MAU / DDC INTERFACE POINTS LIST

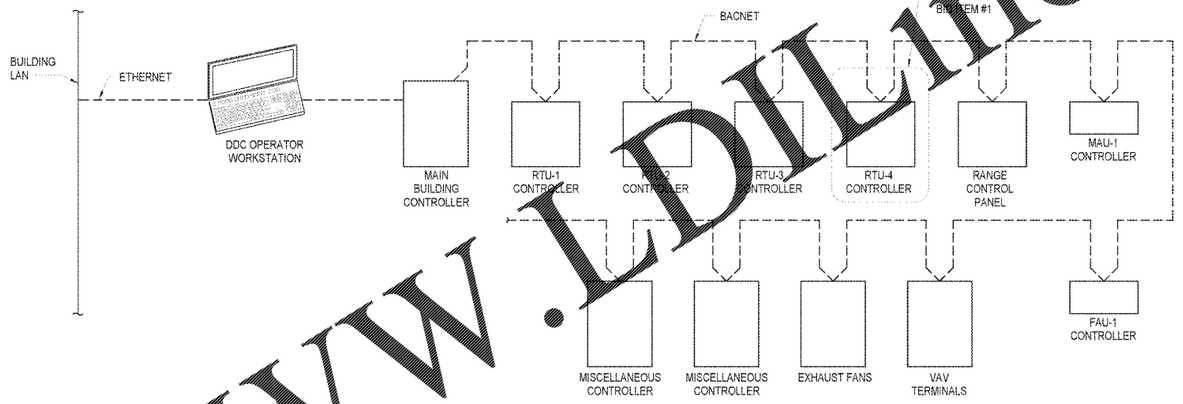
	INPUT (MAU TO DDC)			
	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG	HEATING CAPACITY			X
	COOLING CAPACITY			X
	SUPPLY FAN SPEED			X
	MIXED AIR TEMPERATURE			X
	DISCHARGE AIR TEMPERATURE			X
	OUTDOOR AIR FLOW RATE			X
	OUTDOOR AIR DAMPER POSITION			X
	RETURN AIR DAMPER POSITION			X
	ECONOMIZER RELIEF AIR DAMPER POSITION			X
BINARY	UNIT STATE (OFF, HEATING, COOLING, ECONOMIZER)			X
	UNIT STATUS			X
	COOLING STATUS			X
	HEATING STATUS			X
	ECONOMIZER STATUS			X
	DIRTY FILTER		X	X
	SUPPLY FAN STATUS			X
	SUPPLY FAN VFD FAULT		X	X

	OUTPUT (DDC TO MAU)			
	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG	OUTDOOR AIR TEMPERATURE			X
	OUTDOOR AIR RELATIVE HUMIDITY			X
	DISCHARGE AIR TEMPERATURE SETPOINT			X
BINARY	UNIT - ENABLE / DISABLE			
	HEATING MODE - ENABLE / DISABLE			
	COOLING MODE - ENABLE / DISABLE			
	ECONOMIZER - ENABLE / DISABLE			

MAU/DDC INTERFACE POINTS LIST

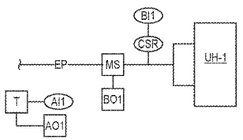
NO SCALE

REFERENCE SHEET M-802



CONTROLS SYSTEM ARCHITECTURE

NO SCALE



SEQUENCE OF OPERATION

THE UNIT HEATER SHALL BE CONTROLLED BY THE BUILDING DDC SYSTEM. UPON A DROP IN SPACE TEMPERATURE OF 2 °F (ADJ) BELOW SET POINT 45°F (ADJ) THE UNIT SHALL CYCLE ON AND THE FAN SHALL RUN CONTINUOUSLY FOR A MINIMUM OF 5 MINUTES (ADJ) OR UNTIL THE SPACE TEMPERATURE IS SATISFIED. AT THE END OF THE MINIMUM RUN TIME, IF THE SPACE TEMPERATURE IS SATISFIED (SETPOINT + 2°F (ADJ)), THE UNIT SHALL CYCLE OFF. ANTI-SHORT CYCLE TIMER SHALL PREVENT THE UNIT FROM CYCLING MORE THAN 6 TIMES PER HOUR. THE BMS SHALL MONITOR UNIT HEATER STATUS AND SPACE TEMPERATURE.

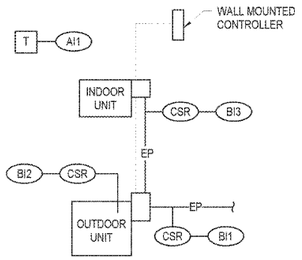
PROVIDE THE FOLLOWING ALARMS TO THE DDC SYSTEM:
- LOW SPACE TEMPERATURE. SPACE TEMPERATURE FALLS BELOW 38°F (ADJ).
- UNIT HEATER FAILURE: COMMANDED 'ON' BUT STATUS IS 'OFF'.
- UNIT HEATER RUNNING IN HAND: COMMANDED 'OFF' BUT STATUS IS 'ON'.

ALARMS SHALL REQUIRE MANUAL RESET.

DDC POINTS LIST					
	INPUT				
	POINT #	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG	AI1	SPACE TEMPERATURE			X
BINARY	BI1	UNIT HEATER STATUS			X
	OUTPUT				
	POINT #	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG	AO1	SPACE TEMPERATURE SETPOINT			X
BINARY	BO1	UNIT HEATER START / STOP			

ELECTRIC UNIT HEATER (UH-1 & UH-2)

NO SCALE



DDC POINTS LIST					
	INPUT				
	POINT #	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG	AI1	SPACE TEMPERATURE	X		X
BINARY	BI1	SYSTEM STATUS			X
	BI2	HEAT PUMP STATUS			X
	BI3	DSS STATUS			X
	OUTPUT				
	POINT #	POINT DESCRIPTION	TREND	ALARM	GRAPHIC
ANALOG					
BINARY					

SEQUENCE OF OPERATION

DUCTLESS SPLIT SYSTEM SHALL HAVE UNIT MANUFACTURER'S STANDARD WALL-MOUNTED, WIRED CONTROLLER. THE SYSTEM SHALL OPERATE SUBJECT TO ITS FACTORY INSTALLED INTERNAL CONTROLS TO MAINTAIN ROOM TEMPERATURE SET POINTS. INITIAL SET POINT FOR TELECOMM EQUIPMENT ROOM SHALL BE 72°F (ADJ). TEMPERATURE SET POINT IS USER ADJUSTABLE. AN INDEPENDENT WALL-MOUNTED TEMPERATURE SENSOR SHALL MONITOR ROOM TEMPERATURE AND SEND AN ALARM TO THE DDC PANEL IF ROOM TEMPERATURE RISES ABOVE 85°F (ADJ). HIGH TEMPERATURE ALARM SHALL REQUIRE MANUAL RE-SET. DDC SHALL MONITOR INDOOR AND OUTDOOR UNIT STATUS.

DUCTLESS SPLIT SYSTEM

NO SCALE

WILMINGTON, NC

HAYNES / LACEWELL POLICE AND FIRE TRAINING FACILITY

3100 HURST STREET, WILMINGTON, NC 28405

DESIGNER

CLARKNEXSEN
213 South Jefferson, Suite 1011
Roanoke, Virginia 24011
540 982-0800
www.clarknexsen.com
Clark Nexsen License Number: C-1028

SEALS

SUBMITTAL

4 MAY 2018

CONSTRUCTION DOCUMENTS

REVISIONS

SHEET

CONTROLS

M-804

DESIGN: JLD
DRAWN: DRL
REVIEW: EES

CN 5938

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