

## Floating Point Control For Fan Coil Unit Controllers With The Palladiom Thermostat

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### Overview

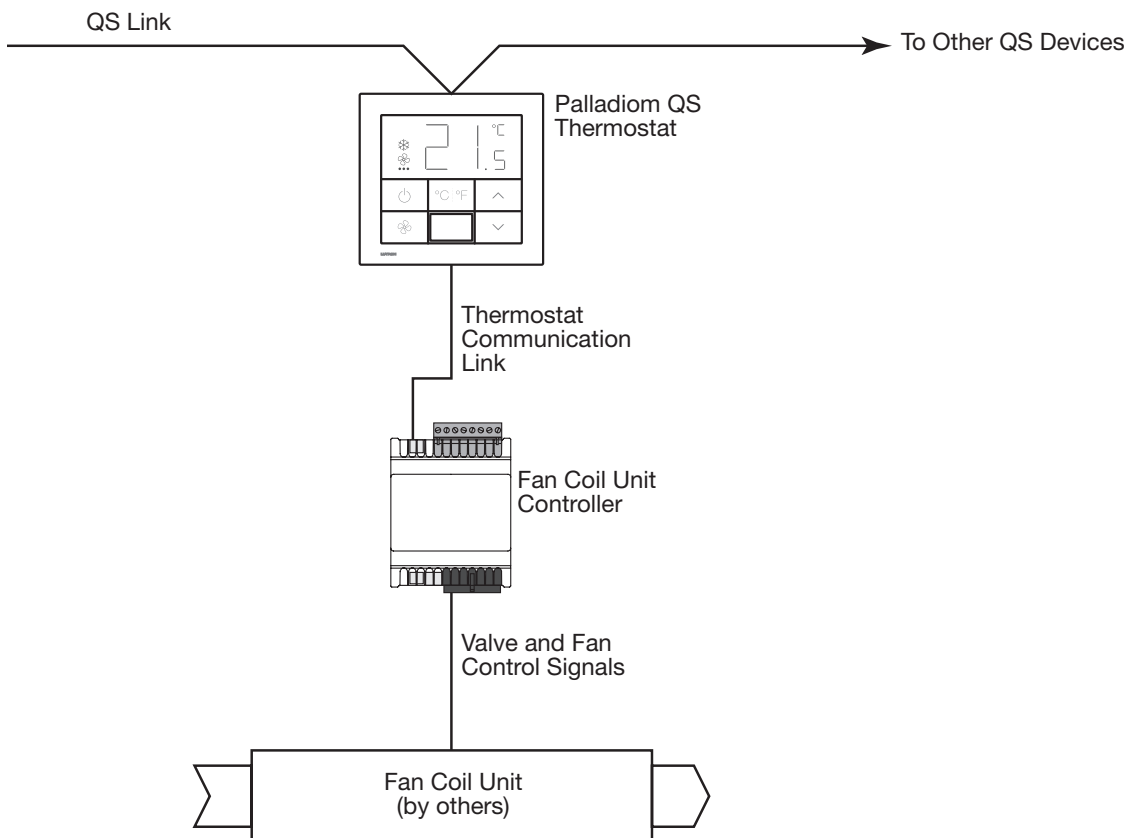
Lutron offers a Fan Coil Unit (FCU) Controller that can be configured to control valve actuators using a single (on/off) relay or a proportional (0–10 V<sub>rms</sub>) signal. This FCU controller can also be configured to accommodate floating point (also known as “Tri-State” or “3-Point”) valves, using a separate wire harness and solid state relays.

Floating point control requires the valve actuator to have both OPEN (CW/Y1) and CLOSE (CCW/Y2) control relay inputs. If there is no signal (Null point) on either input the actuator stays in its last position. The Actuator Running Time (ART) defines the total seconds the valve can actuate from fully closed (0%) to fully open (100%).

### Required Hardware

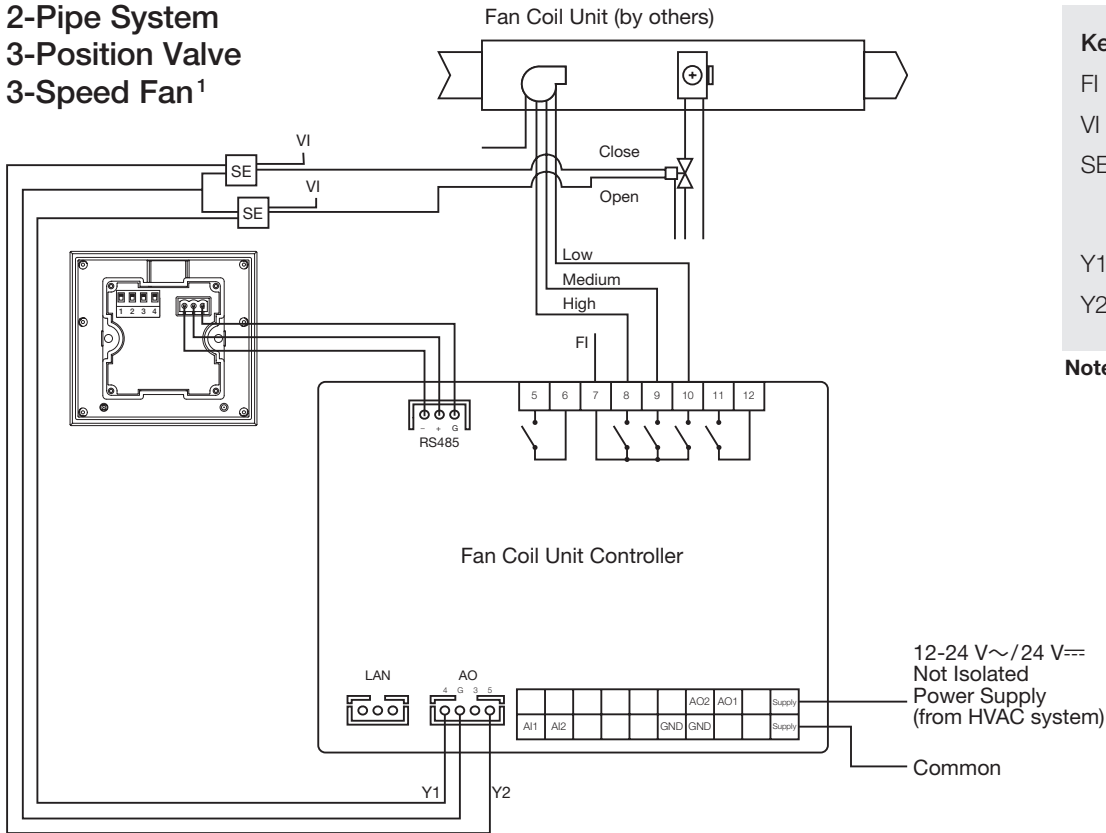
- Palladiom Thermostat model: MWP-T-OHW-XX
- FCU Controller model: SMC5500050407
- Wire harness model: LR-HVAC-WIRE-120
- Solid state relays (not sold by Lutron)
  - Recommended Schneider Electric models:
    - Relay: SSL1A12JDR
    - DIN Rail Socket: SSLZVA1

### System Topology



## Wiring Diagrams

2-Pipe System  
3-Position Valve  
3-Speed Fan<sup>1</sup>

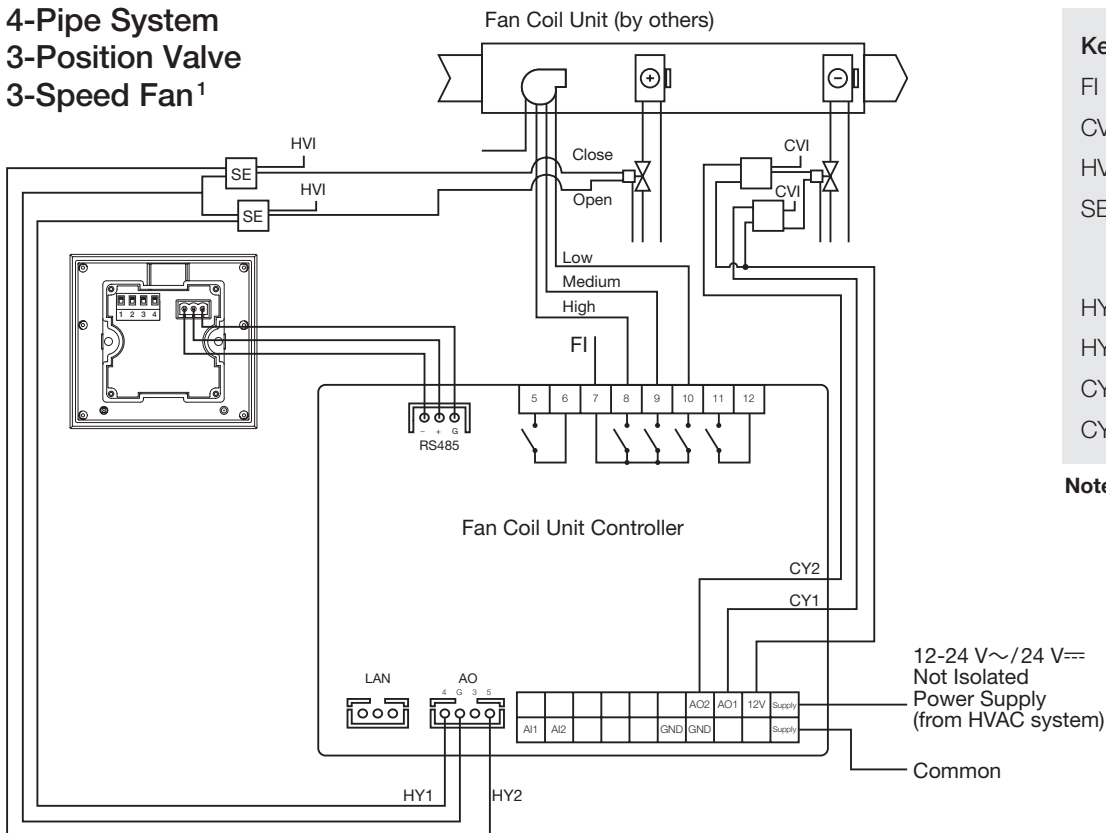


### Key

- FI = Fan In
- VI = Valve Signal Source
- SE = Schneider Electric  
SSL1A12JDR: Relay  
SSLZVA1: Relay Socket
- Y1 = Valve Open
- Y2 = Valve Close

**Note:** Relays are Normally Open (NO)

4-Pipe System  
3-Position Valve  
3-Speed Fan<sup>1</sup>



### Key

- FI = Fan In
- CVI = Cold Valve Signal Source
- HVI = Hot Valve Signal Source
- SE = Schneider Electric  
SSL1A12JDR: Relay  
SSLZVA1: Relay Socket
- HY1 = Hot Valve Open
- HY2 = Hot Valve Close
- CY1 = Cold Valve Open
- CY2 = Cold Valve Close

**Note:** Relays are Normally Open (NO)

<sup>1</sup> The fan may also be configured to use a 0–10 V== signal with the SMC55. See the instruction sheets included with the FCU Controller for more wiring diagrams.

## Configuration

You must enable floating point control and set the correct actuator running time. Use the Palladiom thermostat advanced configuration mode to set the following values:

Name	Parameter ID	Units	Default	Minimum	Maximum	Notes
Enable floating point	60	Choice	0	0	1	0= Not enabled <b>1= Enabled (overrides valve basic configuration)</b>
Actuator Running Time	61	Seconds	150 Seconds	1	999	Actuator running time for floating point control

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