SEQUENCE OF OPERATIONS

VARIABLE REFRIGERANT FLOW (DAIKIN) SYSTEM:

1. The variable refrigerant flow system, including the outdoor condensing units, indoor fan coil units, and refrigerant controllers, shall operate under their internal controls. A serial interface is provide for remote changes through the DDC system and provide alarms for the Diakin control system. The Diakin control system will control all thermal expansion valves, compressor operation, etc. See the Input/Output Sumary list of available interface points and remote control options.

DDC MONITORING OF THE FIRST FLOOR:

1. DDC shall monitor space temperature, CO2 levels and humidity as shown per the floor plans.
2. DDC shall monitor each fan coil electronic filter module for differential pressure.

MORNING WARM-UP AND MORNING COOL DOWN:

1. Morning Warm-up and Cool Down – DDC shall enable the Diakin system to achieve Occupied heating/cooling setpoint at the start of Occupied hours. Software shall calculate unit start time based on indoor and outdoor temperatures.

INPUT/ OUTPUT SUMMARY	OUTPUTS						INPUTS														SOFTWARE						NOTES
	DIGITAL				ANALOG		DIGITAL					ANALOG									ALARM			ENERGY MANAGEMENT				
	START/STOP	OPEN/CLOSE	ENABLE/DISABLE	OCCUPIED/UNOCCUPIED	DDC MODULATION	SETPOINT ADJUST	DIFF. PRESS. SWITCH	CURRENT SWITCH	ON/OFF	OPEN/CLOSE CONTACT	MANUAL OVERRIDE	AIRFLOW (CFM)	STATIC PRESSURE	GPM	%SPEED/HZ/CURRENT	TEMPERATURE	HUMIDITY/DEWPOINT	POWER (AMPS/KW/KWH)	CO2 LEVEL (PPM)	DIFFERENTIAL PRESSURE	EQUIPMENT FAILURE	HI/LO LIMIT	TEMPERATURE	TIME SCHEDULE	RUN TIME	OVERRIDE PROGRAM	DAY/NIGHT SETBACK	
DIAKIN VRV SYSTEM																											(1)
START/STOP (CONTROL)	X																							X		X	X	(2)
START/START (MONITORING)																												(2)
TRIP																					X							(2) (10)
MALFUNCTION CODE																					X							(2) (14)
AIR CONDITIONING MODE (SETTING)																												(2) (15)
AIR CONDITIONING MODE (MONITORING)																												(2)
AIR FLOW RATE (SETTING)																												(2) (4)
AIR FLOW RATE (MONITORING)																												(2) (4)
ROOM TEMPERATURE INDICATOR																X												(2) (3)
TEMPERATURE ADJUST						X																						(2) (3)
FILTER SIGN																												(2) (5)
FILTER SIGN RESET																												(2) (5)
REMOTE CONTROL MODE SETTING (START/STOP)	X																											(2)
REMOTE CONTROL MODE SETTING (A/C MODE)																												(2)
REMOTE CONTROL MODE SETTING (TEMP ADJUST)						X																						(2)
CENTRAL/LOCAL EQUIPMENT OPERATION																												(2) (5)
SYSTEM FORCED OFF																												(2) (9)
AIR DIRECTION (SETTING)																												(2) (5)
AIR DIRECTION (MONITORING)																												(2) (5)
FORCED THERMO OFF (SETTING)																												(2) (6)
FORCED THERMO OFF (MONITORING)																												(2) (6)
ENERGY EFFICIENCY (SETTING)																												(2) (7)
ENERGY EFFICIENCY (MONITORING)																												(2) (7)
THERMO OPERATION STATUS																												(2) (8)
COMPRESSOR OPERATION STATUS																												(2)
INDOOR FAN OPERATION STATUS																												(2)
HEATER OPERATION STATUS																												(2) (5)
SPACE TEMPERATURE																X												(11) (12)
SPACE HUMIDITY																	X											(11)
SPACE CO2 LEVEL																		X										(11)
FAN COIL FILTER MODULE																			X		X							(13)

(1) SEE FLOOR PLANS FOR THE LOCATION OF ALL FAN COILS AND CONDENSING UNITS.
(2) BACNET SERIAL INTERFACE POINTS FROM THE DIAKIN SYSTEM.
(3) DIAKIN GENERATES TEMPERATURES IN CELSIUS THEREFORE A CONVERTER WILL BY REQUIRED BY ALC.
(4) FAN SPEED
(5) NOT USED
(6) FAN ONLY – SHUT OFF OF AC OR HEAT
(7) SPACE TEMPERATURE RESET WITH NO CHANGE IN THE DISPLAY OF SPACE TEMPERATURE SET POINT
(8) CALL FOR HEATING OR COOLING
(9) FIRE ALARM TIE-IN
(10) FOR EACH FAN COIL AND CONDENSING UNIT
(11) SEE FLOOR PLANS FOR LOCATION. TEMPERATURE SENSOR/OVERRIDE SHALL BE PROVIDED FOR EACH FAN COIL.
(12) TEMPERATURE SENSOR FOR MONITORING SPACE TEMPERATURE
(13) FILTER DIFFERENTIAL PRESSURE SWITCH FOR DYNAMIC (ELECTRONIC) FILTER MODULE ASSOCIATED WITH EACH DIAKIN FAN COIL
(14) AN ALPHA NUMERIC CODE GENERATED BY THE DIAKIN SYSTEM
(15) COOLING/HEATING/STANDBY MODE

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CONSULTING ENGINEERS
Johnson, Spellman & Associates, Inc.
6991 Peachtree Industrial Boulevard, Building 700,
Norcross, Georgia 30092
Phone (770) 447-4555 Fax (770)246-9042
visit us at www.jsace.com
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ASHRAE HEADQUARTERS
ADDITION AND RENOVATION

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