | OVM / OVL |
| | OBM / OBL |

# Controls

Attention:
Thermostat must sense Outdoor temp for Dual Fuel Applications.

## 37MU(R,H)A & Crossover Application Thermostat Choices:

- Most 24-Volt thermostats will work for Crossover Applications, refer to the Application/Installation instructions for specific details for the model installing.
- We strongly recommend that these systems are always wired as a Heat Pump, not Conventional.
- NOTE: Dual Fuel Crossover Applications require the thermostat to sense outside temperature to operate correctly.




ecobee Cielo Nest

No outside temperature sensor required, uses Wi-Fi weather data, stores up to 5 days



Hard wired outside temperature sensor must be installed

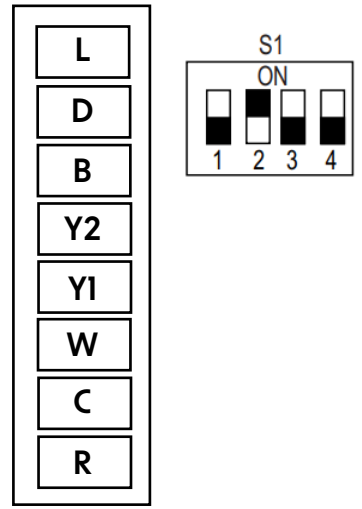
# 37MU(R,H)A – Applications Requiring Defrost or Error Signal from Outdoor Unit ODU

Only in applications where a Defrost (D-terminal ODU) or Error (L-terminal ODU) signal is needed, an R wire from the Indoor Unit to the Outdoor would be required.

Applications would include:

- Thermostats that accept a 24-Volt Error signal from outdoor unit (L-terminal).
- Applications that use a Defrost signal (D-terminal) to activate a relay to shut down the indoor fan during defrost.
- Applications that use a Defrost signal (D-terminal) to bring on the electric heat kit or other heat source, field supplied relay may be required.

Set S1-2 to ON at ODU
for 24-Volt Connections



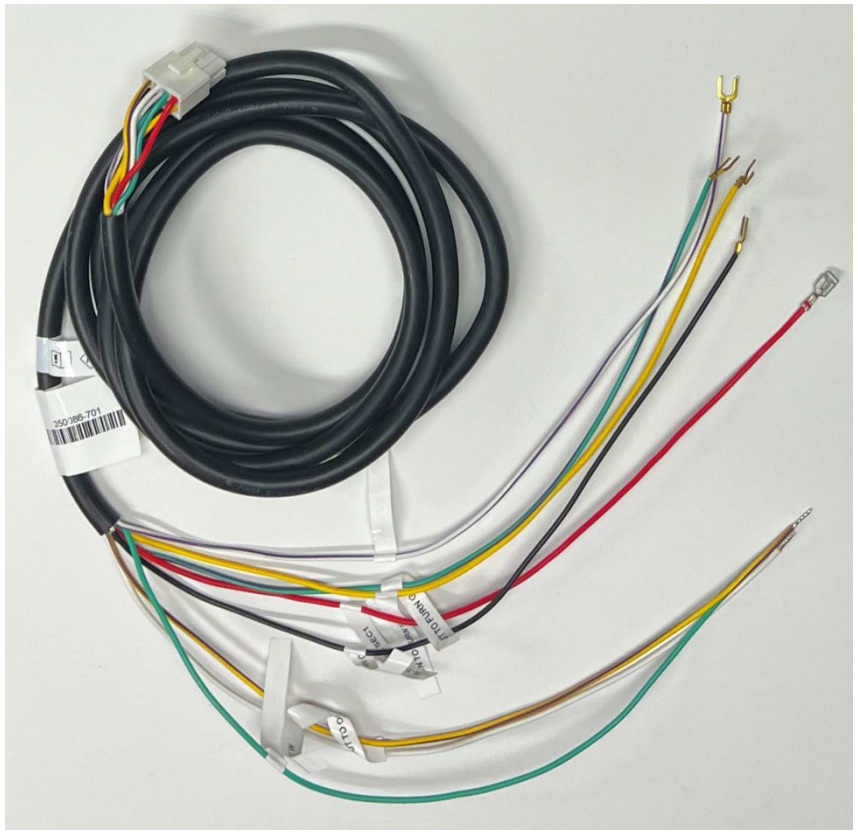

Outdoor Unit
MU(R,H)A

# Res. Indoor Coil Dissipation Board Overview

## Main components:

### Dissipation Board


### Main Harness



### Leak Sensor

# Control

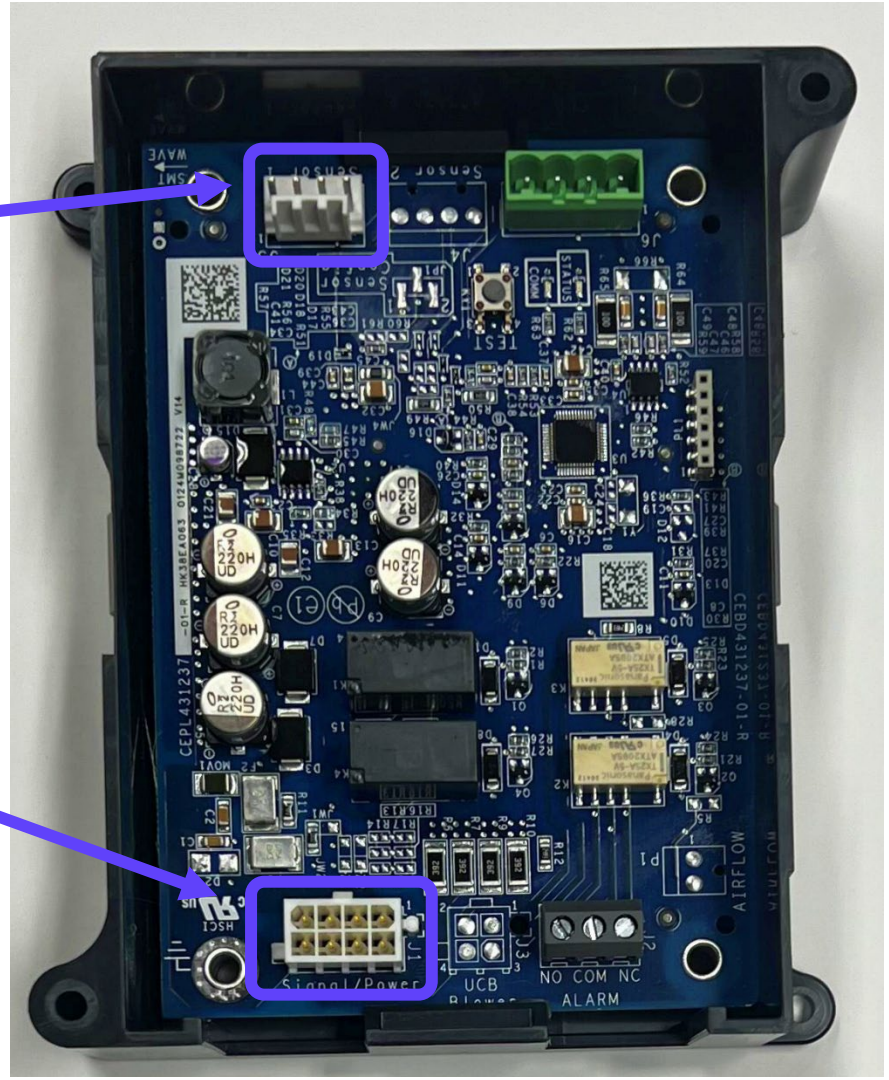
## Dissipation Board Overview

### Dissipation Board:

### Sensor connection

### Main harness connection

| FLASH CODE CHART | | |
|---|---|---|
| **Yellow LED** | **Reason** | **Mode** |
| Solid | Normal Operation | Normal Operation |
| Flashing 1 | Sensor >= 20% LFL | Dissipation |
| Flashing 2 | Sensor Open | Dissipation |
| Flashing 3 | Normal Dissipation After Leak | Dissipation |
| Flashing 4 | No Power to G Output | Dissipation w/o Blower |
| Flashing 5 | Fault with A2L Digital Sensor | Dissipation |
| Flashing 6 | Test Button Stuck (>30s) | Dissipation |
| Flashing 7 | Y or W Wiring Inverted | Normal Operation |
| Flashing 8 | Y or W Shorted | Normal Operation |



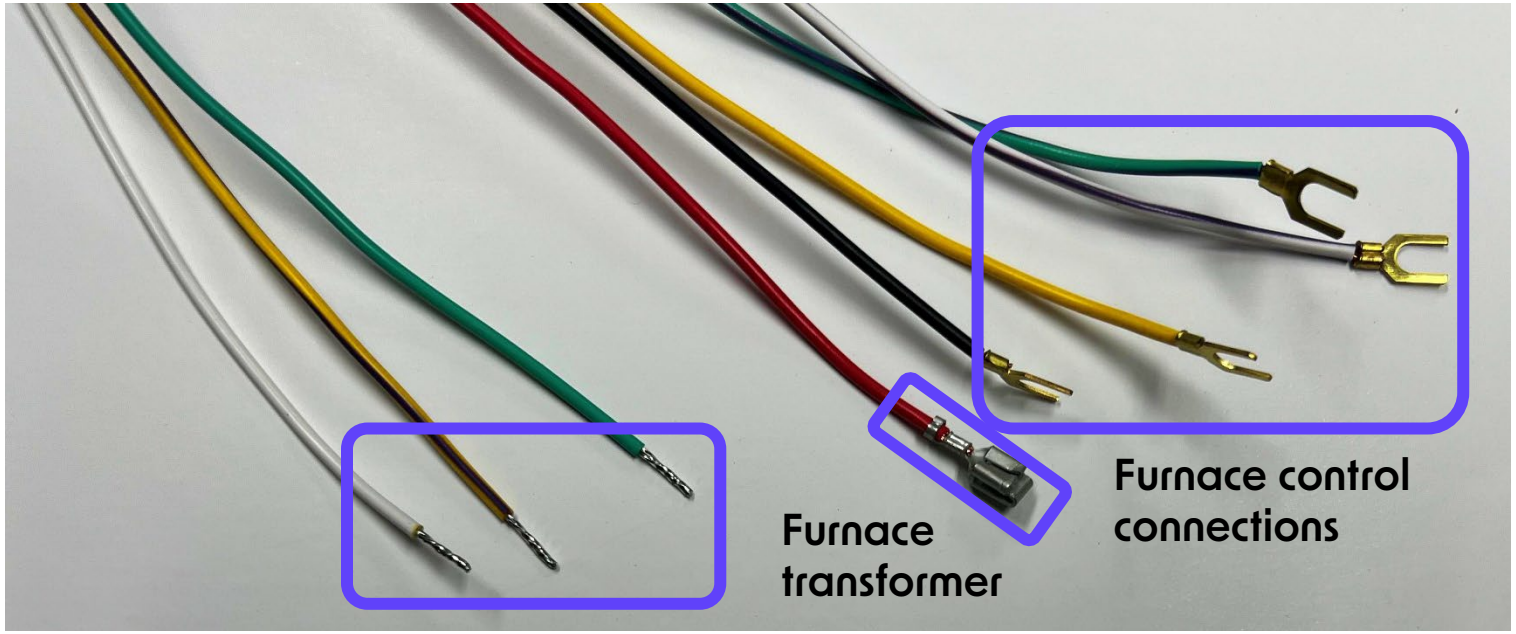
# Dissipation Board Overview

## Wire connections:

- Shipped with Indoor Coil.
- Designed to work with a Carrier or Bryant furnace.
- Make sure to review Installation Manual prior to connecting device.

| PIN | COLOR | 1-Stage Label | 2-Stage Label |
|---|---|---|---|
| 1 | Red | to Furnace SEC1 | to Furnace SEC1 |
| 2 | Grn/Vio | to Furnace G | to Furnace G |
| 3 | White | to TSTAT W | to TSTAT W1 |
| 4 | Yel/Vio | to OD unit Y | to OD unit Y1 |
| 5 | Yellow | to Furnace Y | to Furnace Y1 |
| 6 | Green | to TSTAT G | to TSTAT G |
| 7 | White/Vio | to Furnace W | to Furnace W1 |
| 8 | Black | to Furnace C | to Furnace C |
| See Installation Instructions For Specific Details** | | | |

350110-701 REV. C




Stat connections

# Controls

**Attention:**
Thermostat must have Outdoor temp sensor for Dual Fuel Applications.

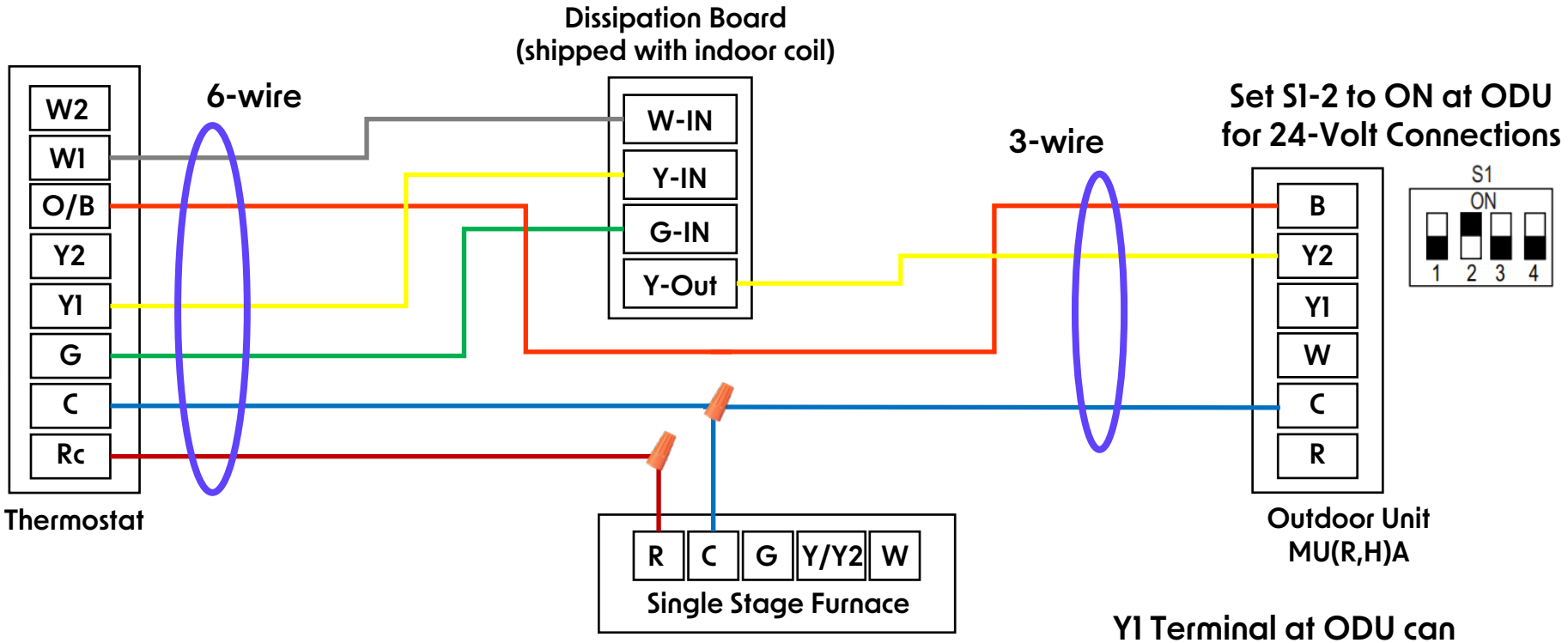
## 37MU(R,H)A & 1-Stage Furnace – Dual Fuel Applications

Includes Carrier/Bryant 2-Stage Gas Furnaces utilizing Comfort Heat Technology® or Adaptive Mode.

**When setting up thermostat make sure to disable furnace and heat pump running at same time.**


ecobee Cielo

**2 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
1 Stage Gas Furnace




Notes:
Factory wires from Diss. Board to Furnace not shown.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Furnace will NOT operate during Defrost.

Y1 Terminal at ODU can be utilized instead of Y2 for slower ramp up rate.

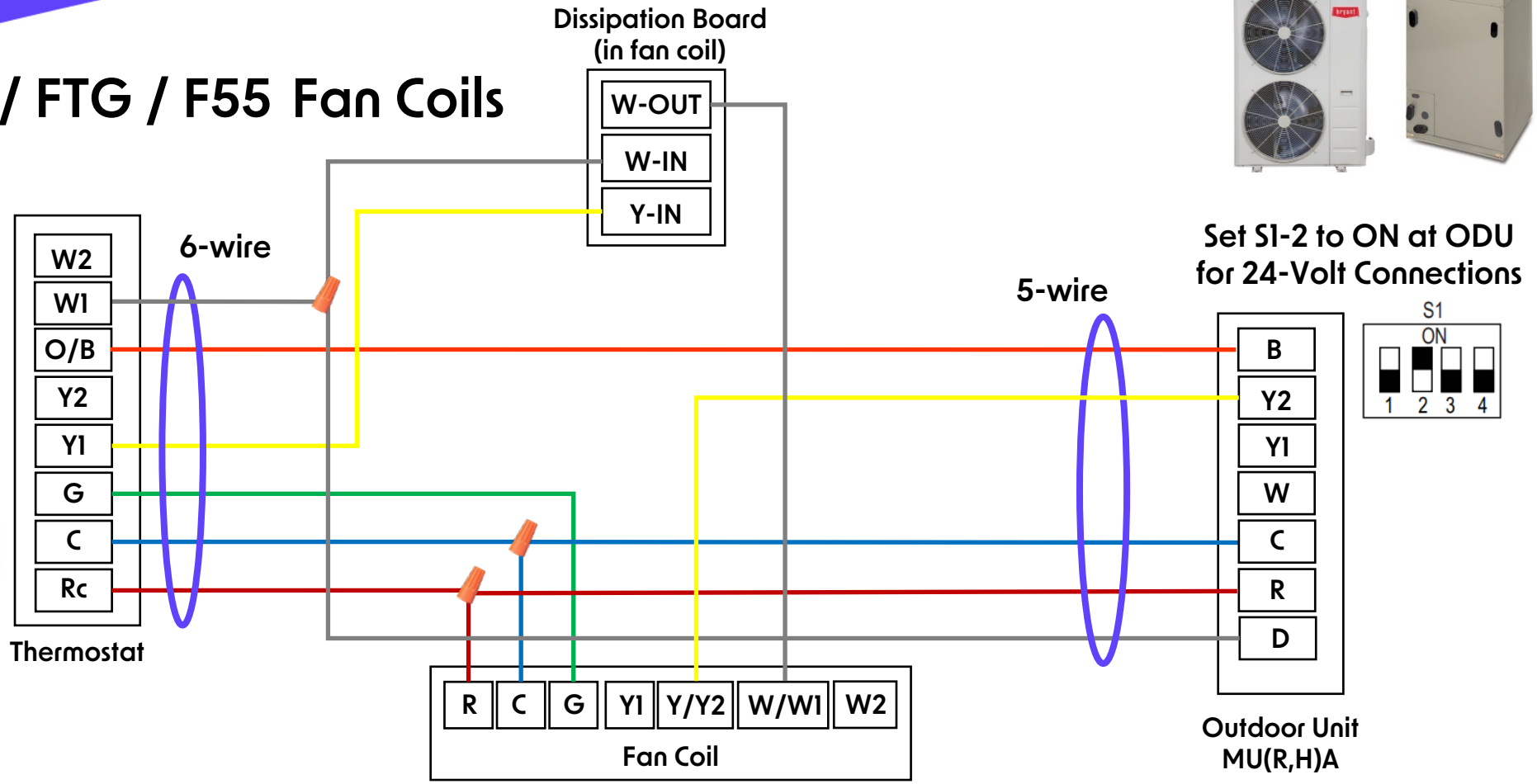
# Controls

## 37MU(R,H)A & FT5 / FTG / F55 Fan Coils


ecobee


Cielo

**2 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
1 Stage Electric Heat




Recommend "HP-EFF" setting on Easy Select Board during initial set up.

Y1 Terminal at ODU can be utilized instead of Y2 for slower ramp up rate.

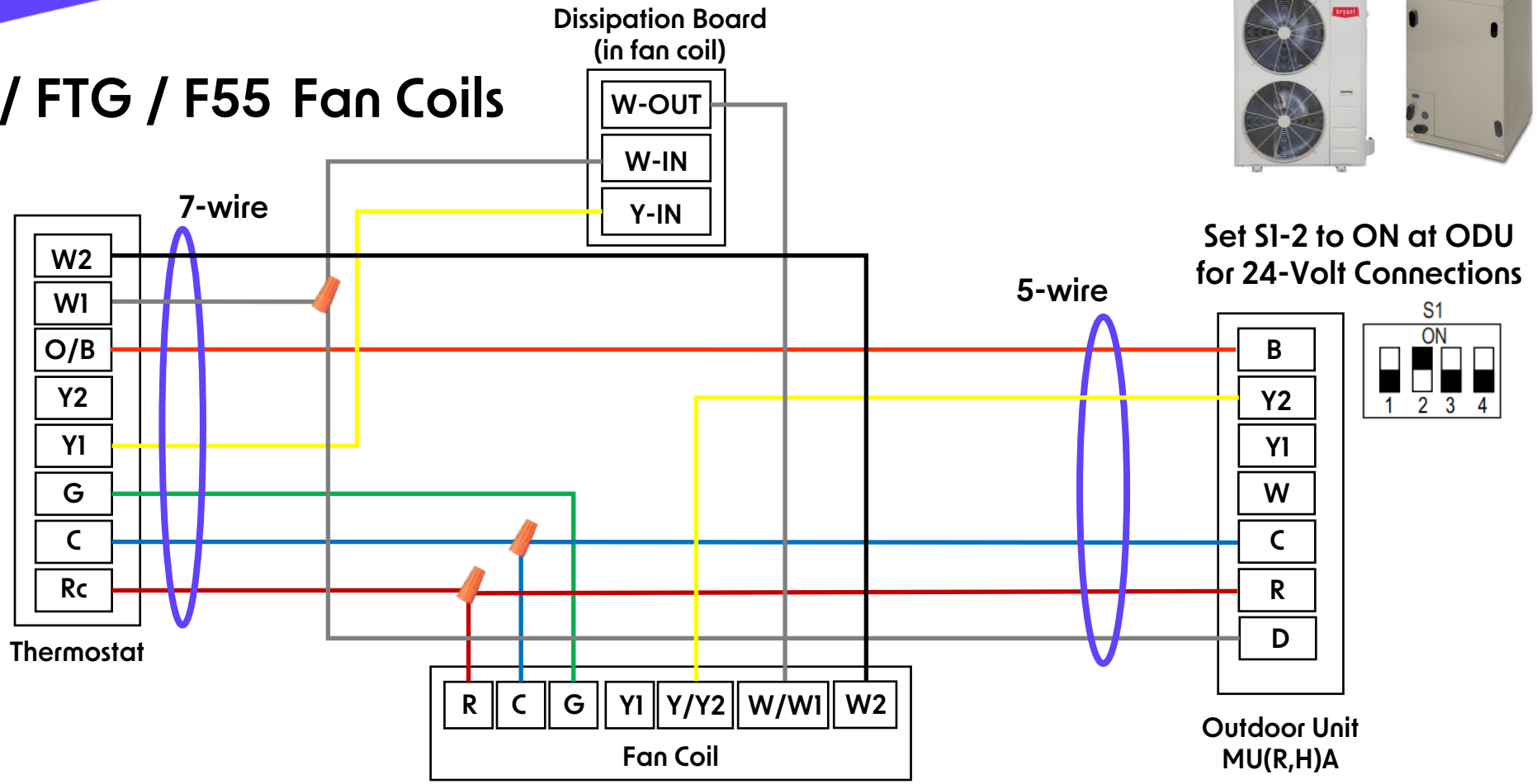
Notes:
Factory wires from Diss. Board to Fan Coil not shown.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Electric Heat ON during Defrost.

# Controls

## 37MU(R,H)A & FT5 / FTG / F55 Fan Coils


ecobee Cielo

**3 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
2 Stage Electric Heat




Recommend "HP-EFF" setting on Easy Select Board during initial set up.

Y1 Terminal at ODU can be utilized instead of Y2 for slower ramp up rate.

Notes:
Factory wires from Diss. Board to Fan Coil not shown.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Electric Heat ON during Defrost.

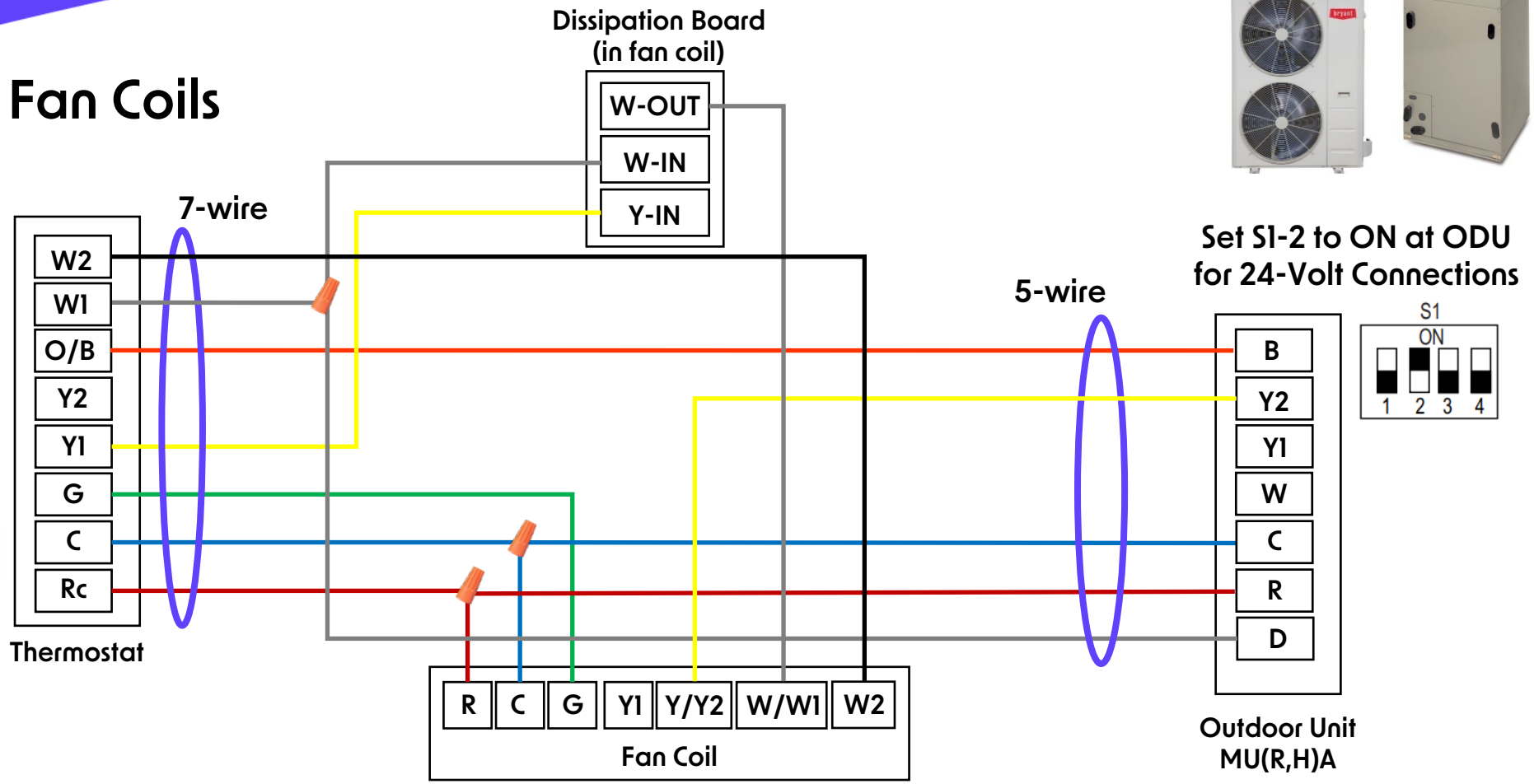
# Controls

## 37MU(R,H)A & F55 Fan Coils


ecobee


Cielo

**3 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
2 Stage Electric Heat




Notes:
Factory wires from Diss. Board to Fan Coil not shown.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Electric Heat ON during Defrost.

Y1 Terminal at ODU can be utilized instead of Y2 for slower ramp up rate.

# Controls

## 37MU(R,H)A & FJ5 Fan Coils


ecobee Cielo

**2 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
1 Stage Electric Heat

Dissipation Board (in fan coil)
W-OUT
W-IN
Y-IN
Y-OUT

6-wire
5-wire

Thermostat
W1
O/B
Y1
G
C
Rc

Fan Coil
R C G E W2 W3

Outdoor Unit MU(R,H)A
B
Y2
Y1
W
C
R
D

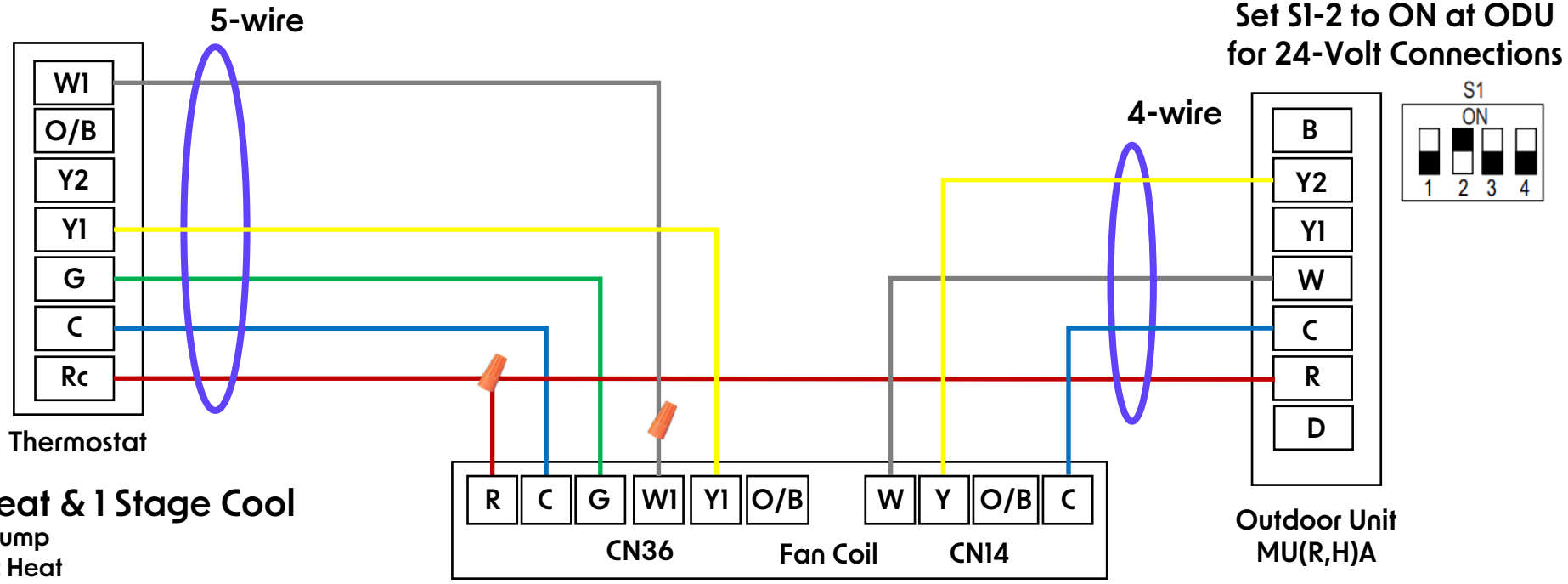
Set S1-2 to ON at ODU for 24-Volt Connections
S1
ON
1 2 3 4

Notes:
Factory wires from Diss. Board to Fan Coil not shown.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Electric Heat ON during Defrost.

# Controls

## 37MU(R,H)A & Multi-family Indoor Units
## FMA5L(X) / FMC5X(Z) / FMU5X(Z) Fan Coils






**2 Stage Heat & 1 Stage Cool**
1 Stage Heat Pump
1 Stage Electric Heat

Notes:
Dissipation board built-in to main PCB in fan coil.
High Voltage wiring to equipment not shown.
Indoor Fan ON during Defrost.
Electric Heat ON during Defrost.

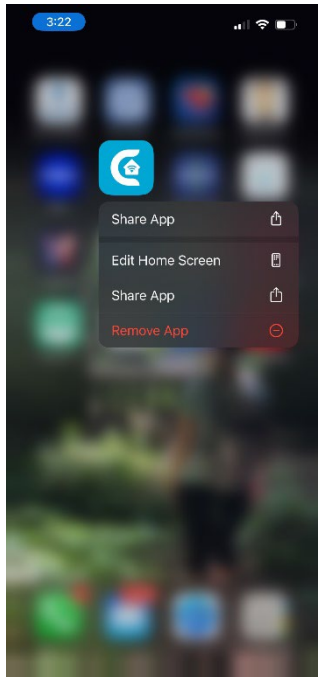
Y1 Terminal at ODU can be utilized instead of Y2 for slower ramp up rate.

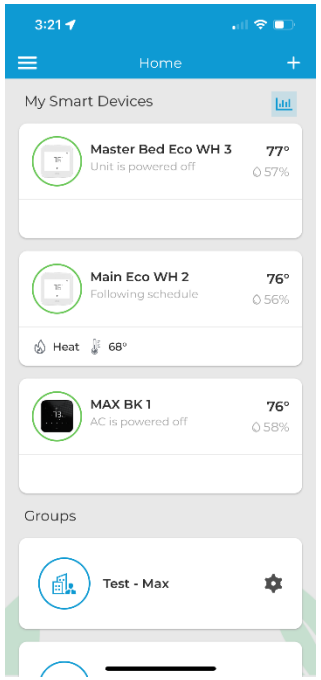
# Controls

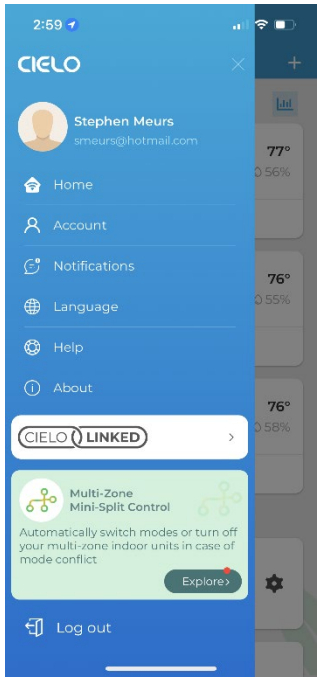
## Ductless systems and Residential systems can talk without wires

Cielo's Linked feature can talk through the Cielo App
Decisions can change the other based on outdoor temp or state of other system and more.


Cielo Smart Thermostat
(24-Volt)





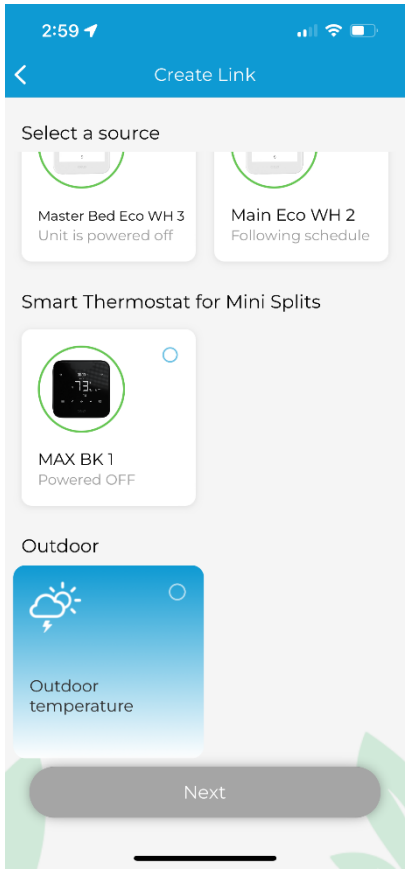
Cielo Breez Max
(DLS)

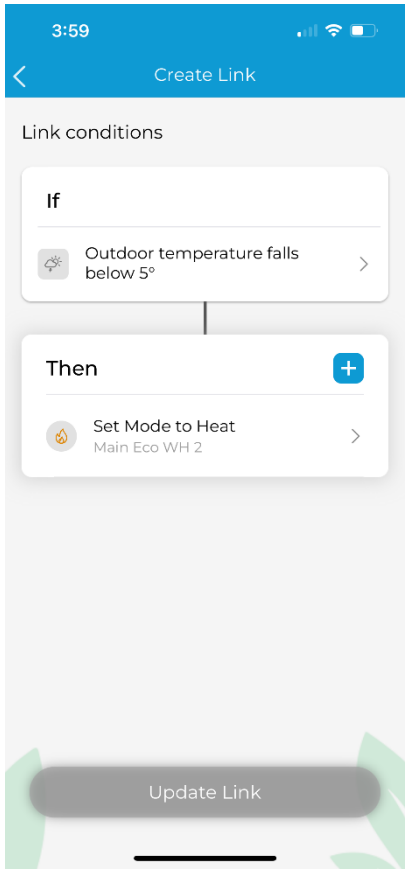
# Controls

## Ductless systems and Residential systems can talk without wires (end)

**As you work your way through the decision-making process takes a few screens, but in the end a "Link conditions" screen shows you the rule. Think of it as "If this, then that". The rule can be toggled ON and OFF.**


**Cielo Smart Thermostat**
**(24-Volt)**





**Cielo Breez Max**
**(DLS)**