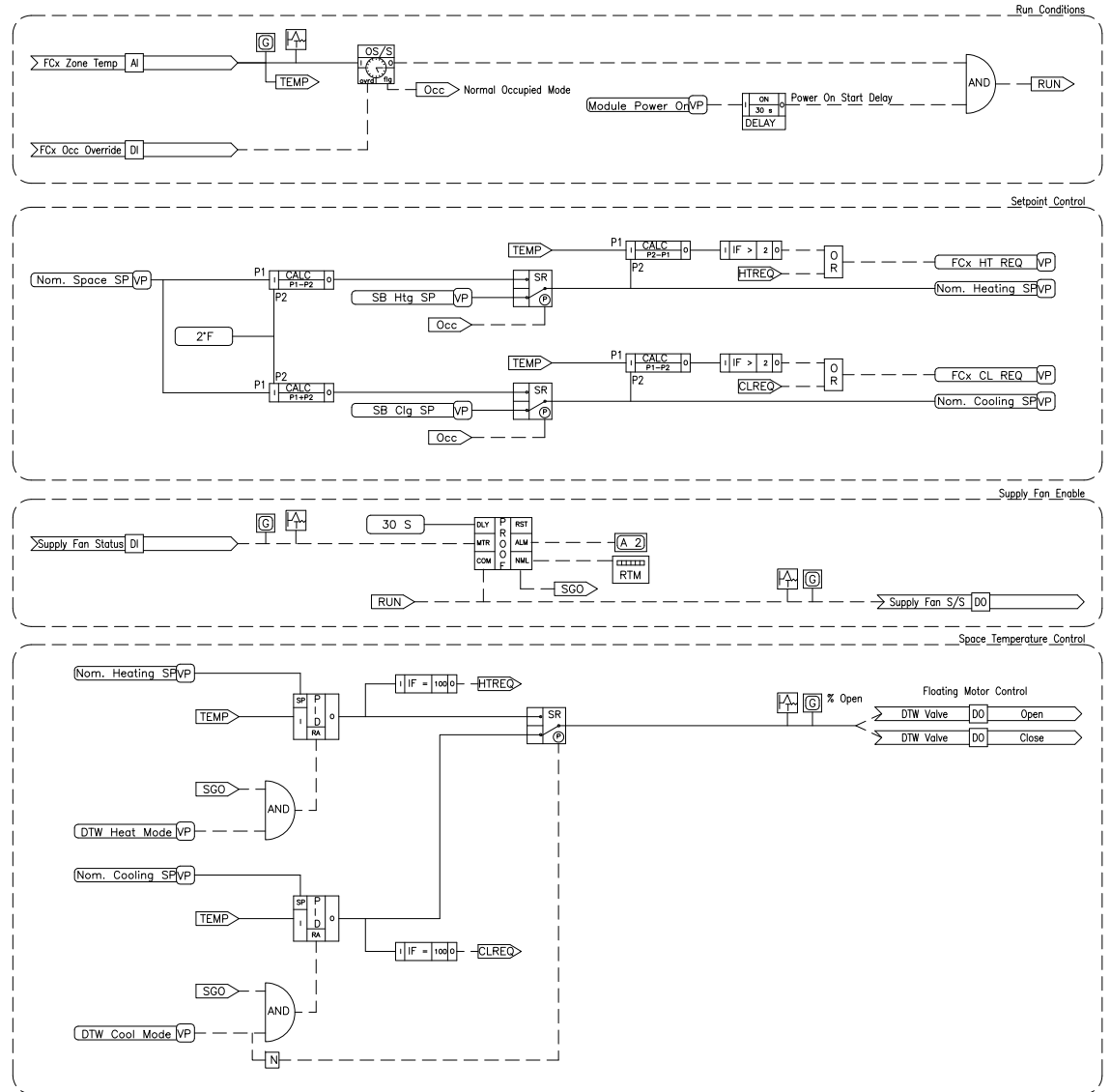


CONTROL SCHEMATIC



CONTROL LOGIC

NOTES
1. Provide with temperature display and communications port.

POINT NAME	POINT DESCRIPTOR	POINT TYPE				REMARKS
		DI	AI	DO	AO	
FCUxx.ZN-T	FCUx Zone Temp		1			
FCUxx.OCC-OVRD	FCUx Occ Override	1				
FCUxx.SA-T	FCUx SA Temp		1			
FCUxx.S-FN-STS	FCUx SF Status	1				
FCUxx.S-FN-C	FCUx SF S/S				1	
FCUxx.DTW-V-C-O	FCUx DTW Valve Open			1		Floating Motor Output
FCUxx.DTW-V-C-C	FCUx DTW Valve Close			1		Floating Motor Output
TOTALS		2	2	3	0	

BILL OF MATERIAL			
DESIG	QTY	MODEL NO.	DESCRIPTION
TS 1	1		Temp Sensor, Duct
TS 2	1		Temp Sensor, Zone
V1	1		Valve Actuators
CS 1	1		Current Switch

SEQUENCE OF OPERATION

General: The two pipe horizontal fan coil unit shall be fully controlled by the BAS.

Space Temperature Control: During periods of occupied operation (space is scheduled to be occupied) the operator may adjust the Normal (72F adj.) setpoint. The BAS shall automatically apply an offset for cooling and heating set points during occupied periods as follows:
 1. Space cooling setpoint shall be the Normal space temperature setpoint plus 2F (adj.).
 2. Space heating setpoint shall be the Normal space temperature setpoint minus 2F (adj.).

During periods of unoccupied operation (space is scheduled unoccupied) the operator may adjust Setback heating (50F adj.), and Setback cooling (85F adj.) setpoints. The BAS will prevent the operator from entering a Setback heating setpoint higher than the Space heating setpoint OR entering a Setback cooling setpoint lower than the Space cooling setpoint.

Occupancy Override: Occupancy override shall be initiated at the local zone sensor. Unit shall change to the occupied mode whenever the override button is depressed for a period of 2 hours (adj.) and reset to normal operation at the end of the period or whenever the override button is held for more than 5 seconds (adj.).

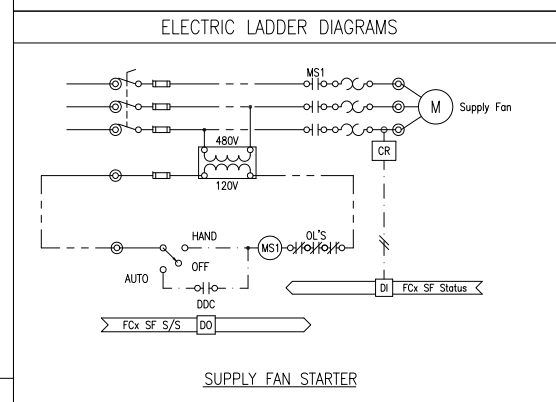
Fan: Fan shall run continuously during occupied mode. During unoccupied mode, fan shall be deenergized except as required to maintain setback temperature setpoints for both heating and cooling with a cycle differential of 3F (adj.). BAS shall prove fan operation and use the status indication to accumulate runtime.

Valve: BAS shall modulate the dual temperature water valve to maintain the active space temperature setpoint (normal occupied, setback cooling, setback heating). Whenever the unit receives a signal that the dual temperature water system is in cooling mode the dual temperature water valve modulates to maintain the cooling setpoint. Whenever the unit receives a signal that the dual temperature water system is in heating mode the dual temperature water valve modulates to maintain the heating setpoint.

Heating Request: A "Heating Request" shall be broadcast to the HW system serving this unit whenever the HW output is at 100% (adj.) OR the space temperature falls below the throttling range of the heating loop.

Cooling Request: A "Cooling Request" shall be broadcast to the CHW system serving this unit whenever the CHW output is at 100% (adj.) OR the space temperature rises above the throttling range of the cooling loop.

LOGIC VARIABLES			
BINARY	ANALOG	DESCRIPTION	#
Occ		ON WHEN OCCUPIED MODE ACTIVE	3
Run		ON WHEN UNIT COMMANDED TO START	2
HTREQ		ON WHEN DUAL TEMPERATURE VALVE IS 100% OPEN IN HEATING MODE	2
CLREQ		ON WHEN DUAL TEMPERATURE VALVE IS 100% OPEN IN COOLING MODE	2
SGO		ON WHEN SUPPLY FAN ENERGIZED AND STATUS PROVEN	3
	TEMP	VARIABLE VALUE OF ZONE TEMPERATURE	3



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UNIVERSITY OF VIRGINIA
 FACILITIES MANAGEMENT
 HVAC CONTROLS STANDARDS

Eng	DMC
Drawn	DMC
Chkd	HJN
Appd	---
Issued	8/4/11
Job No.	10080
Scale	N/A
Proj Code	

STANDARD

FAN COIL UNIT
(2-PIPE)

15 OF 30
SHEET NUMBER

C-2.4

DWG NUMBER