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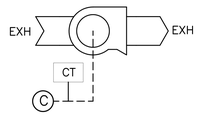
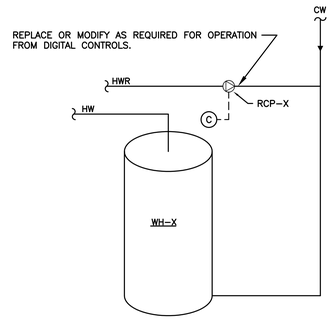
CONTROLS FOR EXHAUST FANS, EACH					
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
FAN START/STOP			X		
FAN STATUS	X				

CONTROLS FOR DOMESTIC WATER HEATER					
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
HW CIR PUMP START/STOP			X		
HW CIR PUMP STATUS	X				X

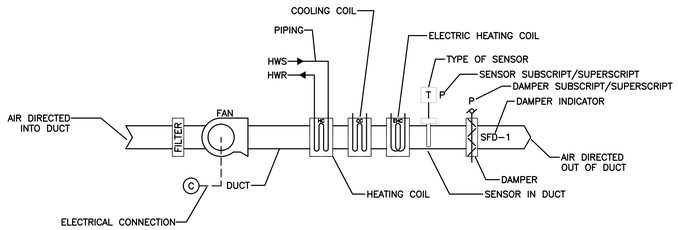
CONTROLS FOR EXISTING RTU'S					
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
UNIT START/STOP			X		
ROOM TEMPERATURE		X			
HEATING STAGE 1			X		
HEATING STAGE 2			X		
ECONOMIZER			X		
MECHANICAL COOLING			X		



1 M6.2 EXHAUST FAN CONTROL DIAGRAM
NTS



2 M6.2 DOMESTIC HOT WATER HEATER CONTROL
NOT TO SCALE



EQUIPMENT ABBREVIATIONS:

P – PUMP
FP – FUEL PUMP
SP– SUMP PUMP
BP – BOOSTER PUMP
HWP – HEATING WATER PUMP
CHP – CHILLED WATER PUMP
CHRP – CHILLED WATER RISER PUMP
CWP – CONDENSING WATER PUMP
CSP – COOLING TOWER SUMP PUMP
HWRP – DOMESTIC HOT WATER RECIRCULATION
VFD – VARIABLE FREQUENCY DRIVE
CT – CONTACTOR
CC – CONTROL COMPRESSOR
CH – CHILLER
CT – COOLING TOWER
B – BOILER
EF – EXHAUST FAN
RF – RETURN/RELIEF FAN
AH – AIR HANDLER
MZ – MULTIZONE AIR HANDLER
HP – HEAT PUMP
VAV – VARIABLE AIR VOLUME DAMPER BOX
AD – AREA DAMPER
SD – SMOKE DAMPER
SFD – FIRE SMOKE COMBINATION DAMPER
H – HUMIDIFIER
V – VALVE
WH – WATER HEATER
BAS – BUILDING AUTOMATION SYSTEM

AIR FLOW ABBREVIATIONS:

OSA – OUTSIDE AIR
RA – RETURN AIR
SA – SUPPLY AIR
EXH – EXHAUSTED AIR

T? SPACE TEMPERATURE SENSOR
P? SPACE PRESSURE SENSOR
H? SPACE HUMIDITY SENSOR
? DP DIFFERENTIAL PRESSURE SENSOR
? H HUMIDITY SENSOR
? T TEMPERATURE SENSOR
? LL TEMPERATURE LOW LIMIT SENSOR
? FL FLUID LEVEL SENSOR

CT CURRENT TRANSFORMER
M MANOMETER
VFD VARIABLE FREQUENCY DRIVE
C CONTACTOR/STARTER
MCC MOTOR CONTROL CENTER
SD SMOKE DETECTOR
? CO CARBON DIOXIDE SENSOR
? F FLOW SENSOR

CAPPED LINE
PUMP
FLOW DIRECTION INDICATOR
MULTI VALVE
? ELECTRIC 3-WAY VALVE
? 2-WAY VALVE

CONTROL SUBSCRIPTS AND SUPERSCRIPTS:

P – PNEUMATIC
E – ELECTRIC

PLUMBING ABBREVIATIONS:

CHS – CHILLED WATER SUPPLY
CHR – CHILLED WATER RETURN
CWS – CONDENSING WATER SUPPLY
CWR – CONDENSING WATER RETURN
HWS – HEATING WATER SUPPLY
HWR – HEATING WATER RETURN
HW – DOMESTIC HOT WATER
CW – DOMESTIC COLD WATER
GPM – GALLONS PER MINUTE
DB – DOUBLE VALVE OPERATOR

LEGEND

EQUIPMENT ABBREVIATIONS:

P – PUMP
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SP– SUMP PUMP
BP – BOOSTER PUMP
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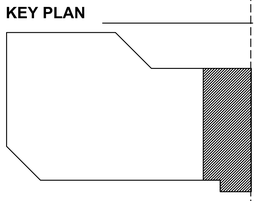
LEGEND

P DUCT PRESSURE
LL LOW LIMIT SENSOR
SD SMOKE DETECTOR
CO2 CO2 SENSOR
PUMP
T SPACE TEMPERATURE SENSOR
P SPACE PRESSURE SENSOR
DP DIFFERENTIAL PRESSURE SENSOR
T TEMPERATURE SENSOR
OAS OUTSIDE AIR MEASUREMENT STATION
CT CURRENT TRANSFORMER
F AIR FLOW STATION
VFD VARIABLE FREQUENCY DRIVE
C CONTACTOR/STARTER
H HUMIDITY SENSOR
2-WAY VALVE
3-WAY VALVE
MOTORIZED DAMPER

SEQUENCE OF OPERATION FOR SPACES WITH DUCTLESS SPLIT SYSTEMS:

1. OPERATE FROM ITS OWN PACKAGE THERMOSTAT. SET THERMOSTAT FOR 72°F MAX.
2. SEND ALARM TO REMOTE STATION ON TEMPERATURE ABOVE 75°F.

KEY PLAN



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1/18/16

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REVISIONS:

PERMIT SET

MECHANICAL CONTROLS PLAN

M6.2