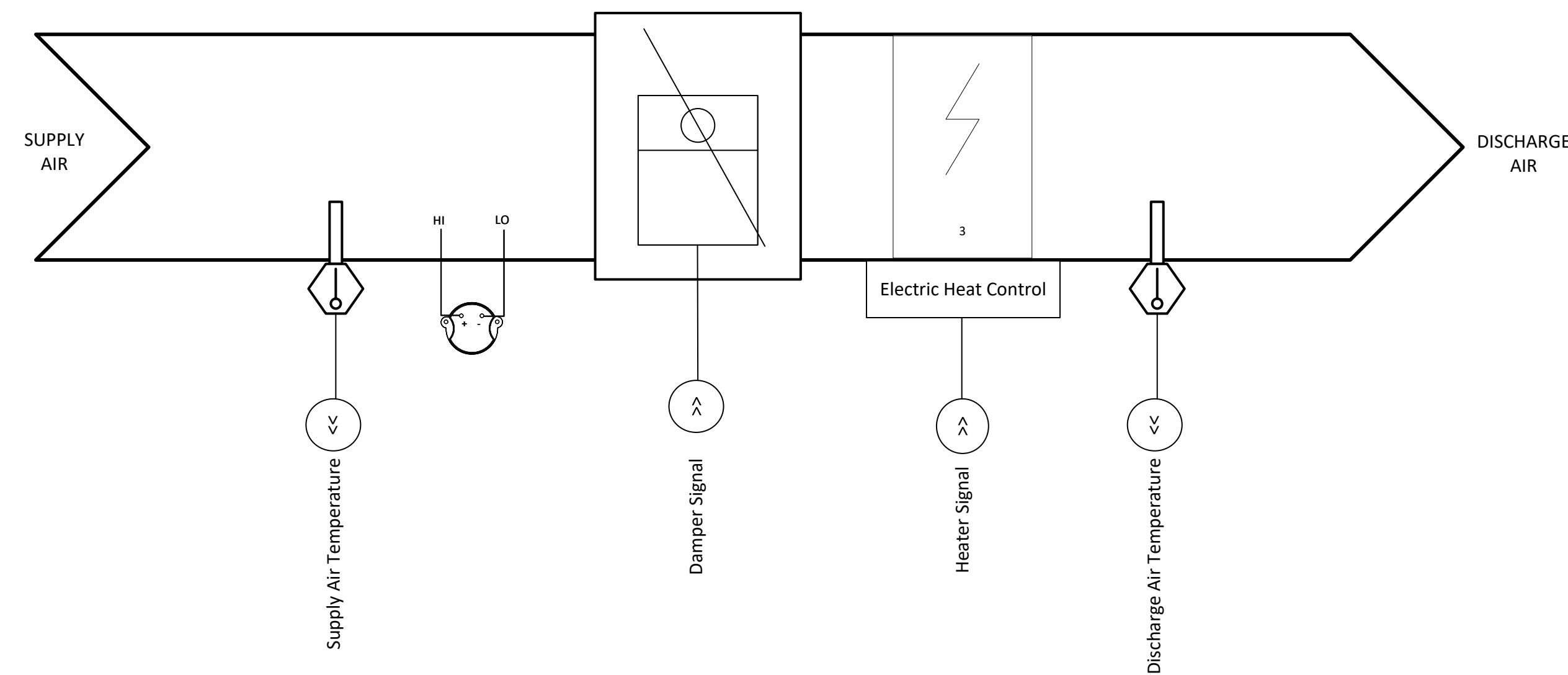


VAV TERMINAL UNITS
Typical for ???



Smart Node						
Inputs/Outputs						
Point Description	I/O Type	Controller	Wire Label	Comments	Device Model	Device Range
Spare	AI1			0-10Vdc		
Spare	AI2			0-10Vdc		
Discharge Air Temperature	TH1	SN #	DAT	10k Type II or DI	S10013 (APP105 Part)	°F
Supply Air Temperature	TH2	SN #	SAT	10k Type II or DI	S10013 (APP105 Part)	°F
Damper Control Signal	AO1	SN #	DMPR CNTL	0-10Vdc	A10005 (APP105 Part)	2-10VDC = 0-100%OPEN
Re-heat Control Signal	AO2			0-10Vdc	By Others	2-10VDC = 0-100%HEAT
Spare	Relay 1			Dry contact		
Spare	Relay 2			Dry contact		
Power In	Power In	SN #	24VAC	24Vac	By Others	-
Power Out	Power Out		POWER	24Vac		
Other Ports						
Spare	Damper 1			Primary Smart Damper		
Spare	Damper 2			Secondary Smart Damper		
Temperature/Humidity/Duct Pressure	RTS	SN #	RTH/DP	3 pin cable connector (No local interface option)	2001 (3000 BL Part)	°F/RH%
Spare	RS485			4 pin cable connector (Local Interface option)		

VARIABLE AIR VOLUME (VAV) SEQUENCE OF OPERATIONS

OPERATION OF THE VAV TERMINAL UNITS TO BE CONTROLLED BY THE SMART NODE CONTROLLERS. THE SMART NODE WILL RECEIVE ALL CONTROLS SIGNALS WIRELESSLY FROM THE CENTRAL CONTROL UNIT USING THE DYNAMIC AIRFLOW BALANCING (DAB) PROFILE. THE VAV TERMINAL UNIT IS CONTROLLED WITHIN USER DEFINED MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR AND AIR VELOCITY SENSOR AND MODULATES THE SUPPLY AIR DAMPER IN SEQUENCE WITH THE ELECTRIC REHEAT TO MAINTAIN THE ROOM TEMPERATURE AT SETPOINT.

SEQUENCE

THE ZONE DAMPERS WILL MODULATE TO REDIRECT THE AIRFLOW WHERE IT IS NEEDED. THE DAMPERS WILL NEVER DROP BELOW THEIR MINIMUM DAMPER VALUE (40% DEFAULT ADJ.). THE AVERAGE OPENING OF ALL ZONE DAMPERS WILL BE 70% (ADJUSTABLE).

HEATING

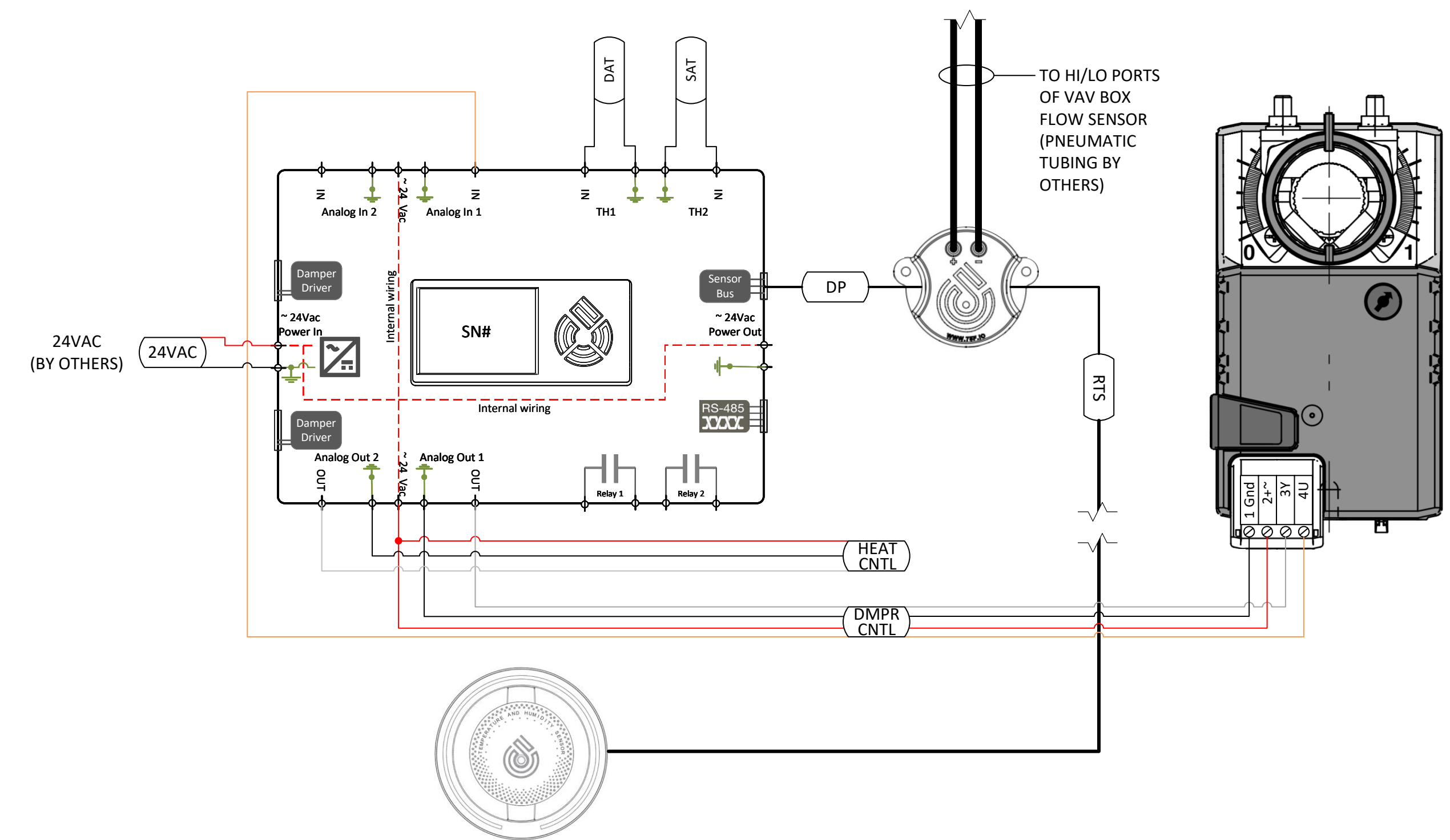
- WHEN THE SYSTEM IS PROVIDING WARM AIR AND THE ZONE REQUIRES HEATING THEN THE DAMPER WILL MODULATE TOWARDS ITS MAXIMUM POSITION.
- WHEN THE SYSTEM IS PROVIDING WARM AIR AND THE ZONE IS SATISFIED THE DAMPER WILL REMAIN IN ITS LAST KNOWN POSITION.
- WHEN THE SYSTEM IS PROVIDING WARM AIR AND THE ZONE REQUIRES COOLING THEN THE DAMPER WILL MODULATE TOWARDS ITS MINIMUM POSITION.

COOLING

- WHEN THE SYSTEM IS PROVIDING COOL AIR AND THE ZONE REQUIRES COOLING THEN THE DAMPER WILL MODULATE TOWARDS ITS MAXIMUM POSITION.
- WHEN THE SYSTEM IS PROVIDING COOL AIR AND THE ZONE IS SATISFIED THE DAMPER WILL REMAIN IN ITS LAST KNOWN POSITION.
- WHEN THE SYSTEM IS PROVIDING COOL AIR AND THE ZONE REQUIRES HEATING THEN THE DAMPER WILL MODULATE TOWARDS ITS MINIMUM POSITION.

75F COMMISSIONING NOTES

- EACH OF THE ZONE CONTROLS SHOULD BE PAIRED AS A DYNAMIC AIRFLOW BALANCING (DAB) ZONE PROFILE.
- FIRST DAMPER TYPE WILL BE SET TO '2-10VDC DAMPER' CONTROL.
- DAMPER SIZE AND SHAPE WILL BE DETERMINED BY INSTALLER.
- REHEAT OPTION WILL BE SELECTED, THE REHEAT CONTROL OUTPUT WILL BE CHANGED TO 'ANALOG 2' AND CONTROL WILL BE SET TO '2-10VDC'.



PRELIMINARY