

DEHUMIDIFICATION UNIT
APPLICABLE UNITS:
 DH-2-1 DH-2-2 DH-2-3 DH-3-1 DH-3-2 DH-3-3

RUN CONDITIONS:
 THE UNIT SHALL RUN TO MAINTAIN A ZONE HUMIDITY OF 60% RH (ADJ.) OR LESS AT ALL TIMES.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH ZONE HUMIDITY: IF THE ZONE HUMIDITY IS GREATER THAN THE HUMIDITY SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

RETURN AIR SMOKE DETECTION:
 THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A RETURN AIR SMOKE DETECTOR STATUS.

SUPPLY AIR SMOKE DETECTION:
 THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A SUPPLY AIR SMOKE DETECTOR STATUS.

SUPPLY FAN:
 THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. TO PREVENT SHORT CYCLING, THE SUPPLY FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME. ALARMS SHALL BE PROVIDED AS FOLLOWS:

- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

DEHUMIDIFICATION:
 THE CONTROLLER SHALL MEASURE THE ZONE HUMIDITY AND STAGE THE COOLING TO MAINTAIN ITS HUMIDITY SETPOINT. TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE COOLING SHALL BE ENABLED WHENEVER:

- THE ZONE HUMIDITY IS ABOVE HUMIDITY SETPOINT.
- AND THE SUPPLY FAN STATUS IS ON.

HOT GAS REHEAT COIL:
 THE HOT GAS REHEAT COIL SHALL OPERATE PER THE DEHUMIDIFIER'S INTERNAL CONTROLS, AND SHALL REJECT HEAT TO THE SUPPLY AIR AS REQUIRED.

ELECTRIC HEATING STAGE:
 THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS MINIMUM SUPPLY AIR TEMPERATURE SETPOINT OF 70°F (ADJ.). TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE ELECTRIC HEATING SHALL BE ENABLED WHENEVER:

- THE SUPPLY AIR TEMPERATURE IS BELOW THE MINIMUM SUPPLY AIR TEMPERATURE SETPOINT.
- AND THE SUPPLY FAN STATUS IS ON.

FILTER DIFFERENTIAL PRESSURE MONITOR:
 THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- FILTER CHANGE REQUIRED: FILTER DIFFERENTIAL PRESSURE EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

RETURN AIR TEMPERATURE:
 THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE.

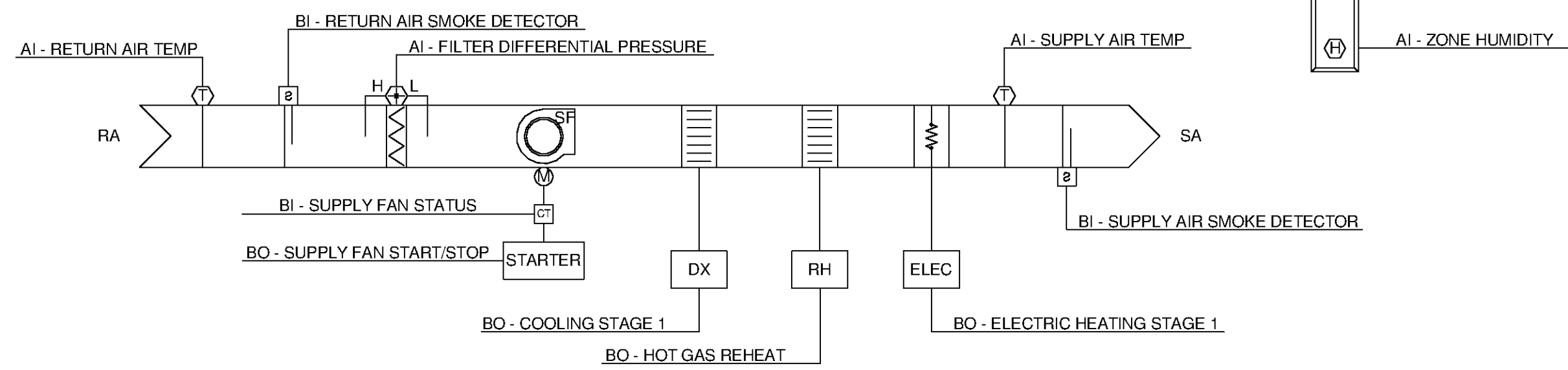
ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

SUPPLY AIR TEMPERATURE:
 THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE.

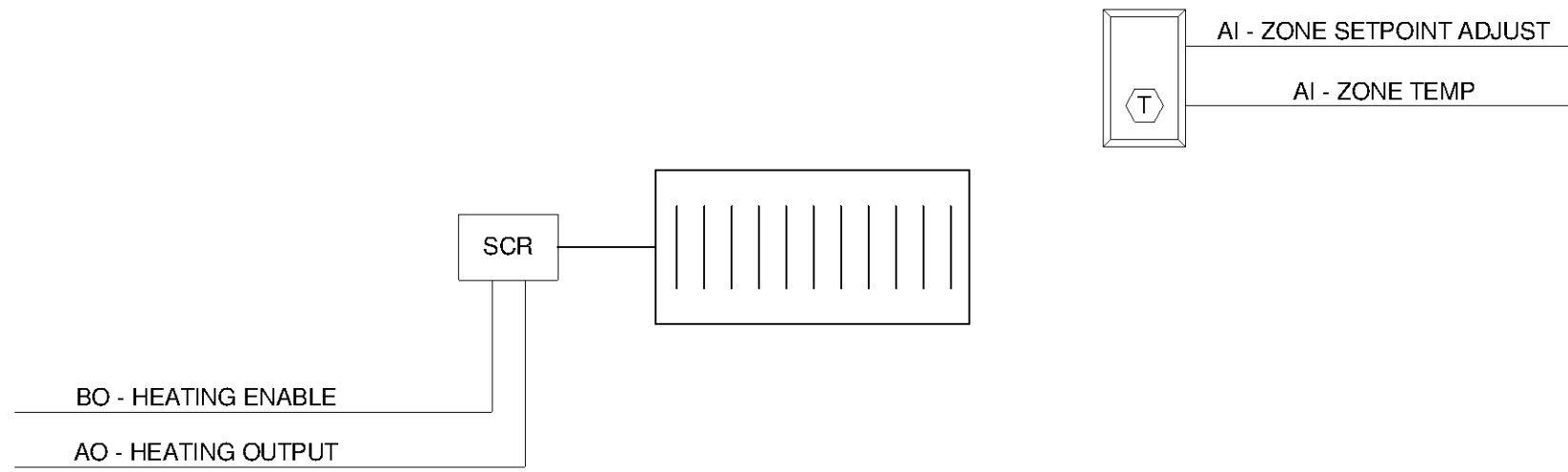
ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).



1 DEHUMIDIFICATION UNIT
 M-9909 N.T.S.

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS				SHOW ON GRAPHIC		
	AI	AO	BI	BO	AV	BV	SCHED	TREND		ALARM	
ZONE HUMIDITY	X							X		X	
FILTER DIFFERENTIAL PRESSURE	X							X		X	
RETURN AIR TEMPERATURE	X							X		X	
SUPPLY AIR TEMPERATURE	X							X		X	
RETURN AIR SMOKE DETECTOR			X					X	X	X	
SUPPLY AIR SMOKE DETECTOR			X					X	X	X	
SUPPLY FAN STATUS			X					X		X	
SUPPLY FAN START/STOP				X				X		X	
COOLING STAGE 1				X				X		X	
ELECTRIC HEATING STAGE 1				X				X		X	
DEHUMIDIFICATION SETPOINT					X			X		X	
SUPPLY AIR TEMPERATURE SETPOINT								X		X	
HIGH ZONE HUMIDITY									X		
LOW ZONE HUMIDITY									X		
SUPPLY FAN FAILURE									X		
SUPPLY FAN IN HAND									X		
SUPPLY FAN RUNTIME EXCEEDED									X		
COMPRESSOR RUNTIME EXCEEDED									X		
FILTER CHANGE REQUIRED									X	X	
HIGH RETURN AIR TEMPERATURE									X		
LOW RETURN AIR TEMPERATURE									X		
HIGH SUPPLY AIR TEMPERATURE									X		
LOW SUPPLY AIR TEMPERATURE									X		
TOTALS	4	0	3	3	1	0	0	12	13	12	
		TOTAL HARDWARE (10)				TOTAL SOFTWARE (26)					



2 ELECTRIC INFRARED RADIANT HEATER
 M-9909 N.T.S.

ELECTRIC INFRARED RADIANT HEATER

APPLICABLE UNITS:

ERH-5-1 ERH-8-2
 ERH-5-2 ERH-8-3
 ERH-8-1

RUN CONDITIONS - CONTINUOUS:

THE UNIT SHALL RUN CONTINUOUSLY AND SHALL MAINTAIN A HEATING SETPOINT OF 60°F (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN 50°F (ADJ.).

ZONE SETPOINT ADJUST:

THE OCCUPANT SHALL BE ALLOWED TO ADJUST THE ZONE HEATING SETPOINT AT THE ZONE TEMPERATURE SENSOR.

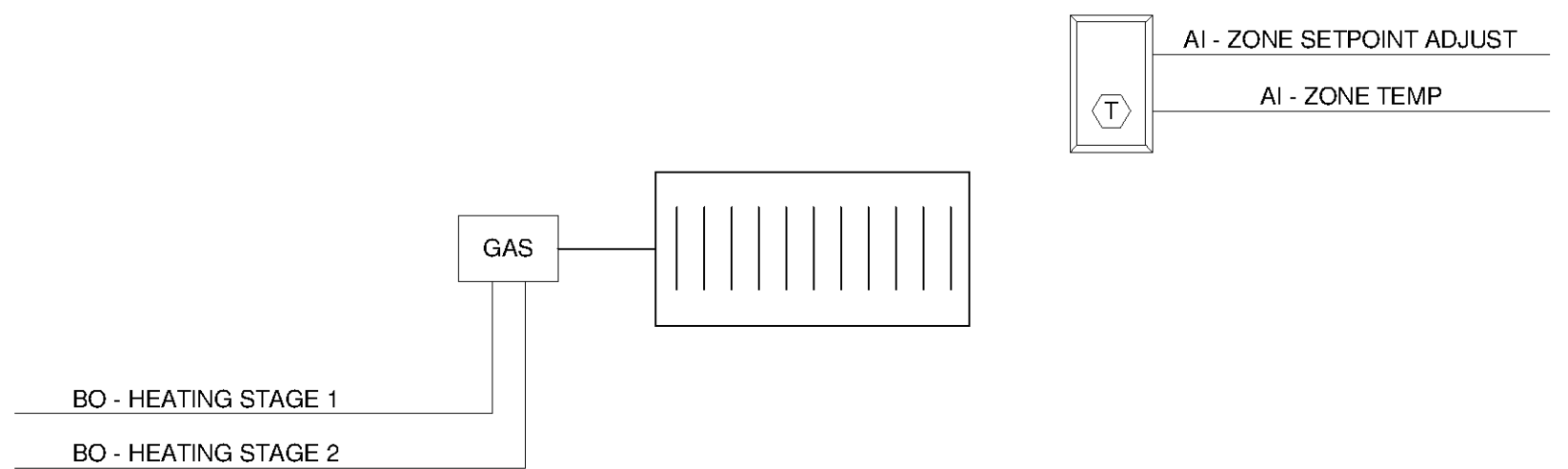
ELECTRIC HEATING WITH SCR:

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE HEATING TO MAINTAIN ITS HEATING SETPOINT.

THE HEATING SHALL BE ENABLED WHENEVER:

- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT BY 5°F (ADJ.).
- AND THE FAN IS ON.

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS				SHOW ON GRAPHIC		
	AI	AO	BI	BO	AV	BV	SCHED	TREND		ALARM	
ZONE TEMP	X							X		X	
ZONE SETPOINT ADJUST	X									X	
HEATING OUTPUT		X						X		X	
HEATING ENABLE				X				X		X	
HEATING SETPOINT								X		X	
LOW ZONE TEMP									X		
TOTALS	2	1	0	1	0	0	0	4	1	5	
		TOTAL HARDWARE (4)				TOTAL SOFTWARE (5)					



3 GAS INFRARED RADIANT HEATER
 M-9909 N.T.S.

GAS INFRARED RADIANT HEATER

APPLICABLE UNITS:

RH-2-1 RH-2-4 RH-2-7 RH-2-10 RH-2-13
 RH-2-2 RH-2-5 RH-2-8 RH-2-11 RH-2-14
 RH-2-3 RH-2-6 RH-2-9 RH-2-12

RUN CONDITIONS - CONTINUOUS:

THE UNIT SHALL RUN CONTINUOUSLY AND SHALL MAINTAIN A HEATING SETPOINT OF 60°F (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN 50°F (ADJ.).

ZONE SETPOINT ADJUST:

THE OCCUPANT SHALL BE ALLOWED TO ADJUST THE ZONE HEATING SETPOINT AT THE ZONE TEMPERATURE SENSOR.

GAS HEATING STAGES:

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER:

- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT BY 5°F (ADJ.).
- AND THE FAN IS ON.

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS				SHOW ON GRAPHIC		
	AI	AO	BI	BO	AV	BV	SCHED	TREND		ALARM	
ZONE TEMP	X							X		X	
ZONE SETPOINT ADJUST	X									X	
HEATING STAGE 1				X				X		X	
HEATING STAGE 2				X				X		X	
HEATING SETPOINT								X		X	
LOW ZONE TEMP									X		
TOTALS	2	0	0	2	0	0	0	4	1	5	
		TOTAL HARDWARE (4)				TOTAL SOFTWARE (5)					