GENERAL NOTES

1. BUILDING AUTOMATION SYSTEM (BAS) CONTRACTOR SHALL FURNISH AND INSTALL A DIRECT DIGITAL CONTROL BAS THAT TIES IN TO THE EXISTING BAS FRONT-END. THE NEW BAS SHALL UTILIZE ELECTRONIC SENSING, MICROPROCESSOR-BASED DIGITAL CONTROL, AND ELECTRONIC ACTUATION OF DAMPERS, VALVES AND DEVICES TO PERFORM CONTROL SEQUENCES AND FUNCTIONS SPECIFIED. REFER ALSO TO CONTROL DRAWINGS, SEQUENCES OF OPERATION, AND POINT LISTS ELSEWHERE IN THE CONTRACT DOCUMENTS.

2. ALL MATERIALS SHALL BE NEW, THE BEST OF THEIR RESPECTIVE KINDS WITHOUT IMPERFECTIONS OR BLEMISHES AND SHALL NOT BE DAMAGED IN ANY WAY, AND SHALL CONSIST OF THE MANUFACTURER'S LATEST TECHNOLOGY AT THE TIME OF EQUIPMENT SUBMITTAL. USED EQUIPMENT SHALL NOT BE USED IN ANY WAY FOR THE PERMANENT INSTALLATION EXCEPT WHERE DRAWINGS OR SPECS SPECIFICALLY ALLOW EXISTING MATERIALS TO REMAIN IN PLACE.

3. THE SYSTEM MUST BE FULLY BACNET COMPLIANT AT THE TIME OF INSTALLATION. THIS MEANS THAT THE SYSTEM MUST USE BACNET AS THE NATIVE COMMUNICATION PROTOCOL BETWEEN WORKSTATIONS OR SERVERS ON THE NETWORK.

4. THE FOLLOWING ARE THE ONLY ACCEPTABLE MANUFACTURERS FOR BUILDING AUTOMATION SYSTEM EQUIPMENT: AUTOMATED LOGIC CORPORATION, JOHNSON CONTROLS, INC.

5. ALL CONTROLS WORK SHALL BE INSTALLED BY THE BAS CONTRACTOR, UNLESS SPECIFIED OTHERWISE. WHERE A PIECE OF EQUIPMENT CAN BE CONTROLLED BY THE BAS THEN BAS CONTROLS ALONE SHALL BE USED.

6. CRITICAL SAFETY INTERLOCKS WHICH ARE NOT DIRECTLY WIRED BY THE ELECTRICAL SUB-CONTRACTOR, SUCH AS FREEZESTATS, HIGH LIMIT PROTECTORS, END SWITCHES ETC., SHALL BE DIRECTLY CONNECTED, THROUGH WIRE OR PNEUMATIC TUBING, SO AS NOT TO DEPEND ON ANY DIGITAL CONTROL SYSTEM "SEQUENCE OF OPERATION" TO PERFORM THEIR SAFETY FUNCTION.

7. LAMINATED CONTROL DRAWINGS INCLUDING SYSTEM CONTROL SCHEMATICS, SEQUENCES OF OPERATION AND PANEL TERMINATION DRAWINGS, SHALL BE PROVIDED IN PANELS FOR MAJOR PIECES OF EQUIPMENT. TERMINAL UNIT DRAWINGS SHALL BE LOCATED IN THE CENTRAL PLANT EQUIPMENT PANEL OR MECHANICAL ROOM PANEL. THE DRAWINGS SHALL ACCURATELY RECORD THE ACTUAL CONTROLLER PROGRAMMING AND SETTINGS AT THE TIME OF BUILDING TURNOVER. 8. ELECTRONIC COPIES OF THE RECORD DRAWINGS SHALL BE PROVIDED TO THE INSTRUMENTATION & CONTROLS DEPARTMENT AND SHALL INCLUDE COPIES OF THE

ABOVE NOTED SCHEMATICS AS WELL AS INDIVIDUAL FLOOR PLANS WITH CONTROLLER LOCATIONS WITH ALL INTERCONNECTING ROUTING WIRING, SPACE SENSORS, LAN WIRING, POWER WIRING, AND LOW VOLTAGE POWER WIRING.

9. CONTROLS CONTRACTOR SHALL PROVIDE UNIVERSITY WITH ALL PRODUCT LINE TECHNICAL MANUALS AND TECHNICAL BULLETINS, TO INCLUDE NEW AND UPGRADED

PRODUCTS, BY THE SAME DISTRIBUTION CHANNEL AS TO DEALERS OR BRANCHES THROUGHOUT THE WARRANTY PERIOD OF THE PROJECT. 10. THE SYSTEM PROVIDED SHALL INCORPORATE HARDWARE RESOURCES SUFFICIENT TO MEET THE FUNCTIONAL REQUIREMENTS OF THE PROJECT PLUS 10% ADDITIONAL CAPACITY. THIS ADDITIONAL CAPACITY SHALL BE SPECIFICALLY REFLECTED IN ADDITIONAL CONTROLLER UNIVERSAL INPUTS/OUTPUTS.

11. THE UNIVERSITY RESERVES THE RIGHT TO MAKE CHANGES TO THE BAS DURING THE WARRANTY PERIOD. SUCH CHANGES DO NOT CONSTITUTE A WAIVER OF WARRANTY. THE CONTRACTOR SHALL WARRANT PARTS AND INSTALLATION WORK REGARDLESS OF ANY SUCH CHANGES MADE BY THE UNIVERSITY, UNLESS THE CONTRACTOR PROVIDES CLEAR AND CONVINCING EVIDENCE THAT A SPECIFIC PROBLEM IS THE RESULT OF SUCH CHANGES TO THE BAS. ANY DISAGREEMENT BETWEEN THE UNIVERSITY AND THE CONTRACTOR ON SUCH MATTERS SHALL BE SUBJECT TO RESOLUTION THROUGH THE CONTRACT 'DISPUTES' CLAUSE.

A	Description Air		
AB	Air "A" - "B" Phase		
AC	"A" - "C" Phase		
ACC	Accumulator		
ADJ	Adjust		
AHU	Air Handling Unit		
ALA	Alarm		
AMPS	Amperage		
AN	"A" - "N" Phase (N is Neutral)		
ANG	Angle		
АРН	A Phase		
APP	Application		
ATMZR	Atomizer		
AUTO	Auto		
AVAL	Available		
AVG	Average		
В	Basement		
BA	"B" - "A" Phase		
BATT	Battery		
BATT-L-VOLTS	Battery low voltage		
BATT-OPRT	Battery operational		
BC	"B" - "C" Phase		
BD	Blowdown		
BLD-D	Bleed Damper		
BLDG	Building		
BLR	Boiler		
BN	"B" - "N" Phase (N is Neutral)		
BPH	B Phase Bridge		
BRDG	Bridge		
BYP	Bypass		
<u>C</u>	Command		
CA CAP	"C" - "A" Phase		
CAP CB	Capacity "C" - "B" Phase		
CC			
CD	Cooling Coil Cold Deck		
CD CDTVTY	Conductivity		
CDW	Condenser Water		
CHLR	Chiller		
CHW	Chilled Water		
CHWUVXXXXY	Chilled Water Meter		
CL	Closed		
CLG	Cooling		
CLN	Clean		
CLN-STM-GEN	Clean Steam Generator		
CMN	Common		
CMPR	Compressor		
CN	"C" - "N" Phase (N is Neutral)		
CNT	Count		
CO2	Carbon Dioxide		
СОМВ	Combustion		
СОММ	Communication		
COND	Condensate		
CORR	Corridor		
СРН	C Phase		
CR	Credit		
	Computer Room Air Conditioner		
CRAC	•		
CRAC CT	Cooling Tower		
CRAC CT CUH	Cooling Tower Cabinet Unit Heater		
CRAC CT CUH CYC	Cooling Tower Cabinet Unit Heater Cycle		
CRAC CT CUH CYC D	Cooling Tower Cabinet Unit Heater Cycle Damper		
CRAC CT CUH CYC D DC	Cooling Tower Cabinet Unit Heater Cycle Damper Direct Current		
CRAC CT CUH CYC D DC DCPL	Cooling Tower Cabinet Unit Heater Cycle Damper Direct Current Decouple		
CRAC CT CUH CYC D DC DCPL DD	Cooling Tower Cabinet Unit Heater Cycle Damper Direct Current Decouple Down Duct		
CRAC CT CUH CYC D DC DCPL DD DEL	Cooling Tower Cabinet Unit Heater Cycle Damper Direct Current Decouple Down Duct Delta		
CRAC CT CUH CYC D D DC DCPL DD DD DEL DEWPT	Cooling Tower Cabinet Unit Heater Cycle Damper Direct Current Decouple Down Duct Delta Dew Point		
CRAC CT CUH CYC D DC DCPL DD DEL DEWPT DH	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidification		
CRAC CT CUH CYC D DC DC DCPL DD DEL DEWPT DH DHUM	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifier		
CRAC CT CUH CYC D DC DCPL DCPL DD DEL DEWPT DH DHUM DIFF	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferential		
CRAC CT CUH CYC D D DC DCPL DD DEL DEU DEU DHUM DHUM DIFF DLVRY	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDelivery		
CRAC CT CUH CYC D DC DCPL DCPL DD DEL DEWPT DH DHUM DIFF DLVRY DLY	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelay		
CRAC CT CUH CYC D D DC DCPL DD DEL DEWPT DH DHUM DIFF DLVRY DLY DMD	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDelivery		
CRAC CT CUH CYC D DC DC DCPL DD DEL DEWPT DH DHUM DIFF DLVRY DLVRY DLY DMD DOM	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemand		
CRAC CT CUH CYC D D DC DCPL DC DC DC DC DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic Water		
CRAC CT CUH CYC D D DC DC DCPL DD DEL DEWPT DH DHUM DHUM DIFF DLVRY DLVRY DLY DMD DOM DOM DP DRNPN	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential Pressure		
CRAC CT CUH CYC D DC DCPL DC DCPL DD DEL DEWPT DH DHUM DIFF DLVRY DLY DMD DOM DOM DP DRNPN DTW	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDrain Pan		
CRAC CT CUH CYC D DC DC DCPL DD DEL DEWPT DH DHUM DIFF DLVRY DLVRY DLY DMD DOM DP DRNPN DTW E	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDrain PanDual Temperature Water		
CRAC CT CUH CYC D D DC DC DC DC DC DC DC DC DC DC DC D	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEast		
CRAC CT CUH CYC D D DC DC DC DC DC DC DC DC DC DC DC D	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDrain PanDual Temperature WaterEastEconomize		
CRAC CT CUH CYC D D DC DCPL DC DCPL DD DEL DEWPT DH DHUM DHUM DIFF DLVRY DLVRY DLVRY DLVRY DMD DOM DP DRNPN DTW E ECON EFF EFFI	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffective		
CRAC CT CUH CYC D D DC DC DCPL DD DEL DEWPT DH DHUM DHUM DIFF DLVRY DLY DLY DMD DOM DOM DP DRNPN DTW E ECON EFF EFFI EFFI EGEN	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffectiveEfficiency		
CRAC CT CUH CYC D D DC DC DCPL DD DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffectiveEfficiencyEmergency Generator		
CRAC CT CUH CYC D DC DC DC DCPL DD DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEffectiveEfficiencyEmergency GeneratorElectric		
CRAC CRAC CT CUH CYC D D DC DC DC DCPL DD DEL DEWPT DH DHUM DHUM DIFF DLVRY DLVRY DLVRY DLVRY DLVRY DLVRY DLVRY DLVRY E ECON EFF EFFI EGEN ELE ELEUVXXXXY ELVTR EMP	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffectiveEfficiencyEnergency GeneratorElectricElectric Meter		
CRAC CT CUH CYC D DC DC DCPL DC DCPL DC DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffectiveEfficiencyEnergency GeneratorElectricElectric MeterElevator		
CRAC CT CUH CYC D D DC DC DCPL DC DCPL DC DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDomestic WaterDifferential PressureDrain PanDual Temperature WaterEastEconomizeEffectiveEfficiencyEnergency GeneratorElectricElevatorEmpty		
CRAC CT CUH CYC D D DC DC DCPL DD DEL DEWPT DH DHUM DHUM DHUM DIFF DLVRY DLY DLY DMD DOM DOM DP DRNPN DTW E ECON EFF EFFI EGEN ELE ELEUVXXXXY ELVTR EMP ENA	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDehumidifierDifferentialDeliveryDelayDomestic WaterDrain PanDual Temperature WaterEastEconomizeEffectiveEffectiveEfficiencyElectricElectric MeterElevatorEmptyEnableEnable		
CRAC CT CUH CYC D DC DC DCPL DC DC DC DC DC DC DC DC DC DC	Cooling TowerCabinet Unit HeaterCycleDamperDirect CurrentDecoupleDown DuctDeltaDew PointDehumidificationDeliveryDelayDemandDomestic WaterDifferential PressureDrain PanDual Temperature WaterEffectiveEffectiveEffectiveEfficiencyElectricElectricElectricElectric MeterEnableEnableEnableEntering		

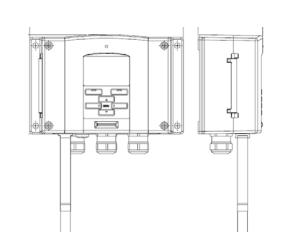
fflowFACEI faveFACEFalureFALTFalureFALTFalureFALTFalureFRATI fauleFRAMEI fameFLAMEFilterFNFameFRAMEFrequencyFSVRProtocol Converter (Field Server, Data Station)FUELFuelGGrequencyFSVRProtocol Converter (Field Server, Data Station)FUELFuelGGroundGASGasGASGasGASGasGMDGround (etertical)HHumdityHANDHandHANDHandHANDHadHANDHadHANDHadHANDHadingHTTHeatraceHTGHeatraceHTGHeatraceHMMHumditherHWMHou'MaterHWMHou'MaterHWAHaditangeHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINTHeatraceHINT	Abbreviation	Description
FAILFailureFAILFaultFAILFaultFAILFaultFBFeedbackFCUFan Coll UnitFINFinalFURFillerFINFanFIREFreguencyFSVRProtocol Converter (Field Server, Data Station)FUEFuelGoGroundGASUXXXXGas MeterGENGeneratorGUYGlycolGNDGround (electrical)HHumidryHADHol DeckHHighHCCHeat Recovery CollHTHeat TraceHTRHeaterHWHy WaterHWHol WaterHWHol WaterHWHol WaterINTENALIncreaseINTENALIntervalINTENALIntervalINTENALKlo Volt AmpsKVAKlo Volt AmpsKVAKlo Volt AmpsKVAKlo Volt AmpsKVALogLGDLogLGTLogLGAD-ON-INVTRLoad on inverterLGAD-ON-INVTRLoadLGAD-ON-INVTRLoad on inverterLGADLogLGAD-ON-INVTRLoad on inverterLGADLogLGAD-ON-INVTRLoad on inverterLGAD-ON-INVTRLoad on inverterLGADLogMAXMaked JairMAXMaked JairMAXMaked JairMAXMaked J		
FALTFaultFALTFaultFIPFedbackFGUFan Coll UnitFINFinameFILMEFilameFIRTFilterFNFanFRCQFrequencyFSVRProtocol Converter (Field Server, Data Station)TUELFuelGGroundGSGroundGASLWXXXXGas MeterGRNGeneratorGAUGlycolGNDGround (electrical)HHumidityHANDHandHOHot DeckHIHighHRCHeat Recovery CollHTHeat Recovery CollINIn or InputINMITRInverterINMITRInverterINMITRInverterINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVAL </td <td></td> <td></td>		
FBFeedbackFCUFan Coll UnitFINFinalFLMEFlameFIRAFilterFIRAFilterFNFanFRQFrequencyFSVRProtocol Converter (Field Server, Data Station)FUREFueGGasGASGas MeterGMGeneratorGVGy(volGNDGround (electrical)HHumidityHANDHandHOHO DeckHIHadifyHANDHandHOHO DeckHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollINTRNHeaterHUMHumidifierHWHo WaterHXHeaterHUMHoringINTRNInverterISOIsolationKVAKlo Volt AmpsKUARKlo Volt AmpsKUARKlo Volt AmpsKVAKlo Volt AmpsKUAKlo Volt Am		
FINFinalFLAMEFlameFLAMEFliterFNFanFNQFrequencyFSVRProtocol Converter (field Server, Data Station)FVRLFuelGGasGASGasHandHandHDHondHandHighHRHeaterHUMHot WaterHWHot WaterHNIn or inputINTERVALIntervalINTERVALIntervalINTERVALIntervalINTRAKilo Volt AmpsKVAKilo Volt AmpsKVAKilo Volt AmpsKVAKilo Volt AmpsKVAKilo Volt AmpsLGALagLDLeadLGTLeadLGTLeadLGALagLDADLoad on inverterLOADLoad on bypasLOADLoadLOADL		
FLAMEFlameFLIRFliterFNFanFREQFrequencyFREQFrequencyFSNProtocol Converter (Field Server, Data Station)FUELFuelGGroundGASGasGASGasGASGasGASGasGASGasGASGasGRNGeneratorGHNGeneratorGNDHandHandHDHot DeckHIHighHRCHeat Recovery CollHTHeatingHRTHeatingHRTHeatingHRTHeatingHIMHumidifierHWMHot WaterHWHot WaterHWHot WaterHWHot WaterHWHot WaterHWHot WaterHWHot Volt Amps RecutiveKVAKilovattsKVAKilovattsKVAKilovattsLLowLLowLGCLagLGALagLGALagLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGALosoLGAMedicalMMMiniterLGALag <trr>LGALag<!--</td--><td>FCU</td><td>Fan Coil Unit</td></trr>	FCU	Fan Coil Unit
FLTB.FilterFNFanFRQFrequencyFSVRProtocol Converter (Field Server, Data Station)FSVRProtocol Converter (Field Server, Data Station)FSVRForundGGroundGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGASGasGANDGeneratorGIHatHatHumidityHANDHatHATHeat Recovery CollHTHeat TraceHTRHeaterHUMHumidifierHWHu WaterINIn orinputINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALKilovalt AmpsKVAKilovalt AmpsKVAKilovalt AmpsKVALovalt AmpsLGDLeagLGTLeagLGTLeagLGALogLODLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-		
FMFanFREQ.FrequencyFSVR.Protocol Converter (Field Server, Data Station)FVR.FuelG.GroundGASGasGASGas MeterGENGeneratorGLYGlycolGNDGrand (electrical)HHumdityHANDHandHDHot DeckHIHighHTTHeat Racovery CollHTTHeatingHTTHeatingHTTHeatingHTTHeatingHWMHumdifierHWMHumdifierHWMHumdifierHWMHumdifierHWMHot WaterNTRHeatingINTEWALIncreavalINTEWAL<		
FREQFrequencyFREQProtocoi Converter (Field Server, Data Station)FSVRProtocoi Converter (Field Server, Data Station)FVLLFuelGGroundGASUXXXYVGas MeterGASUXXXYVGas MeterGHNGenand (electrical)HHHumidityHANDHandHDHot DeckHIHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollINTHeaterHUMHumidfilerHWHot WaterHWHot WaterHWHot WaterINTERVALIn or inputINTERVALIntervalINTRALInverterISOIsolationKVAKilo Volt AmpsKWMKilowatt HoursLLowLGLogLGLogLGLogLGLogLGALagLGALagLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALogLGALog<		
SYMProtocol Converter (Field Server, Data Station)FUFLFuelGGroundGASGasGAS/WXXXVGas MeterGENGeneratorGIVGiycolSMDGround (electrical)HHandHANDHandHOHot DeckHIHighHGCHeat Recovery CollHTHeat Recovery CollINHor InguitINTRHeat Recovery CollINIn or InguitINTRHeat Recovery CollINInverterINHor InguitINTRHeat Recovery CollINInverterINLog CollINLogINLog CollINHeat Re		
GGroundGASGasGASUVXXXXYGas MeterGRNGeneratorGIVGivolGNDGround (electrical)HHumidityHANDHandHDHighHGHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHTHeat Recovery CollHWHumiditierHWMHumiditierHWMHour MaterHWHot WaterHXHeat ExchangerIDIDIDIDINTREWALIntervalINTREWALKilo Volt AmpsKVAKilo Volt AmpsKVMKilo Volt AmpsKVMLagLDLogLGLogLGLogLGLogLGLogLGALog </td <td>FSVR</td> <td></td>	FSVR	
GASGasGASLWXXXYGas MeterGASLWXXXYGeneratorGIYGlycolGYUGlycolGNDGround (electrical)HHumidityHANDHandHOHot DeckHIHighHRCHeat Recovery CollHTFHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTRHeat Recovery CollHTRHeat Recovery CollHWHot WaterHWHot WaterHWHot WaterINTERVALIntervalInverterINTERVALIntervalINTERVALIntervalINTRAInverterINTRInverterISOIsolationKVAKilo Volt Amps ReactiveKVAKilo Volt Amps ReactiveKVAKilo Volt Amps ReactiveKVAKilo Volt Amps ReactiveIDLowLGLowLGLowLGLogLGLogLGLogLGDLoadLGD-ON-REPLoad on InverterLGALLoadLGALLoadLGALLoogLGALLoogLGALLoogLGALLoogLGALLoogLGALLoogLGALLoogLGALLoogLGALLoog <t< td=""><td></td><td></td></t<>		
GASLUVXXXYGas MeterGENGeneratorGGVGivold (lectrical)HHumidityHANDHandHDHot DeckHIHighHACHeat Recovery CollHTHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat ExchangerIDIDINHot WaterHWHot WaterHWHot ExchangerIDIDINTERVALIntervalINTRYInverterISOIsolationKVARKilo Volt Amps AcativeKVMKilo Volt Amps AcativeKVMLagLDLoadLDLoadLDLoad <td></td> <td></td>		
GENGeneratorGLYGlycolGNDGround (electrical)HHumidityHANDHandHDHot DeckHIHighHRCHeat Recovery CollHTHeat TraceHTGHeatingHTRHeaterHWHot WaterHWHot WaterHWHot WaterINIn or InputINTRInverterINIn or InputINTRVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKVMKilo Volt Amps ReactiveKVMKilo Volt Amps ReactiveKVMLagLDLeadLGLowLGLoad on InverterLOADLoad on InverterLOADMedicalMAMkeed AirMAXMeximumMEDMedicalMRMedium PressureMAMkeed AirMAXMaximumMDDEModeMDITUMMedium TeresureMTHWMedium TeresureMTAMeterMTHWMedium TeresureMTHWMedium TeresureMTHMeterMDDE		
GLYGlycolGNDGround (electrical)HANDHandHANDHandHDHot DeckHIHighHRCHeat Recovery CollHTTHeat TraceHTGHeatingHTTHeat TraceHUMHumidifierHWHot WaterHXHeat ExchangerIDIDINIn or inputINTRHeaterINTRInvertarISOIsolationKVAKilo Volt Amps ReactiveKWKilowattsKVARKilo Volt Amps ReactiveKWLengthLULowLGLogLGDLeadLGTHLengthLILine UneLODLeadLODLoad on bypassLOAD-ON-BYPLoad on bypassLOAD-ON-BYPLoad on bypassLOAD-ON-NYRTLoad on bypassLOAD-ON-NYRTLoad on merterLOCALLocalLOCALLocalLMAMaintenance SwitchMAMaixed AirMAXMaximumMAEMaintenance SwitchMITMMedical TopMITMMedical TopMODEModeMOTAMedierMOTAMedierMAMixer AirMAXMaximumMAMixer AirMAXMaximumMAMixer AirMAXMaximumMOTAMeder<		
HHumidityHANDHandHOHot DeckHIHighHRCHeat Recovery CollHTTHeat Recovery CollHTGHeat Ret Recovery CollHTGHeat Recovery CollHTGHeaterHWMHumidifierHWMHot WaterHXHeat ExchangerIDIDINIn or InputINTERVALIntervalINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilowattsKWKilowattsKWLowLGLagLDLeadLGTHLengthLIMLine to NeutralLOAD-ON-PNULoad on bypassLOAD-ON-INVTRLoad on inverterLOAD-ON-INVTRLoad on inverter		
HANDHandHDHot DeckHIHighHRCHeat Recovery CoilHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat TraceHTGHeat ExchangerIDIDIDIn or InputINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTLogLGLogINTLogINTIntervalINTIntervalINTIntervalINTLogINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTIntervalINTInter	GND	Ground (electrical)
HDHot DeckHIHighHRCHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTGHeat Recovery CollHTGHeaterHUMHutwidtfierHWHot WaterHXHeat ExchangerIDIDINIn or InputINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalKVARKilo Volt Amps ReactiveKVWKilowattsKVARKilo Volt Amps ReactiveKVARKilo Volt Amps ReactiveKVARKilowattsKUMLoadLGLoadLGLeadLGTHLengthLILine LineLILoad on bypassLOAD-ON-NVRLoad on bypassLOAD-ON-NVRLoad on bypassLOAD-ON-NVRLoad on bypassLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoadLOAD-ON-NVRLoad </td <td></td> <td>· · · · · ·</td>		· · · · · ·
HIHighHRCHeat Recovery CoilHTGHeat raceHTGHeatingHTRHeaterHUMHumidifierHWHot WaterHWHot WaterHXHeat ExchangerIDIDINTERVALIn tervalINTERVALIntervalINTERVALIntervalINTERVALIntervalINTERVALIntervalSOIsolationKVAKilo Volt Amps ReactiveKWKilo volt Amps ReactiveKWKilowattsKWHLowLGLowLGLogLGTHLeadLGTHLeadLGTHLeadLGADLoadLOAD-ON-INVTRLoad on inverterLOCALLocalLOCALLocalLOCALLocalLOCALLocalLTHWUVXXXYLow Temp MeterLVLeavingMAMixed AirMAXMaximumMDEModeMOISTMoistureMOISTMoistureMOISTMoistureMITHWMedium Temp HeterMITHMeterMITHMeterMITHMeterMITHMeterMITHMeterMOISTMoistureMOISTMoistureMITHMeterMITHMeterMITHMeterMITHMeter <trr>MITHMeter<trr>MI</trr></trr>		
HRCHeat Recovery CollHTHeat TraceHTGHeatingHTRHeaterHUMHumidfilerHWHot WaterHXHeat ExchangerIDIDINIn or InputINTRRALIntervalINTRRALIntervalINTRRALIntervalINTRRALIntervalINTRRALKilo Volt AmpsKVAKilo Volt Amps ReactiveKWKilo Volt Amps ReactiveKWKilo Volt Amps ReactiveKWHKilo Volt Amps ReactiveLLowLGLowLGLagIDLeadLGTHLengthUMUmitLLLine to NeutralLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on SpassLOAD-ON-INVTRLoad on SpassLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVTRLoadLOAD-ON-INVT		
HTHeat TraceHTGHeatingHTGHeatingHTRHeaterHUMHumidifierHWHot WaterHWHot WaterHWHot WaterIDIDINIn or InputINTERVALInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilo volt Amps ReactiveKWKilo wath HoursLLowLGLagLDLeagLGTHLengthLIMULine to NeutralLOAD-ON-HYPLoad on InverterLOAD-ON-HVTRLoad on SpassLOAD-ON-HVTRLoad on SpassLOAD-ON-HVTRLoad on SpassLOAD-ON-HVTRLoad on InverterLOAD-ON-HVTRLoad on SpassLOAD-ON-HVTRLoad on SpassLOAD-NONLeavingMAMixed AirMAMixed AirMAMixed Air<		
HTGHeatingHTRHeaterHUMHumidifierHWHot WaterHWHot WaterHXHeat ExchangerIDIDINIn or inputINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilowatt HoursLLowLAGCLagLDLeadLGTHLingthLGTHLengthLGAUad on StypassLOAD-ON-BYPLoad on StypassLOAD-ON-HYRLoad on InverterLOAD-ON-HYRLoad on InverterLOAD-ON-HYRLoad on StypassLOAD-ON-HYRLoad on StypassLOAD-ON-HYRLoad on StypassLOAD-ON-HYRLoad on StypassLOAD-ON-HYRLoad StrLOAD-ON-HYRLoad on StypassLOAD-ON-HYRLoad on StypassLOAD-ON-INVTRLoad StrLOAD-ON-INVTRLoad StrLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOAD <td></td> <td>·</td>		·
HUMHumidifierHWHot WaterHWHot WaterHXHeat ExchangerIDIDINIn or InputINTERVALIntervalINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilowatt HoursLLowKWHKilowatt HoursLLowLGILeadLTHLengthLIMLine tineLIMLine tineLODLoadLOAD-ON-BYPLoad on bypassLOAD-ON-HYTRLoad on inverterLOCALLocalLOCALLocalLOCALLocalLTHLeavingMAMixed AirMAXMaximumMEDMedicalMAAMixed AirMAXMaximumMDDEModeMINMinimumMODEModeMINMinimumMOTORMetorMINMaintenance SwitchMTWMedium Temp HeterMUMake Up ValveNESMaintenance SwitchMTHWUVXXXYMedium Temp HeterMTHMeterMUMake Up CupOCCOccupancy/OccupiedOFFOFFOFFOFFOLUVXXXYOil MeterONOPOPARDOperationalOVRDOperational <trr>OVRDOperational<trr< td=""><td>HTG</td><td></td></trr<></trr>	HTG	
HWHot WaterHXHeat ExchangerIDIDINIn or InputINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilo Volt Amps ReactiveLLowLAGLagLDLeadLGTHLengthLIMLine to NeutralLOAD-ON-BYPLoad on bypassLOAD-ON-HYPLoad on bypassLOAD-ON-HYTLoad on inverterLOAD-ON-HYTLoad on inverterLOAD-NON-WTLoad on inverterMOATMixed AirMaximumMaximumMENMixed AirMAXMaximumMAXMaximumMENMeical RoomMINMininumMOTORMotorMOTORMotorMDMaittenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp InterMTAMake Up		
HXHeat ExchangerIDIDIDIDINIn or InputINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilovattsKWHKilovattsKWHLowLLowLAGLagLDLeadLTHLengthLIMLimitLIMLine LineLODLoadLODLoadLODLoadLODLoadLODLoadLODLoadLODLoadLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMadinumMODEModeMOISTMoistureMOTORMotorMINMinimumMODEMedium Temp MeterMITWMedium Temp MeterMITWMedium Temp MeterMITWMedium Temp MeterMOTRMotorMOTRMotorMOTRMotorMOTRMotorMITHWMedium Temp MeterMITWMedium Temp MeterMITHWMedium Temp MeterMOTRMotorMOTRMotorMOTR<		
D ID ID In or Input INTERVAL Interval INTERVAL Interval INVTR Inverter ISO Isolation KVA Kilo Volt Amps KVAR Kilo Volt Amps Reactive KW Kilowatt Hours L Low LAG Lag LD Lead LGTH Length LIN Line Line LOAD Load LOAD-ON-INVTR Load on Inverter LOAD-ON-INVTR Load on Inverter LOOP Loop LST Loss LTCH Level LVL Level LVL Level LVL Level LVN Leaving MA Mixed Air MAX Maximum MER Mechanical Room MIN Minimum MODE Mode MOIST Moisture MOTOR Motor MTHW Medium Temp Neter MIN Maintenance Switch MTHW Medium Temp Neter MITA Make Up MU Make Up MUN Mainte		
INIn or InputINTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKWKilo Volt Amps ReactiveKWKilowattsKWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLIMLimitLODLoadLODLoadLODLoadLODLoadLOADLoadLOCALLocalLOCALLocalLOCALLocalLOCALLocalLOCALLocalLOADLoadL		
INTERVALIntervalINVTRInverterISOIsolationKVAKilo Volt Amps ReactiveKVARKilo Volt Amps ReactiveKWKilowattsKWHKilowattsKWHLowLaGLagLDLeadLGTHLengthLINLine tineLNLine to NeutralLODLoadLOAD-ON-NYPLoad on InverterLOAD-ON-NYPLoad on InverterLOAD-ON-NYTRLoopLOADLoadLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad on InverterLOAD-ON-INVTRLoad NegregativeLOAD-ON-INVTRLoad NegregativeNAMixed AirMAXMaximumMEDMedicalMAXMaximumMODEModeMOTORMotorMINMinimumMODEModeMINMinimumMOTORMotorMINMedium Ten		
ISOIsolationKVARKilo Volt Amps ReactiveKVARKilo Volt Amps ReactiveKWKilowattsKWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLIMLimitLILine to NeutralLOADLoadLOAD-ON-BYPLoad on bypassLOAP-ON-INVTRLoad on inverterLOCALLocalLOOPLoogLSLossLTCHLatchLTHWUXXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMODEModeMOTORModeMOTORMotorMPMedium PressureMTHWUXXXXYMedium Temp MeterMINMinimumMAMixed AirMAXMaximumMEDMedicalMTMMeinance SwitchMTWMedium Temp MeterMTHWUXXXXYMedium Temp MeterMOTORMotorMOTORMotorMOTORMotorMGMaitreance SwitchMTHWUXXXXYMedium Temp MeterMTHWUXXXXYMedium Temp MeterMTAMake UpMUMake UpMUMake UpMUMake UpMUMake UpNPHN PhaseOOut or OutputOZOxygenOFFOIFOILO		Interval
KVAKilo Volt AmpsKVARKilo Volt Amps ReactiveKWKilovattsKWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLINLine to NeutralLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOAD-ON-INVTRLoad on inverterLOAD-ON-INVTRLoad on inverterLOAD-ON-INVTRLoad SampaLOAD-ON-INVTRLoad SampaLOADLossLTCHLeavingLTCHLeavingMAMixed AirMAXMaximumMEDMedicalMENMaintenace SampaMOISTMoistureMOISTMoistureMOTORMotorMPMedium Temp HeterMTHWMedium Temp InterMTHWMedium Temp InterMTAMake UpMUVMake Up ValveNEGNegativeNPH </td <td></td> <td></td>		
KVARKilo Volt Amps ReactiveKWKilowattsKWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLIMLine to NeutralLOADLoadLOADLoadLOADLoadLOADLoadLOADLoadLOAD-ON-BYPLoad on inverterLOCALLocalLOOPLoadLOCALLocalLOCPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMODEModeMOISTMoistureMOTORMotorMTHWUVXXXYMedium PressureMSMaintenance SwitchMTWMedium Temp Hot WaterMTWMedium CoupleOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILVXXXYOil MeterONONOPENOperationalONOPENOPENOperationalOPENOperationalOPENOperationalOPENOperationalOPENOperationalOPENOperationalOVRDOperationalOPENOperationalOPENOperationelOPENOp		
KWKilowatt HoursKWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLIMLine LineLADLoadLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoadLOOPLoadLOPMarken MeterMAXMaximumMEDMedialMINMinimumMODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp MeterMUMake Up ValveNPHN PaseOOut or OutputO2OxygenOCCOccupancy/Occupied <t< td=""><td></td><td>· · · · · · · · · · · · · · · · · · ·</td></t<>		· · · · · · · · · · · · · · · · · · ·
KWHKilowatt HoursLLowLAGLagLDLeadLGTHLengthLIMLine toneLNLine to NeutralLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOCPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMODEModeMOTORModeMOTORModeMOTORModeMINMinimumMODEModeMINMaintenance SwitchMTHWMedium Temp MeterMOTORModeMOTORModeMOTORMotorMPMedium Temp MeterMTHWMedium Temp MeterMTHWMeterOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOIOILUVXXXYOil MeterONOpenOPRNOpenOPRNOpenOPRNOpenOPRNOpenOPRNPrestorePFPower Factor<		
LAGLagLDLeadLGTHLengthLIMLime LineLNLine to NeutralLOADLoadLOAD-ON-BYPLoad on inverterLOAD-ON-INVTRLoad on inverterLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWUVXXXYYMedium Temp Hot WaterMTHWMedeurMOTORMotorMPMedium Temp Hot WaterMTHWUXXXYYMedium Temp MeterMTRMeterMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILUVXXXYOil MeterONONOPENOpenOPENOpenOPENOpenOPENOpenOPENOpenOPENOpenOPENOpenOPENOpenOPENOPENOPENOPENOPENOPENOPENOPENOPENOPEN<		
LDLeadLGTHLengthLIMLine tineLILine tineLNLine to NeutralLOADLoadLOAD-ON-BYPLoad on inverterLOAD-ON-INVTRLoad on inverterLOCALLocalLOPPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWUXXXXYMedium Temp Hot WaterMTHWMedium Temp MeterOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOLLOILONONOPROpenOPRPressurePF<	L	Low
LGTHLengthLIMLimitLILine tineLNLine to NeutralLOADLoadLOAD-ON-BYPLoad on inverterLOCALLocalLOCALLocalLOCALLoopLSLossLTCHLatchLTHWUVXXXYLovenep MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMODEModeMOTORMotorMINMinimumMODEModeMOTORMotorMFWMedium PressureMSMaintenance SwitchMTHWUVXXXYMedium Temp Hot WaterMTHWMedium Temp MeterOOut or OutputO2OxgenOOut or OutputO2OxgenOCCOccupancy/OccupiedOFFOFFOILUVXXXYOil MeterONONOPPNOperationalOVRDOperationalOVRDOperationalOVRDOperationalOVRDOperationalOVRDPressurePCPluse EounterPCHWPrimary Chilled WaterPHPheabeat		
LIMLimitLILine tineLNLine to NeutralLOADLoadLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOCPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMRRMechanical RoomMINMinitum ressureMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp Hot WaterMTRMeterMINMintenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp Hot WaterMTHWMedium Temp Hot WaterMTRMeterMINNintenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp Hot WaterMTRMeterMINNintenance SwitchMTHUNegativeOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONOpenOPRNOperationalOVRDOverridePPressurePCPulse CounterPCHWPressurePHNehaet <td></td> <td></td>		
LLLine LineLNLine to NeutralLOADLoadLOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMODEModeMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp MeterMUNMake UpMUNMake UpMUNMake UpMUNMake UpMUNMake UpMUNMake UpMUVMake Up ValveNPANedium Temp MeterMTRMeterMUNMake Up ConcupiedOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILUVXXXYOil MeterONOpenOPRNOpenOPRNOpenOPRTOperationalOVRDOverridePCPluse CounterPCHWPrimary Chilled WaterPHPheaheat		
LOADLoadLOAD-ON-INVTRLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTHLatchLTHWUXXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMOEModeMOISTMoistureMOTORMotorMHWMedium Temp Hot WaterMTWUXXXXYMedium Temp Hot WaterMTHWUXXXXYMedium Temp Hot WaterMOTORMotorMPMedium Temp Hot WaterMTHWMedium Temp MeterMTNMintenance SwitchMTNMoleMOUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVNake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOILOILOilONONOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANOpenOPANPressurePCPulse CounterPFPower FactorPHNeheat		
LOAD-ON-BYPLoad on bypassLOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp MeterMUVMake UpMTHWUVXXXYMedium Temp MeterMTHWMedium Temp MeterMTHWMedium Temp MeterMTHWMotorMODEModeMTHWUVXXXYMedium Temp MeterMTHWMedium Temp MeterMTRMeterMUVMake UpMUVMake UpNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOF		
LOAD-ON-INVTRLoad on inverterLOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMRRMechanical RoomMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVMolagativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILUVXXXYOIl MeterONONOPROpenOPRTOperationalOVRDOverridePPressurePCPilse ConterPCPulse ConterPCPower FactorPHPheaheat	LOAD	Load
LOCALLocalLOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp MeterMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUMinatenance SwitchMTRMeterOOut or Output02Oxygen0CCOccupancy/Occupied0FFOFF0ILUVXXXYOil Meter0NON0PNOpen0PNOpen0PNOpen0PNOpen0PRTOperational0VRDOverridePPressurePCPlase ConterPFPower FactorPHPheaheat		
LOOPLoopLSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVLLevelMAMixed AirMAXMaximumMEDMedicalMRRMechanical RoomMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMeterMUNMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake Up Coupant0Out or Output02Oxygen02Oxygen04OfFF01LUXXXXYOil Meter0NON0PNOpen0PRTOpenant0PRTOpenant0PRTOpenant0PRTPiressurePCPulse CounterPCPulse CounterPCPheaheat		
LSLossLTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOTORMotorMTHWMedium PressureMSMaintenance SwitchMTRMeterMUUMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUUMake UpMUUMake UpMUUMake UpMUUMake UpMUUMake UpMUUMake UpMUVMake UpMUVMake Up AlaveNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONOPOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPwer FactorPHPheaheat		
LTCHLatchLTHWUVXXXYLow Temp MeterLVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOTORMotorMTHWMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTRMeterMUUMake UpMUVMake UpMUVMake UpMUVNagativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		· · · ·
LVLLevelLVNLeavingMAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWMedium Temp MeterMTRMeterMUVMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOIIOILUVXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
LVNLeavingMAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWMederMUUMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUUMake UpMUUMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake UpMUVMake Up Coccupancy/OccupiedOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		· · · · · · · · · · · · · · · · · · ·
MAMixed AirMAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWMederMUVMake UpMUVMake UpMUVMake UpMUVMake Up CoupledOOut or Output02Oxygen0CCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONNONOPNOpenOPNOperationalOVRDOverridePCPulse CounterPCPulse CounterPFPower FactorPHPheaheat		
MAXMaximumMEDMedicalMERMechanical RoomMINMinimumMODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXXYMedium Temp MeterMUVMake UpMUVMake UpMUVMake Up NageNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILUVXXXYOil MeterONONOPNOpenalOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MEDMedicalMERMechanical RoomMINMinimumMODEModeMODEModeMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXYMedium Temp MeterMTRMeterMUVMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPNOpenantOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MERMechanical RoomMINMinimumMODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXYMedium Temp MeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOILOILUVXXXYOI MeterONONOPNOpenOPRTOperationalOVRDPressurePCPulse CounterPCHWPrimary Chilled WaterPHPresatorPHPheaheat		
MODEModeMOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MOISTMoistureMOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPHPheaheat		
MOTORMotorMPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONONOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
MPMedium PressureMSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONOPNOPRTOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
MSMaintenance SwitchMTHWMedium Temp Hot WaterMTHWUVXXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOILOILOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MTHWUVXXXYMedium Temp MeterMTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILUVXXXXYOil MeterONOPOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MTRMeterMUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONOPOPRTOpenOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
MUMake UpMUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONOPNOPRTOpenationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPHPheaheat		· · · · · ·
MUVMake Up ValveNEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
NEGNegativeNPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
NPHN PhaseOOut or OutputO2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
O2OxygenOCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
OCCOccupancy/OccupiedOFFOFFOILOilOILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
OFFOFFOILOilOILUVXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
OILOilOILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPFPower FactorPHPheaheat		
OILUVXXXXYOil MeterONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
ONONOPNOpenOPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
OPRTOperationalOVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
OVRDOverridePPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
PPressurePCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
PCPulse CounterPCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
PCHWPrimary Chilled WaterPFPower FactorPHPheaheat		
PF Power Factor PH Pheaheat		
PH Pheaheat		
PHS Phase	PF	

6 POINT NAMING STANDARD

NOTES:

1.ALL POINT NAMES SHALL USE A COMBINATION OF THE ABBREVIATIONS SHOWN IN THIS DETAIL WITH A DASH (-) SEPARATING THE ABBREVIATIONS. FOR EXAMPLE, A SUPPLY AIR TEMPERATURE SENSOR WOULD BE INDICATED AS SA-T. ALL POINT OBJECT NAMES SHALL INCLUDE THE RESPECTIVE BUILDING NUMBER, CONTROLLER IDENTIFICATION, AND APPROPRIATE POINT ABBREVIATION SEPARATED BY A PERIOD. FOR EXAMPLE, "0001.VAV-01.SA-T" WOULD REPRESENT A SUPPLY AIR TEMPERATURE ASSOCIATED WITH VARIABLE AIR VOLUME CONTROLLER NUMBER 01 IN BUILDING NUMBER 0001.

3. THE DETAILS/DESCRIPTION FIELD SHOULD CONTAIN FLOOR, ROOM, AND ASSOCIATED COOLING/HEATING SOURCE (WHERE APPLICABLE) IN THAT ORDER. FOR EXAMPLE, ROOM ZONE TEMPERATURE - "FLR 3 : RM 321 : AHU-06" THIS WOULD INDICATE THE ROOM OF THE POINT AND ITS RESPECTIVE HEATING/COOLING SOURCE, WHICH IS AIR HANDLER 06.



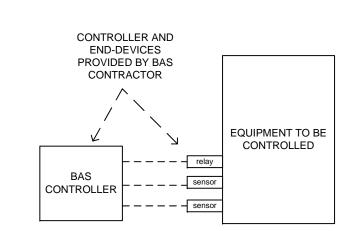
PRODUCT SHALL BE EQUIVALENT TO VAISALA HMT331/HMT/333 DISPLAYED ABOVE

1 ANIMAL HOLDING ROOMS

NOTES: 1. A NIST TRACEABLE TEMPERATURE AND HUMIDITY DISPLAY WITH A NEMA TYPE ENCLOSURE SHALL BE PROVIDED FOR EACH ANIMAL HOLDING ROOM AND OTHER ROOMS AS SPECIFIED BY THE UNIVERSITY.

2. IF SENSOR IS LOCATED INSIDE THE ANIMAL ROOMS THEY SHALL HAVE A WATER PROOF ENCLOSURE SUITABLE FOR PERIODIC WASH DOWNS. 3. THE SENSORS FOR THESE DISPLAYS SHALL BE THE CONTROLLING SENSORS AND SHOULD BE SUITABLE FOR HIGH HUMIDITY ENVIRONMENTS WITH QUICK RECOVERY FOR

SATURATION EVENTS, EQUIVALENT TO HMT337 SERIES. IF A HUMIDIFIER IS PROVIDED IN THE CENTRAL STATION AHU, THE HUMIDITY SENSORS SHALL BE AVERAGED FOR CONTROL.



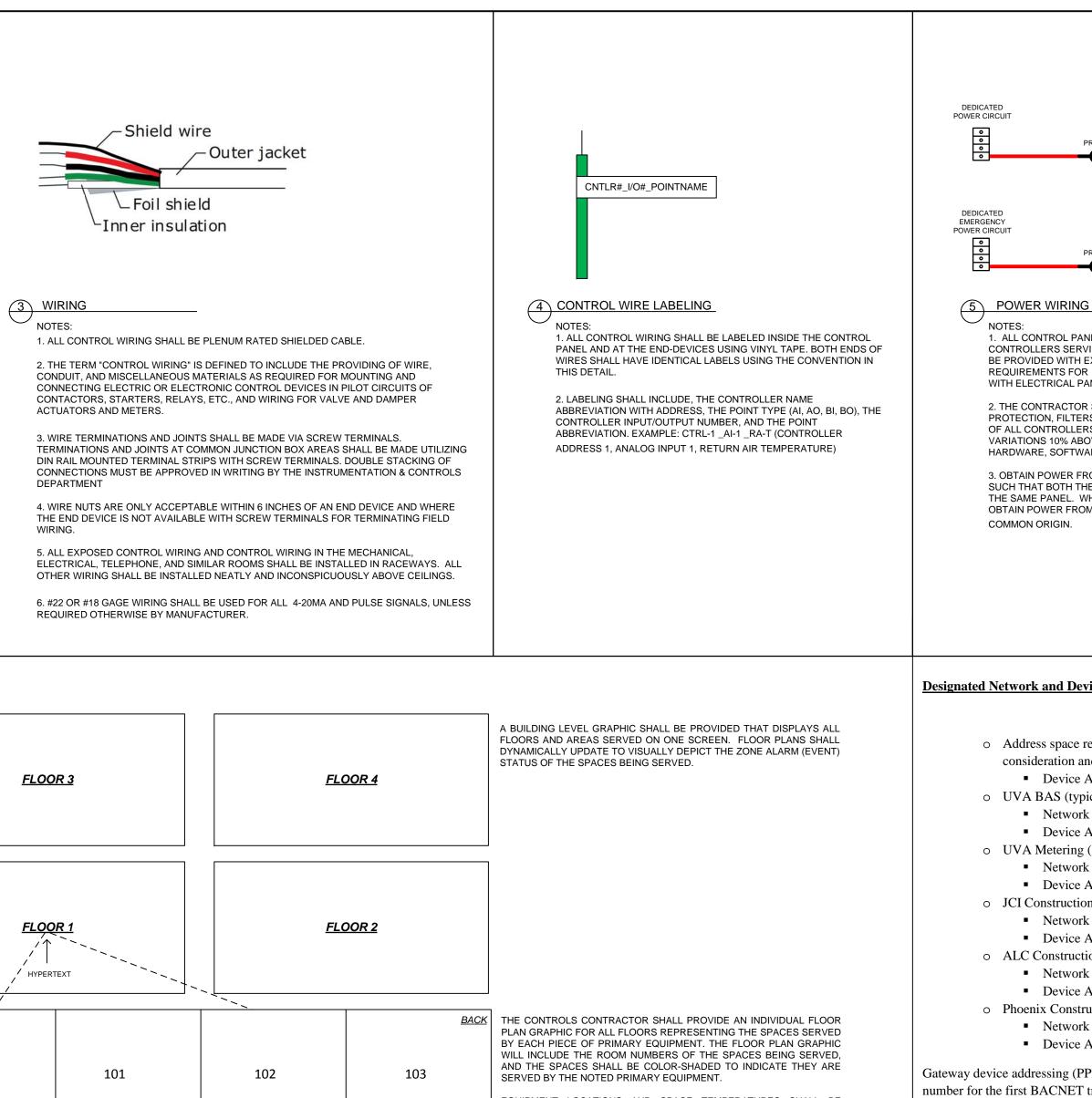
2 THIRD-PARTY INTEGRATION

NOTES:

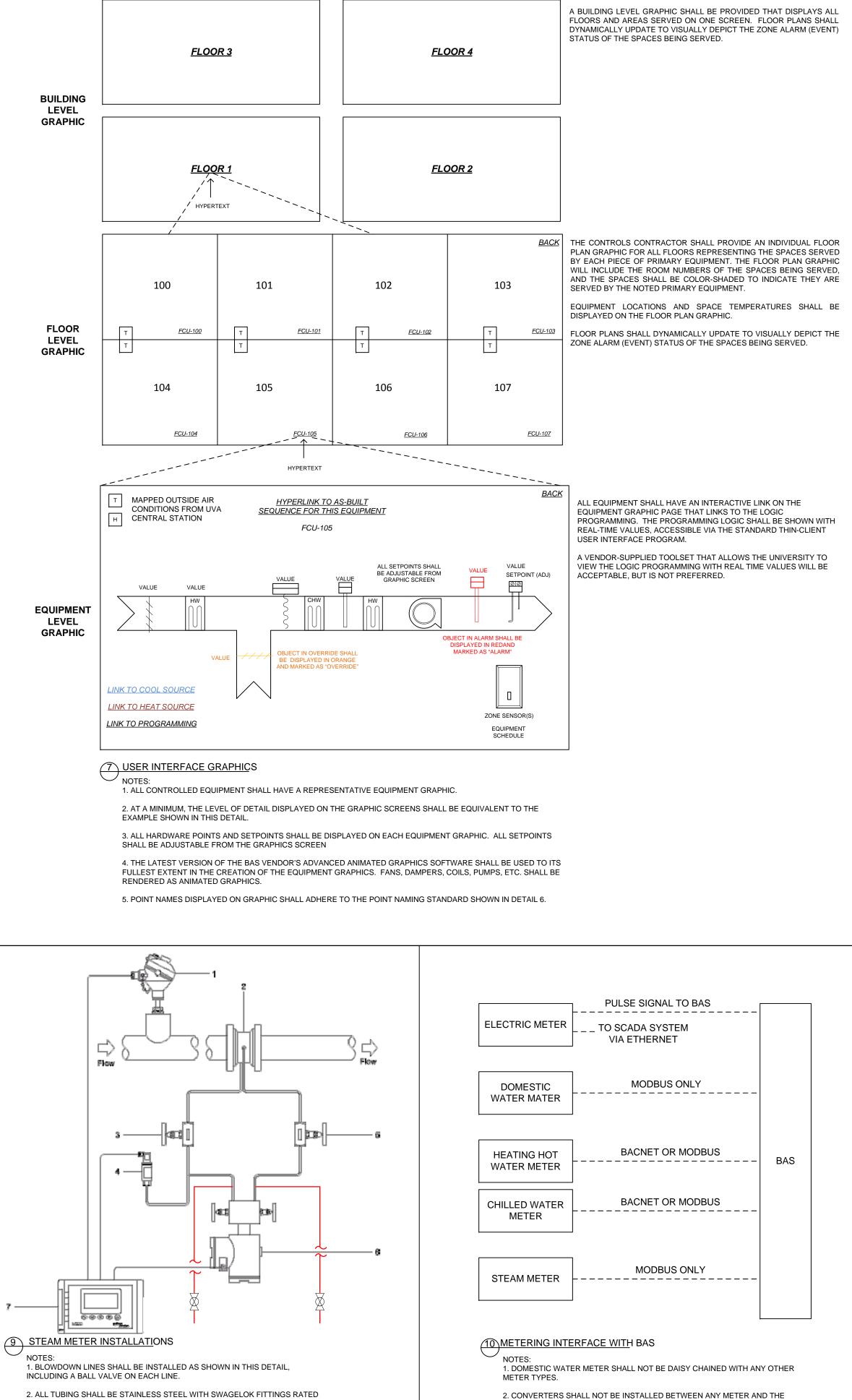
1. THE BAS CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL SUB-SYSTEMS TO THE BUILDING AUTOMATION SYSTEM. THIRD PARTY SUB-SYSTEMS SHALL BE CONTROLLED, MONITORED AND PROGRAMMED THROUGH THE BAS WITH END DEVICES PROVIDED BY THE BAS CONTRACTOR. EQUIPMENT MANUFACTURER PROVIDED PACKAGED CONTROLS ARE NOT ACCEPTABLE.

2. WHERE A THIRD-PARTY INTERFACE IS ABSOLUTELY NECESSARY FOR THE EQUIPMENT TO FUNCTION PROPERLY, IT SHALL BE ACCOMPLISHED VIA NATIVE BACNET INTERFACE (PROVIDED BY THE ORIGINAL EQUIPMENT MANUFACTURER) WITH ALL AVAILABLE POINTS MADE AVAILABLE TO THE BAS AS READ AND WRITE POINTS. 3. EXCEPTION: IF THE PROJECT REQUIREMENTS INCLUDE ACTIVE-

PRESSURIZATION CONTROL, IN CERTAIN LABORATORIES FOR EXAMPLE, THE CONTROLLER MAY BE PROVIDED BY THE ORIGINAL EQUIPMENT MANUFACTURER. IN SUCH CASES, ALL SETPOINTS SHALL BE ADJUSTABLE FROM THE BAS INTERFACE.



Abbreviation	Description
PIL PK	Pilot Peak
PLANT	Plant
PMP	Pump
PNL	Panel
PNTHSE	Pent House
POS PRCS	Positive Process
PRE	Pre
PRM	Parameter
PRVS	Previous
PWR	Power
Q R	Heat Transfer (BTU/Hr) Return
RA	Return Air
RAD	Radiation
RCFYR	Rectifier operational
RCFYR-OPRT	Rectifier operational
RCVR	Receiver
RDGS REFG	Readings Refrigerant
REM	Remote
RES	Reserve
REV	Reversal
RLF-FN	Relief Fan
RMS	Root Mean Square
ROT RST	Rotate Reset
RTU	Roof Top Unit
RUNT	Run Time
S	Supply
SA	Supply Air
SCHED SCHW	Schedule Secondary Chilled Water
SEC	Secondary
SEQ	Sequence/Order
SEW	Sewage
SEWUVBDXXXXY	CDW Blowdown Meter
SEWUVCRXXXXY	Sewer Credit Meter
SEWUVMUXXXXY SFTNR	CDW Make Up Meter Softener
SHW	Secondary Hot Water
SLR	Solar
SMK	Smoke
SN	Serial Number
SP	Set Point
SPD START	Speed Start
STBY	Standby
STEUVXXXXY	Steam Meter
STG	Stage
STM	Steam
STN	Station
STOP STP	Stop Static Pressure
STS	Status
SUB	Sub
SUMP	Sump or Basin etc.
SUPP	Supplemental
SW	Switch
SYS T	System Temperature
TCHW	Tertiary Chilled Water
ТК	Tank
TOL	Tolerance
TONS	Tonnage
TOT TST	Total Test
TWR	Tower
U	Unit
UH	Unit Heater
UNBLC	Unbalanced
UPS	Uninterruptable Power Supply
V VAC	Valve Vaccum
VAL	Value
VEL	Velocity
VFD	Variable Frequency Drive or Variable Speed Drive
VIB	Vibration
VOLTS	Voltage
W WAT	West Water
WAT	Irrigation Meter
WATUVMUXXXXY	Make Up Meter
WATUVXXXXY	Domestic Water Meter
WRLSS	Wireless
XFMR	Transformer
XMTR ZERO	Transmitter ZERO
ZERO ZN	ZERO Zone



FOR THE CORRECT PSI OF THE STEAM. TUBE SIZE SHOULD BE 3/8" OR

GREATER.

BAS.

DEDICA POWER C				CONTROLLER		
0 0				SERVING GENERAL EQUIPEMNT		
DEDICA EMERGE POWER C	ENCY		_	CONTROLLER SERVING EQUIPMENT ON EMERGENCY POWER OR		
• •	POWER WIRING	• I	JPS	HOUSING CRITICAL POINTS		
	NOTES: 1. ALL CONTROL PANELS CONTROLLERS SERVING BE PROVIDED WITH EXTE REQUIREMENTS FOR PO	EMERGENCY AND RNAL UNINTERRU	OR CRITICA	L EQUIPMENT SHALL WER SUPPLIES (UPS)	ADDITIONALLY TO MEET THE	
	WITH ELECTRICAL PANEL 2. THE CONTRACTOR SHA PROTECTION, FILTERS, E	& CIRCUIT SOUR LL FURNISH AND FC. AS NECESSAR	CE. INSTALL AN' Y FOR PROF	Y POWER SUPPLY SU PER OPERATION AND	RGE PROTECTION	
	OF ALL CONTROLLERS. AN VARIATIONS 10% ABOVE (HARDWARE, SOFTWARE, 3. OBTAIN POWER FROM /	OR BELOW MEASU COMMUNICATION A SOURCE THAT F	JRED NOMIN S, AND DATA EEDS THE E	AL VALUE, WITH NO A STORAGE. QUIPMENT BEING CC	AFFECT ON	
	SUCH THAT BOTH THE CC THE SAME PANEL. WHER OBTAIN POWER FROM TH COMMON ORIGIN.	E EQUIPMENT IS F	POWERED FI	ROM A 460V OR HIGH	ER SOURCE,	
esignated	Network and Device	Address Range	<u>es</u>			
C	consideration and a	pproval prior to	using):	nce ID limitations	(contact University staff	for
C	UVA BAS (typicallNetwork Rate	nge: 0-99 AND	ct installed 200-999	-		
С	UVA Metering (De	ress Range: 0-99 vices not integra nge: 650-749				
С	JCI Construction Jo	ress Range: 650 bs nge: 14000-149		9		
C	 Device Adda ALC Construction J 	ress Range: 140 obs	0000-1499	999		
C	Device Add	nge: 24000-249 ress Range: 240 on Jobs (typical	0000-2499		S vendor)	
		nge: 34000-349 ress Range: 340		999		
	-				pace and PPNNN is the r g illustration is to serve a	
	Unive	sity BACNET IP Netw	ork: <u>2400</u>			
	-	LGR 2412199 Network: 24121	NAE N 1400199 Network: 14	letwork: 14002	Gateway PPNNN99 Network: PPNNN	
	B/	ACNET Device: 2412101	BACNET Dev 1400101	/ice: 1400201 BACNET Device: 1400202	BACNET Device:	
	Network: 24122 BACNET Device: B/	ACNET Device: 2412102 ACNET Device: 412103 (AAR)	BACNET Dev 1400102 BACNET Dev 1400103		BACNET Device: PPNNNDD BACNET Device: PPNNNDD	
	BACNET Device: 2412202 B/	ACNET Device: 2412104				
			-		e next available network aal network number will	
ized. For ex	kample:	nai space. How	ever, in tha	t case, the addition	iai network number will	not be
Gatew	ork: 123 vay: 12399 ces: 12301, 12302, 1230	0312398				
•		may be reserve			y be addressed as 12400,	12401,
	NETWORKING					
NOTES 1. FOR	NETWORKING : BAS INSTALLATIONS THE IERED TO. PLEASE CONT.					
2. UNIV	EXT AVAILABLE BACNET A ERSITY IP ADDRESSES SH OLS DEPARTMENT.		ED THROUG	H THE INSTRUMENT	ATION &	
		Hard	ware Points	s Software P		
EX	Point Name*		AO BI B	O AV BV Trend	Alarm Limits Displayed On Graphic 50/85 x	
EX	AMPLE ANALOG OUTP		x x	x x	COV x	
EX	(AMPLE BINARY OUTPU (AMPLE ANALOG VALUE (AMPLE BINARY VALUE		x	x x x x x x x x	x x x	_
*PO	INT NAMES SHALL COMPL MATERIALS SHALL USE TH	Y WITH THE POIN	T NAMING S	TANDARD DISPLAYED	D IN DETAIL 6. BILL	
	POINTS LIST NOTES: 1. ALL SUBMITTALS, INCL					
	A POINTS LIST FOR EACH 2. POINT LIST DETAIL SH SHOWN IN THIS DETAIL.					
		SIZE		DWG NO		REV
JED	WGS 3-7-13		NTS	CONTROL SYSTEM STAN	IDARDS - 1 SHEET 1 OF 1	0

DEDICATED POWER CIRCUIT	or.	CONTROLLER	
PROTE		SERVING GENERAL EQUIPEMNT	
DEDICATED EMERGENCY POWER CIRCUIT		CONTROLLER SERVING EQUIPMENT	
Prote Prote		ON EMERGENCY POWER OR HOUSING CRITICAL	
5 POWER WIRING		POINTS	
CONTROLLERS SERVING BE PROVIDED WITH EXTE	EMERGENCY AND/OF RNAL UNINTERRUPT	Y DEDICATED POWER CIRC CRITICAL EQUIPMENT SH/ ABLE POWER SUPPLIES (UF ITION. CONTROL PANEL SH	ALL ADDITIONALLY PS) TO MEET THE
WITH ELECTRICAL PANEL 2. THE CONTRACTOR SHA	& CIRCUIT SOURCE.	TALL ANY POWER SUPPLY	SURGE
OF ALL CONTROLLERS. A	LL EQUIPMENT SHALI OR BELOW MEASURE	_ BE CAPABLE OF HANDLIN D NOMINAL VALUE, WITH N	IG VOLTAGE
SUCH THAT BOTH THE CO THE SAME PANEL. WHER	ONTROL COMPONENT	DS THE EQUIPMENT BEING AND THE EQUIPMENT ARE VERED FROM A 460V OR HII ST PROXIMATE 120V SOUR	E POWERED FROM GHER SOURCE,
COMMON ORIGIN.			
nated Network and Device	Address Ranges		
 Address space reser 	ved for devices wi	th instance ID limitation	ns (contact University staff for
consideration and a Device Add OUVA BAS (typicall	ress Range: 10000	-19999	
Network RaDevice Add	nge: 0-99 AND 20 ress Range: 0-9999	0-999 AND 20000-999999	
 Network Ra 	vices not integrated nge: 650-749 ress Range: 65000	d through another BAS) 0-749999)
JCI Construction JoNetwork Ra	bs nge: 14000-14999		
• ALC Construction J	ress Range: 14000 Jobs nge: 24000-24999	00-1499999	
Device AddO Phoenix Construction	ress Range: 24000 on Jobs (typically c	00-24999999 connected via another B	SAS vendor)
 Device Add 	nge: 34000-34999 ress Range: 34000		
			s space and PPNNN is the network ring illustration is to serve as a
Unive	rsity BACNET IP Network:	2400	
	ISILY DACINE I IP Network.	2400	
		NAE Network: 14002	Gateway PPNNN99
<u> </u>		ACNET Device: 1400101 BACNET Device: BACNET Device:	BACNET Device:
Network: 24122	2412102	ACNET Device: 1400202	BACNET Device: PPNNNDD BACNET Device:
BACNET Device:	ACNET Device: 2412104	1400103	PPNNNDD
e event that more than 98 add	rassas are needed f	or a particular natwork	the next available network
		-	ional network number will not be
For example: Network: 123 Gateway: 12399			
Devices: 12301, 12302, 123		and additional devices n	nay be addressed as 12400, 12401,
12402, 12402and	assigned to the 12	3 network.	
BAS NETWORKING	_		
NOTES: 1. FOR BAS INSTALLATIONS THE BE ADHERED TO. PLEASE CONT FOR NEXT AVAILABLE BACNET A	ACT THE INSTRUMEN		
2. UNIVERSITY IP ADDRESSES SI CONTROLS DEPARTMENT.	HALL BE REQUESTED	THROUGH THE INSTRUME	NTATION &
	Hardwa	re Points Software	
Point Name*	AI AO		Alarm LimitsDisplayed On Graphicx50/85x
EXAMPLE ANALOG OUTP EXAMPLE BINARY INPUT	UT X		x x x COV x
EXAMPLE BINARY OUTPL	Ξ		x x x x
EXAMPLE BINARY VALUE *POINT NAMES SHALL COMPL OF MATERIALS SHALL USE TH	Y WITH THE POINT N	AMING STANDARD DISPLA	
11 POINTS LIST NOTES:			
A POINTS LIST FOR EAC 2. POINT LIST DETAIL SH	H CONTROLLED PIEC	CUMENTS, SHALL INCLUDE E OF EQUIPMENT ROVIDE THE INFORMATION	
SHOWN IN THIS DETAIL.			
]		
WGS	SIZE	DWG N CONTROL SYSTEM S	
3-7-13	SCALE NTS		SHEET 1 OF 1