Connect Touch Control for DynaCIAT LG/LGN chillers

BACNET OPTION

User's guide

Revisions History

REV	DATE yyy mm dd	DESCRIPTION	DONE BY
A	2017-02-28	Original	**JA**
A	2019-11-12	. add 2.2.5 Control BACnet values update best practice §, . update 2.3.3 BACnet codes §. . update BACnet Conf. Objects List	**SyD**

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1 INTRODUCTION

1.1 Purpose

This guide is intended to be used by Building Management System (BMS) engineer inside or outside the CIAT Corporation.
It describes in details the DynaCIAT LG/LGN BACnet option.
All information already provided in the product IOM are not available in this document.

1.2 Definitions, Abbreviations and acronyms

Acronym /Abbreviation	Definition
BMS	Building Management System It is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as ventilation, lighting, power systems, fire systems, and security systems. A BMS consists of software and hardware
BACnet/IP	Building Automation and Controls Network. Open Protocol for the controlled exchange of data between two or more intelligent control devices or BMS. BACnet is used over IP (Internet Protocol).
BTL	BACnet Testing Laboratories
AV	Analog Value
BV	Binary Value
COV	Change of Value
IR	Intrinsic Reporting

2 BACNET FOR DYNACIAT LG/LGN CHILLER

The DynaCIAT LG/LGN chiller supports the BACnet protocol as a B-ASC BACnet equipment.

In addition, the BACnet stack will implement:

- Optional properties as COV, Intrinsic Reporting properties, Commandable properties on some objects.
- The generation of limited alarm and event notifications and the ability to direct them to recipients,
- The tracking acknowledgments of alarms from human operators
- The Adjustment of alarm parameters
- The Read/Write Property Mulitple services

This option can be mounted during manufacturing or on site.

2.1 BACnet settings

There is a configuration menu to Enable or Disable BACnet. The password level required to access this configuration is “Advanced User”. The button is called “BACnet Configuration” and the corresponding icon is:  in Networks menu  .

After a power up, if the BACnet option is enabled and BACnet is enabled (default configuration: Enable) then the chiller objects will be created.

Metric units and Imperial units are supported. By default, BACnet data will be in metric units.

The BACnet network and the device object instance (or identifier) can also be modified.

This default instance has been choosen to easily recognize the Chiller on a BACnet network. This parameter must be unique on the BACnet network.

It must then be modified if more than one device with the same Vendor ID is connected to the BACnet network.

By default, the device object instance is **1600001** in order to easily identify this unit. The first two digits are the BACnet Vendor ID (16).

	Menu Name	Status	Default	Unit	Note	Menu text description	Low Limit	High Limit
1	bacena	Disable/Enable	1	-		BACnet Enable		
2	bacunit	No/yes	1	-		Metric Unit	-	-
3	network	1 to 9999	1601	-		Network	1	9999
4	ident	0 to 9999999	1600001	-		Identifier	0	9999999

Note: Changing one of these BACnet parameters will cause a reboot of the board after 1 minute.

Important: Changing IP address from the SETUP menu will require a manual reboot or power cycle of the Connect Touch controller in order to re-build the BACnet stack.

2.2 BACnet chiller objects

The DynaCIAT LG/LGN chiller contains up to 250 BACnet objects.

These objects are of ANALOG_VALUE (AV) or BINARY_VALUE (BV) type.

There is one Notification Class object for alarm reporting and one Device object (these objects are not in the list below).

Some of AV and BV objects support ***Change Of Value*** (COV) option and/or **Intrinsic Reporting** Option and/or **Commandable option**.

These objects are pre-defined and cannot be deleted. It is also not possible to add any.

Objects name are built from table name and point name concatenated in order to recognize them easily.

For example:

If the table name is *GENCONF* and the point name is *prio_cir*, the object name will be *GENCONF_prio_cir*.

2.2.1 Optionnal properties

For the **Change of Value Option** (COV), the increment value can be configured.

For the **Intrinsic reporting option** (IR), the alarm configuration and the configuration of the equipment to be notified are required to activate the Intrinsic Reporting mechanism.

Objects with **Commandable option** are characterised with the "_wr" suffix.

If the Local Operating Type is set to Network, then it is possible to control the Unit from the BACnet writing these objects:

- The highest priority value of the commandable object will be copied to the present value of the object using the same name with the "_rd" suffix.

For example:

CTRL_POINT_wr highest priority value copied to CTRL_POINT_rd present value.

If the Local Operating Type is set to Local or Remote, then the Priority value will not be applied. The value determined by the controller will be applied:

- The present value of the object name with the "_rd" suffix

For the example:

CTRL_POINT_rd will still reflect the current software value.

• The BACnet priority level corresponds to the **internal priority** level (1:1). If this BACnet priority level is removed, the priority level immediately below will be applied to the corresponding point (a **Network Comfort Control** "Auto" command will be applied first).

• When an internal priority level is applied from the **NCC network**, the internal priority level will be **applied to** the BACnet priority level.

• BACnet priority level 16 (the lowest) has no **internal priority** equivalent and does not correspond to an internal priority. **This priority level should not be used**.

2.2.2 Present Value property access

Writing AV and BV "Present Value" is authorized by the BACnet protocol for all objects.

However, the Chiller application may or may not authorize the “Present value” writing regarding the “access” object parameter, i.e. Read Only (RO) or Read/Write (RW).

If a “present value” property with an access parameter equal to Read only (RO) is written then the present value will be overwritten by the chiller application with the previous value.

Objects with “present value” in Read Only access are all objects used for Chiller configuration and status.

Objects with “present value” in Read/Write access are objects used for setpoint configuration (named with a SETPOINT_ prefix) and Commandable objects (with a _wr suffix).

2.2.3 Notification class object

The notification class object can notify up to 5 BACnet devices. These devices are listed in the Recipient List property.

Important: Enter the IP address of the device to notify.
Device Name and instance are not yet supported.

2.2.4 Savings

COV increment property, Intrinsic Reporting properties, Priority values and Notification class properties are saved in files and restored at power up.

2.2.5 Control BACnet values update best practice

BACnet points included in FACTORY table should not be modified.

BACnet points included in SERVICE1 table can be modified by Ciat After Sales People only.

BACnet points included in configuration tables like PUMPCONF, HCCONFIG could be updated when unit is in OFF state.

BACnet points included in setpoint table SETPOINT could be updated when unit is in ON or OFF state.

Configuration and setpoint BACnet points should not be written too often (max update rate is one per hour) in order to limit control's file compress operation occurences.

BACnet points in GENUNIT table with write access can be modified once every 10 minutes (or longer time period).

2.3 Objects List

The BACnet objects list includes the list of all objects names with respect to the following parameters:
AV: ANALOG_VALUE object type
BV: BINARY_VALUE object type
COV: Change Of Value
IR: Intrinsic Reporting (Alarming)
CMD: Commandable
RO: access to Present Value in Read Only
RW: access to Present Value in Read Write

For BMS, the more often used objects are objects with names starting with “GENUNIT”, “TEMP”, “PRESSURES”, “RUNTIMES” and “SETPOINT” prefixes.

2.3.1 BACNet Conf. Objects List

Object Name	Type	Instance	Option	COVInc	PV Access	Description
GENUNIT_CHIL_S_S_wr	BV	1	CMD	0	RW	Chiller Start/Stop order
GENUNIT_CTRL_PNT_wr	AV	1	CMD	0	RW	Control Point
GENUNIT_DEM_LIM_wr	AV	2	CMD	0	RW	Demand Limit
GENCONF_off_on_d	AV	3		0	RO	Unit Off to On Delay
PUMPCONF_clpmpseq	AV	4		0	RO	Cooler Pumps Sequence
PUMPCONF_clpmpsby	AV	5		0	RO	Cool Pump Stopped in Sby
PUMPCONF_clpmploc	AV	6		0	RO	Flow Checked if Pump Off
PUMPCONF_cdpmpseq	AV	7		0	RO	Condenser Pumps Sequence
PUMPCONF_cdpmpsby	AV	8		0	RO	Cond Pump Stopped in Sby
PUMPCONF_cdpmploc	AV	9		0	RO	Flow Checked if Pump Off
HCCONFIG_cr_sel	AV	10		0	RO	Cooling Reset Select
HCCONFIG_hr_sel	AV	11		0	RO	Heating Reset Select
HCCONFIG_boil_on_wr	BV	2		0	RW	Boiler Manual Command
GENUNIT_CTRL_TYP	AV	12		0	RO	Local=0 Net.=1 Remote=2
GENUNIT_STATUS	AV	13		0	RO	Running Status
GENUNIT_ALM	AV	14		0	RO	Alarm State
GENUNIT_HEATCOOL	AV	15		0	RO	Heat/Cool Status
GENUNIT_CHIL_S_S	BV	3		0	RO	Net.: Cmd Start/Stop
GENUNIT_CAP_T	AV	16	COV	10	RO	Percent Total Capacity
GENUNIT_CAPA_T	AV	17		0	RO	Circuit A Total Capacity
GENUNIT_CAPB_T	AV	18		0	RO	Circuit B Total Capacity
GENUNIT_DEM_LIM	AV	19		0	RO	Active Demand Limit Val
GENUNIT_CTRL_PNT	AV	20		0	RO	Control Point
TEMP_EWT	AV	21	COV	2	RO	Entering Water Temp
TEMP_LWT	AV	22	COV	2	RO	Leaving Water Temp
TEMP_OAT	AV	23	COV	2	RO	Outside Air Temperature
TEMP_CHWSTEMP	AV	24	COV	2	RO	Chilled Water Syst Temp
TEMP_HTWSTEMP	AV	25	COV	2	RO	Heat Water Syst Temp
TEMP_DGT_A	AV	26	COV	2	RO	Discharge Gas Temp cir A

Object Name	Type	Instance	Option	COVInc	PV Access	Description
TEMP_SCT_A	AV	27	COV	2	RO	Saturated Condens Tp A
TEMP_SST_A	AV	28	COV	2	RO	Saturated Suction Tp A
TEMP_DGT_B	AV	29	COV	2	RO	Discharge Gas Temp cir B
TEMP_SCT_B	AV	30	COV	2	RO	Saturated Condens Tp B
TEMP_SST_B	AV	31	COV	2	RO	Saturated Suction Tp B
TEMP_COND_EWT	AV	32	COV	2	RO	Cond Entering Water Temp
TEMP_COND_LWT	AV	33	COV	2	RO	Cond Leaving Water Temp
PRESSURE_DP_A	AV	34	COV	15	RO	Discharge Pressure A
PRESSURE_SP_A	AV	35	COV	15	RO	Suction Pressure A
PRESSURE_DP_B	AV	36	COV	15	RO	Discharge Pressure B
PRESSURE_SP_B	AV	37	COV	15	RO	Suction Pressure B
INPUTS_ONOFF_SW	BV	4		0	RO	On/Off - Remote Switch
INPUTS_FLOW_SW	BV	5		0	RO	Exchanger Flow Switch
OUTPUTS_CP_A1	BV	6		0	RO	Compressor A1 Output
OUTPUTS_CP_A2	BV	7		0	RO	Compressor A2 Output
OUTPUTS_CP_A3	BV	8		0	RO	Compressor A3 Output
OUTPUTS_CP_B1	BV	9		0	RO	Compressor B1 Output
OUTPUTS_CP_B2	BV	10		0	RO	Compressor B2 Output
OUTPUTS_EXVPosA	AV	38		0	RO	EXV Position Circuit A
OUTPUTS_EXVPosB	AV	39		0	RO	EXV Position Circuit B
PUMPSTAT_CL_PUMP1	BV	11		0	RO	Cooler Pump 1 Command
PUMPSTAT_CL_PUMP2	BV	12		0	RO	Cooler Pump 2 Command
PUMPSTAT_CL_WPIN	AV	40		0	RO	Cool Inlet Water Press
PUMPSTAT_CL_WPOUT	AV	41		0	RO	Cool Outlet Water Press
PUMPSTAT_CL_FILTR	AV	42		0	RO	Cool delta press. filt
PUMPSTAT_CL_WPMIN	AV	43		0	RO	Cool mini water pressure
PUMPSTAT_CL_WFLOW	AV	44		0	RO	Cool Water flow
PUMPSTAT_CL_DvPos	AV	45		0	RO	Cool Pump drive position
PUMPSTAT_CD_PUMP1	BV	13		0	RO	Cond Pump 1 Command
PUMPSTAT_CD_PUMP2	BV	14		0	RO	Cond Pump 2 Command
PUMPSTAT_CD_WPIN	AV	46		0	RO	Cond Inlet Water Press
PUMPSTAT_CD_WPOUT	AV	47		0	RO	Cond Outlet Water Press
PUMPSTAT_CD_FILTR	AV	48		0	RO	Cond delta press. filt
PUMPSTAT_CD_WPMIN	AV	49		0	RO	Cond mini water pressure
PUMPSTAT_CD_WFLOW	AV	50		0	RO	Cond Water flow
PUMPSTAT_CD_DvPos	AV	51		0	RO	Cond Pump drive position
RUNTIME_hr_mach	AV	52		0	RO	Machine Operating Hours
RUNTIME_chr_mach	AV	53		0	RO	Cooling Operating Hours
RUNTIME_hhr_mach	AV	54		0	RO	Heating Operating Hours
RUNTIME_st_mach	AV	55		0	RO	Machine Starts
RUNTIME_hr_cp_a1	AV	56		0	RO	Compressor A1 Hours
RUNTIME_hr_cp_a2	AV	57		0	RO	Compressor A2 Hours
RUNTIME_hr_cp_a3	AV	58		0	RO	Compressor A3 Hours
RUNTIME_hr_cp_b1	AV	59		0	RO	Compressor B1 Hours
RUNTIME_hr_cp_b2	AV	60		0	RO	Compressor B2 Hours
RUNTIME_st_cp_a1	AV	61		0	RO	Compressor A1 Starts
RUNTIME_st_cp_a2	AV	62		0	RO	Compressor A2 Starts
RUNTIME_st_cp_a3	AV	63		0	RO	Compressor A3 Starts
RUNTIME_st_cp_b1	AV	64		0	RO	Compressor B1 Starts
RUNTIME_st_cp_b2	AV	65		0	RO	Compressor B2 Starts
LOADFACT_ctrl_avg	AV	66		0	RO	Average Ctrl Water Temp
LOADFACT_delta_t	AV	67		0	RO	Water Delta T

Object Name	Type	Instance	Option	COVInc	PV Access	Description
LOADFACT_zm	AV	68		0	RO	Current Z Multiplier Val
LOADFACT_smz	AV	69		0	RO	Load/Unload Factor
LOADFACT_over_cap	AV	70		0	RO	Active Capacity Override
LOADFACT_SUCT_T_A	AV	71		0	RO	Suction Gas Temp A
LOADFACT_SUCT_T_B	AV	72		0	RO	Suction Gas Temp B
LOADFACT_SH_A	AV	73		0	RO	Suction Superheat A
LOADFACT_SH_B	AV	74		0	RO	Suction Superheat B
LOADFACT_pinch_a	AV	75		0	RO	Cooler Exchange DT Cir A
LOADFACT_pinch_b	AV	76		0	RO	Cooler Exchange DT Cir B
LOADFACT_ov_exv_a	AV	77		0	RO	EXV Override Circuit A
LOADFACT_ov_exv_b	AV	78		0	RO	EXV Override Circuit B
SETPOINT_cond_sp	AV	79		0	RO	Condensing Setpoint
M_MSTSLV_ms_ctrl	AV	80		0	RO	Master Control Type
M_MSTSLV_ms_activ	AV	81		0	RO	Master/Slave Ctrl Active
M_MSTSLV_lead_sel	AV	82		0	RO	Lead Unit is the:
M_MSTSLV_slv_stat	AV	83		0	RO	Slave Chiller State
M_MSTSLV_slv_capt	AV	84		0	RO	Slave Chiller Total Cap
M_MSTSLV_ms_error	AV	85		0	RO	Master/Slave Error
LAST_POR_date_on1	AV	86		0	RO	Power On 1: day-mon-year
LAST_POR_date_on2	AV	87		0	RO	Power On 2: day-mon-year
LAST_POR_date_on3	AV	88		0	RO	Power On 3: day-mon-year
LAST_POR_date_on4	AV	89		0	RO	Power On 4: day-mon-year
LAST_POR_date_on5	AV	90		0	RO	Power On 5: day-mon-year
LAST_POR_time_on1	AV	91		0	RO	Power On 1: hour-minute
LAST_POR_time_on2	AV	92		0	RO	Power On 2: hour-minute
LAST_POR_time_on3	AV	93		0	RO	Power On 3: hour-minute
LAST_POR_time_on4	AV	94		0	RO	Power On 4: hour-minute
LAST_POR_time_on5	AV	95		0	RO	Power On 5: hour-minute
LAST_POR_date_of1	AV	96		0	RO	PowerDown 1:day-mon-year
LAST_POR_date_of2	AV	97		0	RO	PowerDown 2:day-mon-year
LAST_POR_date_of3	AV	98		0	RO	PowerDown 3:day-mon-year
LAST_POR_date_of4	AV	99		0	RO	PowerDown 4:day-mon-year
LAST_POR_date_of5	AV	100		0	RO	PowerDown 5:day-mon-year
LAST_POR_time_of1	AV	101		0	RO	PowerDown 1:hour-minute
LAST_POR_time_of2	AV	102		0	RO	PowerDown 2:hour-minute
LAST_POR_time_of3	AV	103		0	RO	PowerDown 3:hour-minute
LAST_POR_time_of4	AV	104		0	RO	PowerDown 4:hour-minute
LAST_POR_time_of5	AV	105		0	RO	PowerDown 5:hour-minute
ALARMRST_alarm_1c	AV	106		0	RO	Current Alarm 1
ALARMRST_alarm_2c	AV	107		0	RO	Current Alarm 2
ALARMRST_alarm_3c	AV	108		0	RO	Current Alarm 3
ALARMRST_alarm_4c	AV	109		0	RO	Current Alarm 4
ALARMRST_alarm_5c	AV	110		0	RO	Current Alarm 5
CP_UNABL_un_cp_a1	BV	15		0	RO	Compressor A1 Disable
CP_UNABL_un_cp_a2	BV	16		0	RO	Compressor A2 Disable
CP_UNABL_un_cp_a3	BV	17		0	RO	Compressor A3 Disable
CP_UNABL_un_cp_b1	BV	18		0	RO	Compressor B1 Disable
CP_UNABL_un_cp_b2	BV	19		0	RO	Compressor B2 Disable
MST_SLV_ms_sel	AV	111		0	RO	Master/Slave Select
MST_SLV_ms_ctrl	AV	112		0	RO	Master Control Type
MST_SLV_slv_addr	AV	113		0	RO	Slave Address
MST_SLV_lag_pump	BV	20		0	RO	Lag Unit Pump Control

Object Name	Type	Instance	Option	COVInc	PV Access	Description
FACTORY_flui_typ	AV	114		0	RO	Fluid Type
SERVICE1_ewt_opt	BV	21		0	RO	Entering Fluid Control
SERVICE1_sh_sp_a	AV	115		0	RO	EXV A Superheat Setpoint
SERVICE1_sh_sp_b	AV	116		0	RO	EXV B Superheat Setpoint
SERVICE1_mop_sp	AV	117		0	RO	EXV MOP Setpoint
SERVICE1_hp_th	AV	118		0	RO	High Pressure Threshold
SERVICE1_pump_cyc	AV	119		0	RO	Pump Cycling Freeze Prot
SERVICE1_freezesp	AV	120		0	RO	Brine Freeze Setpoint
SERVICE1_min_lwt	AV	121		0	RO	Brine Minimum LWT
SERVICE1_zm_spt	AV	122		0	RO	Auto Z Multiplier
SERVICE1_hc_zm	AV	123		0	RO	Maximum Z Multiplier
SERVICE1_cl_w_ct	AV	124		0	RO	Cool Flow Ctrl Method
SERVICE1_clwdtspt	AV	125		0	RO	Cool Flow DT setpoint
SERVICE1_clwdpspt	AV	126		0	RO	Cool Flow DP Setpoint
SERVICE1_cl_med_t	AV	127		0	RO	Cooler Water Medium Type
SERVICE1_cl_med_p	AV	128		0	RO	Cooler Water Medium Pct
SERVICE1_cd_w_ct	AV	129		0	RO	Cond Flow Ctrl Method
SERVICE1_cdwdtspt	AV	130		0	RO	Cond Flow DT setpoint
SERVICE1_cdwdpspt	AV	131		0	RO	Cond Flow DP Setpoint
SERVICE1_cd_med_t	AV	132		0	RO	Conden Water Medium Type
SERVICE1_cd_med_p	AV	133		0	RO	Conden Water Medium Pct
BACNET_bacena	BV	22		0	RO	BACnet enable
BACNET_bacunit	BV	23		0	RO	Metric Unit
BACNET_network	AV	134		0	RO	Network
BACNET_ident	AV	135		0	RO	Identifier
ALM_COOL_EWT_F	BV	24	IR	0	RO	Water Exchanger Entering Fluid Thermistor Failure
ALM_COOL_LWT_F	BV	25	IR	0	RO	Water Exchanger Leaving Fluid Thermistor Failure
ALM_COND_EWT_F	BV	26	IR	0	RO	Condenser Entering Fluid Thermistor Failure
ALM_COND_LWT_F	BV	27	IR	0	RO	Condenser Leaving Fluid Thermistor Failure
ALM_OAT_F	BV	28	IR	0	RO	OAT Thermistor Failure
ALM_CHWSTEMP_F	BV	29	IR	0	RO	Master/Slave Common Fluid Thermistor Failure
ALM_SUCTION_T_A_F	BV	30	IR	0	RO	Circuit A Suction Gas Thermistor Failure
ALM_SUCTION_T_B_F	BV	31	IR	0	RO	Circuit B Suction Gas Thermistor Failure
ALM_HTWSTEMP_F	BV	32	IR	0	RO	Master/Slave Common Heating Fluid Thermistor Failure
ALM_DRY_LWT_F	BV	33	IR	0	RO	Dry Cooler LWT Thermistor Failure
ALM_DGT_A_F	BV	34	IR	0	RO	Circuit A Discharge Gas Thermistor Failure
ALM_DGT_B_F	BV	35	IR	0	RO	Circuit B Discharge Gas Thermistor Failure
ALM_DP_A_F	BV	36	IR	0	RO	Circuit A Discharge Pressure Transducer Failure
ALM_DP_B_F	BV	37	IR	0	RO	Circuit B Discharge Pressure Transducer Failure
ALM_SP_A_F	BV	38	IR	0	RO	Circuit A Suction Pressure

Object Name	Type	Instance	Option	COVInc	PV Access	Description
						Transducer Failure
ALM_SP_B_F	BV	39	IR	0	RO	Circuit B Suction Pressure Transducer Failure
ALM_CL_WP_IN_F	BV	40	IR	0	RO	Water Exchanger Entering Fluid Transducer Failure
ALM_CL_WP_OUT_F	BV	41	IR	0	RO	Water Exchanger Leaving Fluid Transducer Failure
ALM_CD_WP_IN_F	BV	42	IR	0	RO	Water Condenser Entering Fluid Transducer Failure
ALM_CD_WP_OUT_F	BV	43	IR	0	RO	Water Condenser Leaving Fluid Transducer Failure
ALM_SIOB_A_COM_F	BV	44	IR	0	RO	Loss of communication with SIOB Board Number 1
ALM_SIOB_B_COM_F	BV	45	IR	0	RO	Loss of communication with SIOB Board Number 2
ALM_AUX1_HEATER_COM_F	BV	46	IR	0	RO	Loss of communication with AUX1 Heating Device Control board
ALM_AUX1_DRYC_COM_F	BV	47	IR	0	RO	Loss of communication with AUX1 Condenser board
ALM_AUX1_FREECOOL_COM_F	BV	48	IR	0	RO	Loss of communication with AUX1 FreeCooling board
ALM_AUX1_OPTION_COM_F	BV	49	IR	0	RO	Loss of communication with AUX1 Options board
ALM_FC_AUX1_COM_F	BV	50	IR	0	RO	Loss of communication with Free Cooling Board 1
ALM_COOLER_FREEZE_F	BV	51	IR	0	RO	Cooler Water Exchanger Freeze Protection
ALM_LOW_SUCTION_A_F	BV	52	IR	0	RO	Circuit A Low Saturated Suction Temperature
ALM_LOW_SUCTION_B_F	BV	53	IR	0	RO	Circuit B Low Saturated Suction Temperature
ALM_HIGH_SH_A_F	BV	54	IR	0	RO	Circuit A High Suction Superheat
ALM_HIGH_SH_B_F	BV	55	IR	0	RO	Circuit B High Suction Superheat
ALM_LOW_SH_A_F	BV	56	IR	0	RO	Circuit A Low Suction Superheat
ALM_LOW_SH_B_F	BV	57	IR	0	RO	Circuit B Low Suction Superheat
ALM_CONDENSER_LOCK_F	BV	58	IR	0	RO	Condenser Flow Switch Failure
ALM_CPA1_REVERSE_ROT_F	BV	59	IR	0	RO	Compressor A1 Not Started Or Pressure Increase not Established
ALM_CPA2_REVERSE_ROT_F	BV	60	IR	0	RO	Compressor A2 Not Started Or Pressure Increase not Established
ALM_CPA3_REVERSE_ROT_F	BV	61	IR	0	RO	Compressor A3 Not Started Or Pressure Increase not Established
ALM_CPB1_REVERSE_ROT_F	BV	62	IR	0	RO	Compressor B1 Not Started Or Pressure Increase not Established
ALM_CPB2_REVERSE_ROT_F	BV	63	IR	0	RO	Compressor B2 Not Started Or Pressure Increase not Established
ALM_LOCK_SW_F	BV	64	IR	0	RO	Customer Interlock Failure
ALM_LOSS_COM_SM_F	BV	65	IR	0	RO	Loss of communication with System Manager
ALM_LOSS_COM_MS_F	BV	66	IR	0	RO	Master/Slave communication Failure
ALM_NETWORK_EMSTOP_F	BV	67	IR	0	RO	Unit is in Network emergency stop
ALM_COOL_PUMP1_F	BV	68	IR	0	RO	Cooler pump 1 default

Object Name	Type	Instance	Option	COVInc	PV Access	Description
ALM_COOL_PUMP2_F	BV	69	IR	0	RO	Cooler pump 2 default
ALM_REPEAT_HIGH_DGT_A_F	BV	70	IR	0	RO	Circuit A Repeated High Discharge Gas Overrides
ALM_REPEAT_HIGH_DGT_B_F	BV	71	IR	0	RO	Circuit B Repeated High Discharge Gas Overrides
ALM_REPEAT_LOW_SST_A_F	BV	72	IR	0	RO	Circuit A Repeated low suction temperature overrides
ALM_REPEAT_LOW_SST_B_F	BV	73	IR	0	RO	Circuit B Repeated low suction temperature overrides
ALM_HEAT_LOW_EWT_F	BV	74	IR	0	RO	Low entering water temperature in heating
ALM_COOLER_FLOW_F	BV	75	IR	0	RO	Cooler flow switch failure
ALM_HP_A_F	BV	76	IR	0	RO	Circuit A High pressure switch Failure
ALM_HP_B_F	BV	77	IR	0	RO	Circuit B High pressure switch Failure
ALM_COND_PUMP1_F	BV	78	IR	0	RO	Condenser pump 1 default
ALM_COND_PUMP2_F	BV	79	IR	0	RO	Condenser pump 2 default
ALM_SENSORS_SWAP_F	BV	80	IR	0	RO	Cooler Water Exchanger Temperature Sensors Swapped
ALM_COND_SENSORS_SWAP_F	BV	81	IR	0	RO	Condenser Water Exchanger Temperature Sensors Swapped
ALM_M_S_CONFIG_F	BV	82	IR	0	RO	Master/Slave configuration error
ALM_INI_FACT_CONF_F	BV	83	IR	0	RO	Initial factory configuration required
ALM_ILL_FACT_CONF_F	BV	84	IR	0	RO	Illegal configuration
ALM_SERVICE_MAINTNANCE	BV	85	IR	0	RO	Service maintenance alert
ALM_CL_PUMP_DRIVE_F	BV	86	IR	0	RO	Cooler Water pump Variable Speed Failure
ALM_CD_PUMP_DRIVE_F	BV	87	IR	0	RO	Condenser Water pump Variable Speed Failure
ALM_CL_WL_PROCESS_F	BV	88	IR	0	RO	Cooler Water loop process Failure
ALM_CL_WL_PRES_ZERO_ERR	BV	89	IR	0	RO	Cooler water loop process failure - zero error
ALM_CL_WL_PRES_TOO_LOW	BV	90	IR	0	RO	Cooler water loop failure - water press too low
ALM_CL_WL_PUMP_NO_START	BV	91	IR	0	RO	Cooler water loop failure - pump not started
ALM_CL_WL_SPECI_PUMP_RT	BV	92	IR	0	RO	Cooler Water Loop : RT specific
ALM_CL_WL_PUMP_OVERLOAD	BV	93	IR	0	RO	Cooler water loop failure - pump overload
ALM_CL_WL_FLOW_SWITCH_F	BV	94	IR	0	RO	Cooler water loop failure - switch fail
ALM_CL_WL_PRES_CROSS	BV	95	IR	0	RO	Cooler water loop failure - press cross
ALM_CD_WL_PROCESS_F	BV	96	IR	0	RO	Condenser Water loop Failure
ALM_CD_WL_PRES_ZERO_ERR	BV	97	IR	0	RO	Condenser water loop failure - zero error
ALM_CD_WL_PRES_TOO_LOW	BV	98	IR	0	RO	Condenser water loop failure - water press too low
ALM_CD_WL_PUMP_NO_START	BV	99	IR	0	RO	Condenser water loop failure - pump not started
ALM_CD_WL_SPECI_PUMP_RT	BV	100	IR	0	RO	Condenserer Water Loop : RT

Object Name	Type	Instance	Option	COVInc	PV Access	Description
						specific
ALM_CD_WL_PUMP_OVERLOAD	BV	101	IR	0	RO	Condenser water loop failure - pump overload
ALM_CD_WL_FLOW_SWITCH_F	BV	102	IR	0	RO	Condenser water loop failure - switch fail
ALM_CD_WL_PRES_CROSS	BV	103	IR	0	RO	Condenser water loop failure - press cross
ALM_SIOB_A_LOW_VOLT_F	BV	104	IR	0	RO	SIOB 1 Low Voltage Failure
ALM_SIOB_B_LOW_VOLT_F	BV	105	IR	0	RO	SIOB 2 Low Voltage Failure
ALM_EXV_A_F	BV	106	IR	0	RO	Main EXV stepper motor failure - cir A
ALM_EXV_B_F	BV	107	IR	0	RO	Main EXV stepper motor failure - cir B
ALM_FGAS_NEEDED	BV	108	IR	0	RO	Fgas check needed, call your maintenance company
ALM_FLUIDE_FAIL	BV	109	IR	0	RO	Possible Refrigerant Leakage Failure
ALM_FC_PROCESS_F	BV	110	IR	0	RO	Free Cooling Process Failure
ALM_FC_WLOOP_F	BV	111	IR	0	RO	Free Cooling Water Loop Thermistor Failure
ALM_FC_LWT_F	BV	112	IR	0	RO	Free Cooling Leaving Water Thermistor Failure
ALM_FC_OAT_F	BV	113	IR	0	RO	Free Cooling OAT Sensor Failure
UNIT_STATUS	AV	136	IR	0	RO	Running Status
GENUNIT_HC_SEL_wr	AV	137	CMD	0	RW	HeatCool Select
SETPOINT_csp1	AV	138		0	RW	Cooling Setpoint 1
SETPOINT_csp2	AV	139		0	RW	Cooling Setpoint 2
SETPOINT_ice_sp	AV	140		0	RW	Cooling Ice Setpoint
SETPOINT_hsp1	AV	141		0	RW	Heating Setpoint 1
SETPOINT_hsp2	AV	142		0	RW	Heating Setpoint 2
SETPOINT_hsp3	AV	143		0	RW	Heating Setpoint 3

Note: The configuration parameters of the equipment are available in Read Only access.
Setpoint parameters are available in read/write access

Note:

1- The ALARMRST_alarm_X present values are the « JBus » alarm code of the equipment (see IOM documentation of the equipment),

2- The equipment STATUS and ALM parameter are ASCII coded. In oder to get them from the BACnet, the « GENUNIT_STATUS » and « GENUNIT_ALM » present value are filled with a BACnet code (see below)

2.3.2 BACNet TrendLog Objects List

BACNet Object	Log Enabled	Buffer Size	Log Interval	Notification Threshold	Stop When Full	Notify Type	Intrinsic Reporting
GENUNIT_STATUS	YES	250	90000	48	NO	Alarms	Event Disable
GENUNIT_CAP_T	YES	250	90000	48	NO	Alarms	Event Disable
GENUNIT_CAPA_T	YES	250	90000	48	NO	Alarms	Event Disable
GENUNIT_CAPB_T	YES	250	90000	48	NO	Alarms	Event Disable
GENUNIT_CTRL_PNT	YES	250	90000	48	NO	Alarms	Event Disable
TEMP_EWT	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_LWT	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_OAT	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_CHWSTEMP	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_HTWSTEMP	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_DGT_A	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_SCT_A	YES	250	30000	48	NO	Alarms	Event Enable
TEMP_SST_A	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_DGT_B	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_SCT_B	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_SST_B	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_COND_EWT	YES	250	30000	48	NO	Alarms	Event Disable
TEMP_COND_LWT	YES	250	30000	48	NO	Alarms	Event Disable
PUMPSTAT_CL_DvPos	YES	250	30000	48	NO	Alarms	Event Disable
PUMPSTAT_CD_DvPos	YES	250	30000	48	NO	Alarms	Event Disable
RUNTIME_hr_mach	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_chr_mach	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hhr_mach	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_mach	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hr_cp_a1	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hr_cp_a2	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hr_cp_a3	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hr_cp_b1	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_hr_cp_b2	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_cp_a1	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_cp_a2	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_cp_a3	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_cp_b1	YES	250	360000	48	NO	Alarms	Event Disable
RUNTIME_st_cp_b2	YES	250	360000	48	NO	Alarms	Event Disable

2.3.3 BACNet codes

BACnet text point nummeric conversion for STATUS and HEATCOOL points:

BACnet code	Text
0	Off
1	Running
2	Stopping
3	Delay
4	Tripout
5	Ready
6	override
7	defrost
8	Run Test
9	Test
10	Local
11	Network
12	Remote
13	Auto
14	Setp 1
15	Setp 2
16	4-20mA
17	Setp Sw
18	Ice_sp
19	Heat
20	Cool
21	Standby
22	Both
23	L-off
24	L-on
25	L-sched
26	Network
27	Remote
28	Master

BACnet text point nummeric conversion for Alarm state ALM:

BACnet code	Text
0	Normal
1	Partial
2	Shutdown

3 BACNET PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (PICS)

Date:	**21.10.2016**
Vendor Name:	**Vendor ID = 16**
Product Names:	**BACnet for Web panels CIAT Chiller**
Product Model Number:	**30**
Applications Software Version:	**ECG-SR-20R45020**
Firmware Revision:	**3.41**
BACnet Protocol Revision:	**1.4 (BACnet ANSI/ASHRAE 135-2008)**

3.1 Product Description:

This control system is intended to all types of water to water cooled chillers using scroll compressors. It shall operate as either a stand-alone control system or as a part of the Network (Modbus or BACnet/IP).
IMPORTANT: The BACnet stack is not yet certified by BTL

3.2 BACnet Standardized Device Profile (Annex L):

- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Building Controller (B-BC)
- ☐ BACnet Advanced Application Controller (B-AAC)
- ☑ BACnet Application Specific Controller (B-ASC)
- ☐ BACnet Smart Sensor (B-SS)
- ☐ BACnet Smart Actuator (B-SA)
- ☐ BACnet Gateway (B-GW)

3.3 BACnet Interoperability Building Blocks Supported (Annex K):

3.3.1 Data Sharing BIBBs

Data Sharing Read-Property-A	DS-RP-A
Data Sharing Read-Property-B	DS-RP-B
Data Sharing Read-Property-Multiple-A	DS-RPM-A
Data Sharing Read-Property-Multiple-B	DS-RPM-B
Data Sharing Write-Property-A	DS-WP-A
Data Sharing Write-Property-B	DS-WP-B
Data Sharing Write-Property-Multiple-B	DS-WPM-B
Data Sharing COV-A	DS-COV-A
Data Sharing COV-B	DS-COV-B
Data Sharing COV-Unsolicited-A	DS-COVU-A
Data Sharing COV-Unsolicited-B	DS-COVU-B
Data Sharing COV-Property-B	DS-COVP-B

3.3.2 Alarm / Event BIBBs

Alarm and Event-Notification Internal-B	AE-N-I-B
Alarm and Event-Notification External-B	AE-N-E-B
Alarm and Event-Acknowledge-B	AE-ACK-B
Alarm and Event-Information-B	AE-INFO-B
Alarm and Event-Alarm Summary-A	AE-ASUM-B
Alarm and Event-Enrollment Summary-B	AE-ESUM-B

3.3.3 Scheduling BIBBs

Scheduling-Internal-B	SCHED-I-B
Scheduling-External-B	SCHED-E-B
Scheduling-Weekly-B	?
Scheduling-Read Only-B	?

3.3.4 Trending BIBBs

Trending-Viewing and Modifying Trends Internal-B	T-VMT-I-B
Trending-Viewing and Modifying Trends External-B	T-VMT-E-B
Trending-Automated Trend Retrieval-B	T-ATR-B

3.3.5 Device Management BIBBs

Device Management-Dynamic Device Binding-A	DM-DDB-A
Device Management-Dynamic Device Binding-B	DM-DDB-B
Device Management-Dynamic Object Binding-A	DM-DOB-A
Device Management-Dynamic Object Binding-B	DM-DOB-B
Device Management-DeviceCommunicationControl-B	DM-DCC-B
Device Management-TimeSynchronization-A	DM-TS-A
Device Management-AutomaticTimeSynchronization-A	?
Device Management-TimeSynchronization-B	DM-TS-B
Device Management-UTCTimeSynchronization-A	DM-UTC-A
Device Management-UTCTimeSynchronization-B	DM-UTC-B
Device Management-ReinitializeDevice-B	DM-RD-B
Device Management-Backup and Restore-B	DM-BR-B
Device Management-Restart-B	DM-R-B
Device Management-List Manipulation-B	DM-LM-B
Device Management-Object Creation and Deletion-B	DM-OCD-B

3.3.6 Network Management BIBBs

Network Management-Connection Establishment-A	NM-CE-A
Network Management-Connection Establishment-B	NM-CE-B
Network Management-Router Configuration-A	NM-RC-A
Network Management-Router Configuration-B	NM-RC-B

3.4 Segmentation Capability:

☐ Segmented requests supported Window Size 16
☐ Segmented responses supported Window Size 16

3.5 Standard Object Types Supported:

3.5.1 Standard Object Types Supported: Accumulator-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device Type Reliability Prescale Value_Change_Time Value_Before_Change Value_Set Pulse_Rate High_Limit Low_Limit Limit_Monitoring_Interval Notification_Class Time_Delay Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Description Device Type Prescale Value_Set Pulse_Rate High_Limit Low_Limit Limit_Monitoring_Interval Time_Delay Limit_Enable Event_Enable	-

3.5.2 Standard Object Types Supported: Analog-Input-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device Type Reliability Update_Interval Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value COV_Increment Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable	-

3.5.3 Standard Object Types Supported: Analog-Output-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device Type Reliability Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value COV_Increment Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable	-

3.5.4 Standard Object Types Supported: Analog-Value-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Reliability Priority_Array Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value COV_Increment Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable	-

3.5.5 Standard Object Types Supported: Averaging Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Minimum_Value_Timestamp Variance_Value Maximum_Value_Timestamp Description	Attempted_Samples Window_Interval Window_Samples	-

3.5.6 Standard Object Types Supported: Binary-Input-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Event_Enable	-

3.5.7 Standard Object Types Supported: Binary-Output-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Event_Enable	-

3.5.8 Standard Object Types Supported: Binary-Value-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Event_Enable	-

3.5.9 Standard Object Types Supported: Calendar-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description	Date_List	-

3.5.10 Standard Object Types Supported: Command

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Action_Text	Present_Value Action Action_Text	-

3.5.11 Standard Object Types Supported: Device-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
N/A	**N/A**	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Time_Synchronization_Recipients Configuration_Files Last_Restore_Time Backup_Failure_Timeout Active_COV_Subscriptions		-

3.5.12 Standard Object Types Supported: Event Enrollment Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description		-

3.5.13 Standard Object Types Supported: File

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description	File_Size Archive	-

3.5.14 Standard Object Types Supported: Group

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description		-

3.5.15 Standard Object Types Supported: Loop

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Reliability Update_Interval Proportional_Constant Proportional_Constant_Units Integral_Constant Integral_Constant_Units Derivative_Constant Derivative_Constant_Units Bias Maximum_Output Minimum_Output COV_Increment Time_Delay Notification_Class Error_Limit Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Proportional_Constant Integral_Constant Derivative_Constant Bias Maximum_Output Minimum_Output	-

3.5.16 Standard Object Types Supported: Multistate-Input-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device_Type Reliability State_Text Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Alarm_Values Fault_Values Event_Enable	-

3.5.17 Standard Object Types Supported: Multistate-Output-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Device_Type Reliability State_Text Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Event_Enable	-

3.5.18 Standard Object Types Supported: Multistate-Value-Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Reliability State_Text Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Time_Delay Alarm_Values Fault_Values Event_Enable	-

3.5.19 Standard Object Types Supported: Notification Class Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description		-

3.5.20 Standard Object Types Supported: Program

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Reason_For_Halt Description_Of_Halt Program_Location Description Instance_Of Reliability	Program_Change	-

3.5.21 Standard Object Types Supported: Pulse Converter

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Input_Reference Reliability COV_Increment COV_Period Notification_Class Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Present_Value Adjust_Value Count_Before_Change	-

3.5.22 Standard Object Types Supported: Schedule Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
?	?	Description Weekly_Schedule Exception_Schedule	Weekly_Schedule Exception_Schedule	-

3.5.23 Standard Object Types Supported: Trendlog Object

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties	Proprietary Properties
☐	☐	Description Start_Time Stop_Time Log_DeviceObjectProperty Log_Interval COV_Resubscription_Interval Client_COV_Increment Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Log_Enable Start_Time Stop_Time Log_Interval Record_Count	-

3.6 Device Address Binding :

Is static device binding supported ? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) ☐ Yes ☑ No

3.7 Data Link Layer Options:

☑ BACnet IP, (Annex J)
☐ BACnet IP, (Annex J), Foreign Device
☐ ISO 8802-3, Ethernet (Clause 7)
☐ ASTM 878.1, 2.5 Mb. ARCNET (Clause 8)
☐ ASTM 878.1, RS-485 ARCNET (Clause 8) baud rate(s) _____
☐ MS/TP master (Clause 9), baud rate(s): _____
☐ MS/TP slave (Clause 9), baud rate(s): _____
☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s): max. EIA 232
☐ Point-To-Point, modem, (Clause 10), baud rate(s): 115200 baud / max. modem
☐ LonTalk, (Clause 11), medium: _____
☐ Other: _____

3.8 Networking Options:

☐ Router, Clause 6 - BACnet/IP-PTP.
☐ Annex H, BACnet Tunneling Router over IP
☐ BACnet Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

3.9 Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

☑ ANSI X3.4 / UTF8	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (ICS-4)	☐ JIS C 6226

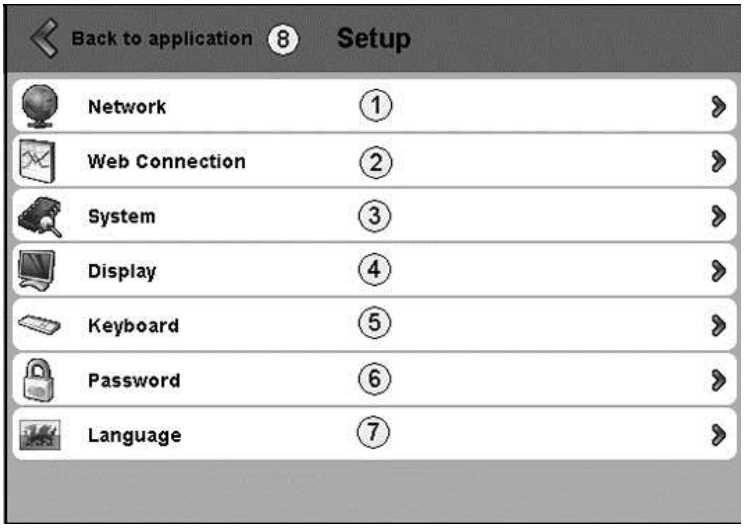
4 HOW TO FIND AND MODIFY THE UNIT IP ADDRESS

The "Setup" display is only possible on the unit touch screen.

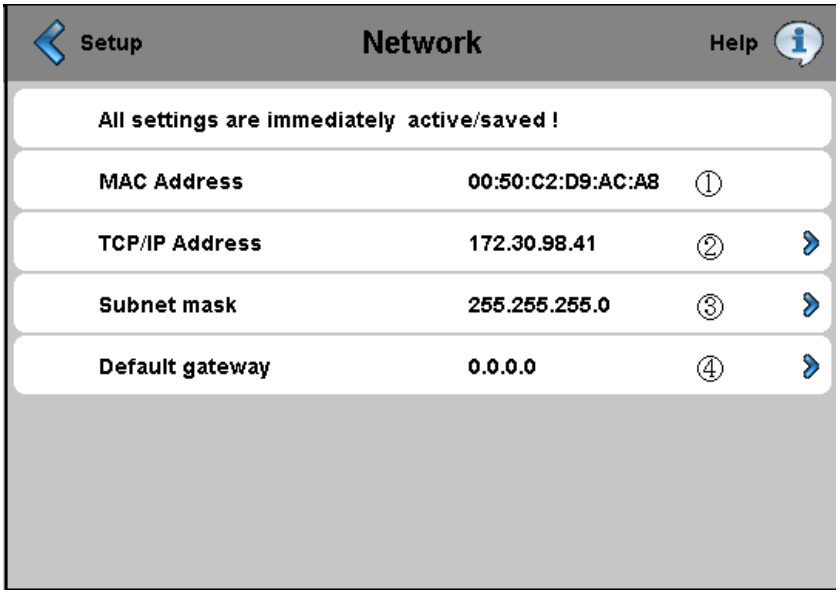
To access the main cofiguration menu, press and hold anywhere on the screen (excluding buttons or text fields) for about 4 secondes. The configuration menu can be accessed at any time. By default, access to the menu is not password-protected.

The main configuration screen permits access to the various unit parameters:

1. Network
2. Web connection



In the main configuration, menu press on the “Network” field to display the screen below.



1 MAC address (read only)

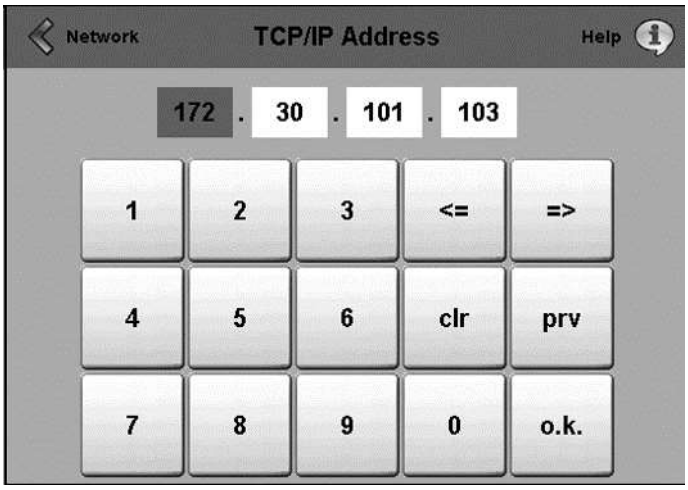
2 IP address

3 Subnet mask

4 Default gateway

IMPORTANT: You must request an IP address, the subnet mask and the default gateway from the system administrator before connecting the unit to the local Ethernet network.

Press the "TCP/IP Address" field.



Enter the new address and validate it by pressing "OK". Proceed in the same way with the other network parameters.

Once all the parameters have been specified, return to the application by pressing the "Back to application" field. The confirmation dialog is displayed. Press "Save" to confirm or "Revert" to discard changes.

5 BACNET IP COMMUNICATION PROBLEM

The unit does not respond to the Building Manager System (BMS).

Possible causes :

- The Ethernet cable is not correctly connected
- Network parameters are not correct (see Network IP/Mask/Gateway configuration)
- There is an IP router between the equipment and the BMS
- BACnet Enable parameter in configuration menu is set to No.

Checks to be made:

- On the Ethernet connector, verify that the green LED is ON and Orange LED is blinking.
- Open a command window under Windows (Start, Execute, type "cmd"<Enter), type the command "ping" followed by the equipment IP address. The equipment must respond.
- Open the Connect Touch Configuration menu (Advanced User password required) and check BACnet parameters.

In order to verify the connection, you need to have any BDT software (BACnet Discovery Tool) installed. This software will allow you to display the list of devices connected to the BACnet network, including the physical names and instance numbers.

Once the BDT software is installed, perform the following steps:

1. Run the BDT software and execute the "Who Is" command.
2. A list of devices connected to the BACnet network will be displayed.
3. Find the required device according to the BACnet device instance configured, i.e. 1600001.