

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

Overview

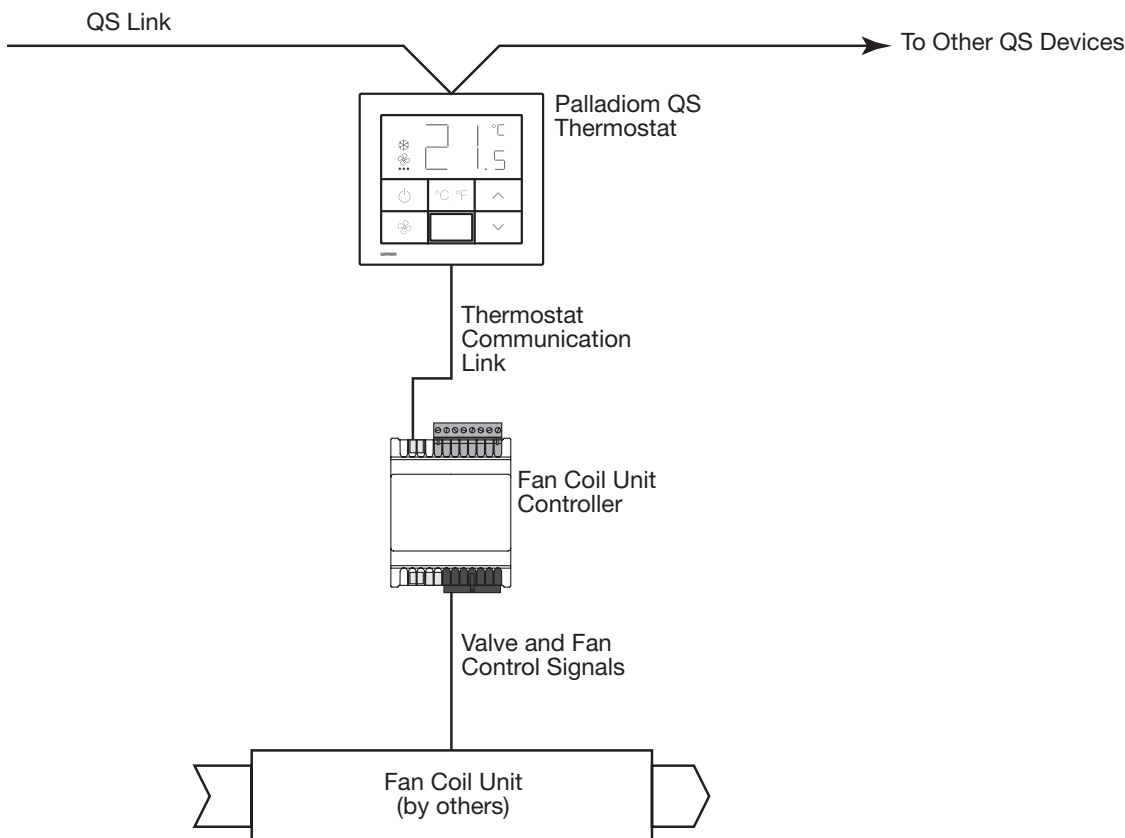
Lutron offers a Fan Coil Unit (FCU) Controller that can be configured to control valve actuators using a single (on/off) relay or a proportional (0–10 V_{rms}) signal. This FCU controller can also be configured to accommodate floating point (also known as “Tri-State” or “3-Point”) valves, using a separate 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

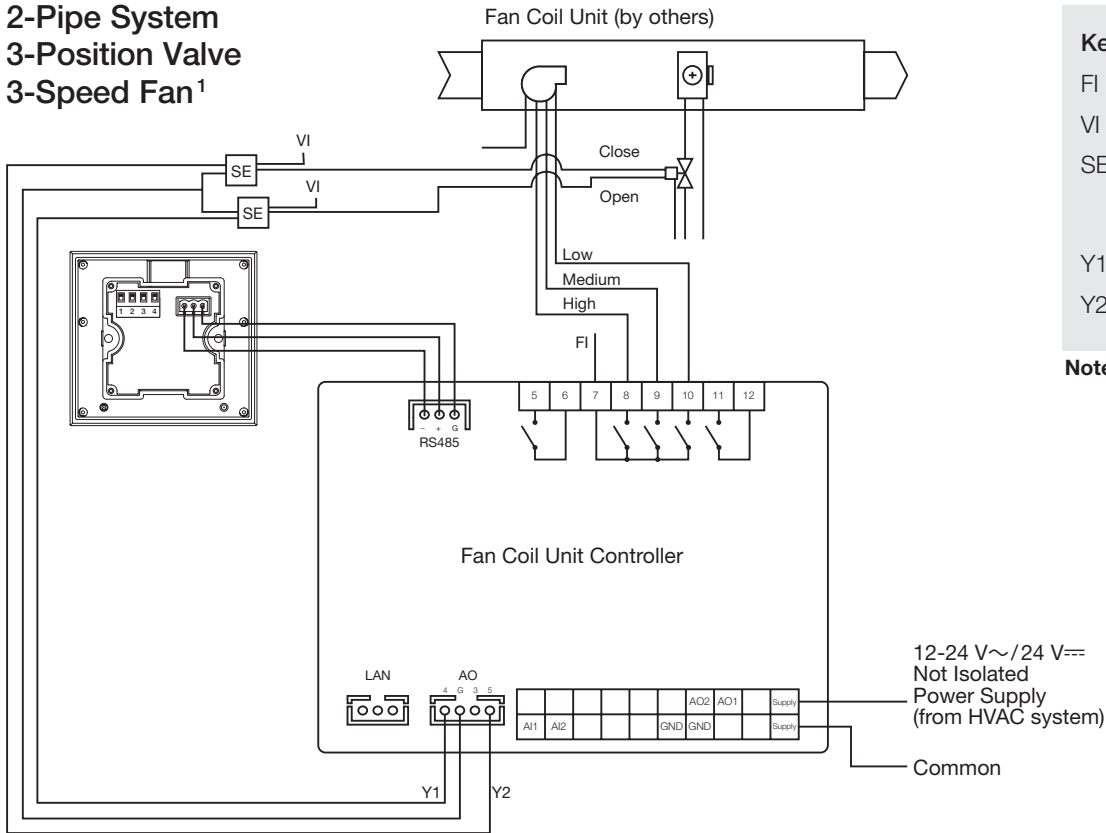
- Palladiom Thermostat model: MWP-T-OHW-XX
- FCU Controller model: SMC55
- Wire harness model: LR-HVAC-WIRE-120
- Solid state relays (not sold by Lutron)
 - Recommended Schneider Electric models:
 - Relay: SSL1A12JDR
 - DIN Rail Socket: SSLZVA1

System Topology



Wiring Diagrams

2-Pipe System
3-Position Valve
3-Speed Fan¹

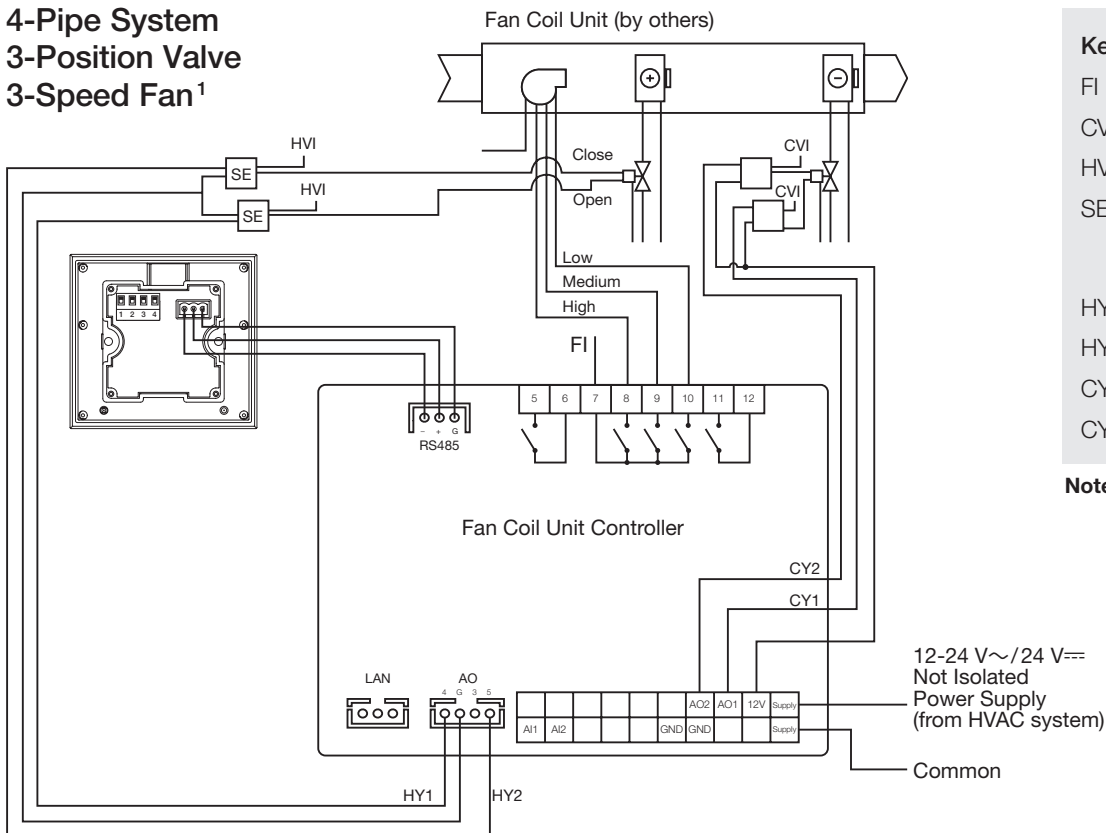


Key

- 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 Fan¹



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)

¹ 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 1= Enabled (overrides valve basic configuration)
Actuator Running Time	61	Seconds	150 Seconds	1	999	Actuator running time for floating point control

Lutron and Palladiom are trademarks of Lutron Electronics Co., Inc., registered in the U.S. and other countries.
Schneider Electric is a registered trademark of Schneider Electric Corporation.

Lutron Contact Numbers

WORLD HEADQUARTERS

USA
Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299
TEL: +1.610.282.3800
FAX: +1.610.282.1243
support@lutron.com

EUROPEAN HEADQUARTERS

United Kingdom
Lutron EA Ltd.
6 Sovereign Close
London, E1W 3JF United Kingdom
TEL: +44.(0)20.7702.0657
FAX: +44.(0)20.7480.6899
FREEPHONE (UK): 0800.282.107
Technical Support: +44.(0)20.7680.4481
lutronlondon@lutron.com

ASIAN HEADQUARTERS

Singapore
Lutron GL Ltd.
390 Havelock Road
#07-04 King's Centre
Singapore 169662
TEL: +65.6220.4666
FAX: +65.6220.4333
Technical Support: 800.120.4491
lutronsea@lutron.com

North & South America

Customer Assistance
USA, Canada, Caribbean:
1.844.LUTRON1 (1.844.588.7661)
Mexico:
+1.888.235.2910
Central/South America:
+1.610.282.6701

Asia Technical Hotlines

Northern China: 10.800.712.1536
Southern China: 10.800.120.1536
Hong Kong: 800.901.849
Indonesia: 001.803.011.3994
Japan: +81.3.5575.8411
Macau: 0800.401
Taiwan: 00.801.137.737
Thailand: 001.800.120.665853
Other Countries: +65.6220.4666