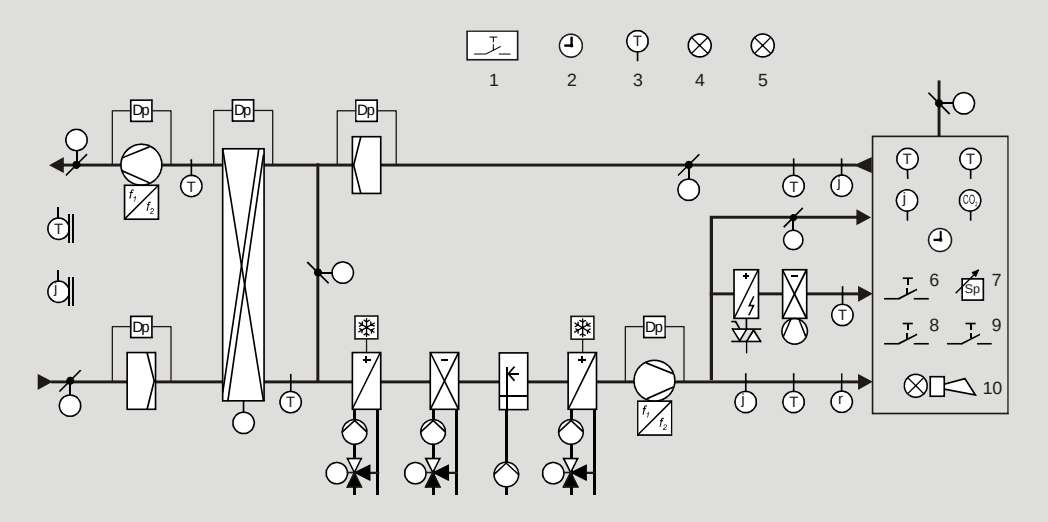
S



Climatix™
BACnet/IP communication with POL908 or POL904
Objects for Climatix AHU application V3.3

CB1Y3963en
2017-09-08

Siemens Switzerland Ltd
Building Technologies Division
International Headquarters
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 58-724 24 24
www.siemens.com/buildingtechnologies

Table of contents

1 About this document

1.1 Revision history

Date	Changes	Section	Pages
Current edition	Update for AHU 3.3		13, 14, 17, 20
2015-10-26	Update for AHU 3.0x incl BACnet client	3.3 + 3.4	11, 12, 14, 15, 18, 19, 20, 23, 25,+29, 30
21.06.2013	Reference to standard application AHU v2.4	2.1	5, 7, 9
	Additional BACnet objects: Analog Inputs	3.3	10,11
	Analog Values	3.3	16
	Binary Inputs	3.3	19, 20
	Multistate Value	3.3	25
	New BACnet objects: Trend Object	3.3	27
22.03.2010	First edition		

1.2 Before you start

Validity

This document applies to the following product:

Name	Version
Climatix AHU application	3.3

This document is a supplement to the general integration guide:
"BACnet/IP communication with POL908.00" *) or POL904.00 (BACnet MS/TP)
*) POL908.00: Climatix BACnet/IP communication module

That document must be read first and all general information such as document conventions, important information on safety, trademarks, copyright etc. are valid for this document as well.

This document only contains the uniqe information for the product mentioned above. All general engineering information such as mounting modules, communication settings etc. are described in the integration guide.

Prerequisite

User has read the general BACnet/IP integration guide for Climatix, CB1J3962en.

1.3 Reference documents

Further information

The following documents contain additional information on the products described in this manual:

Document	Order no.
Data sheet "Communication module BACnet/IP"	CB1Q3933en
Data sheet "Communication module BACnet/MSTP"	CB1Q3932en
Integration Guide "BACnet/IP communication with POL908.00"	CB1J3960en
Integration Guide "BACnet/MSTP communication with POL904.00"	CB1J3967en
Basic documentation "BACnet PICS" for VVS10	CB1P3939en
Basic documentation "Standard Application AHU"	CB1P3977en

2 Application

2.1 General information

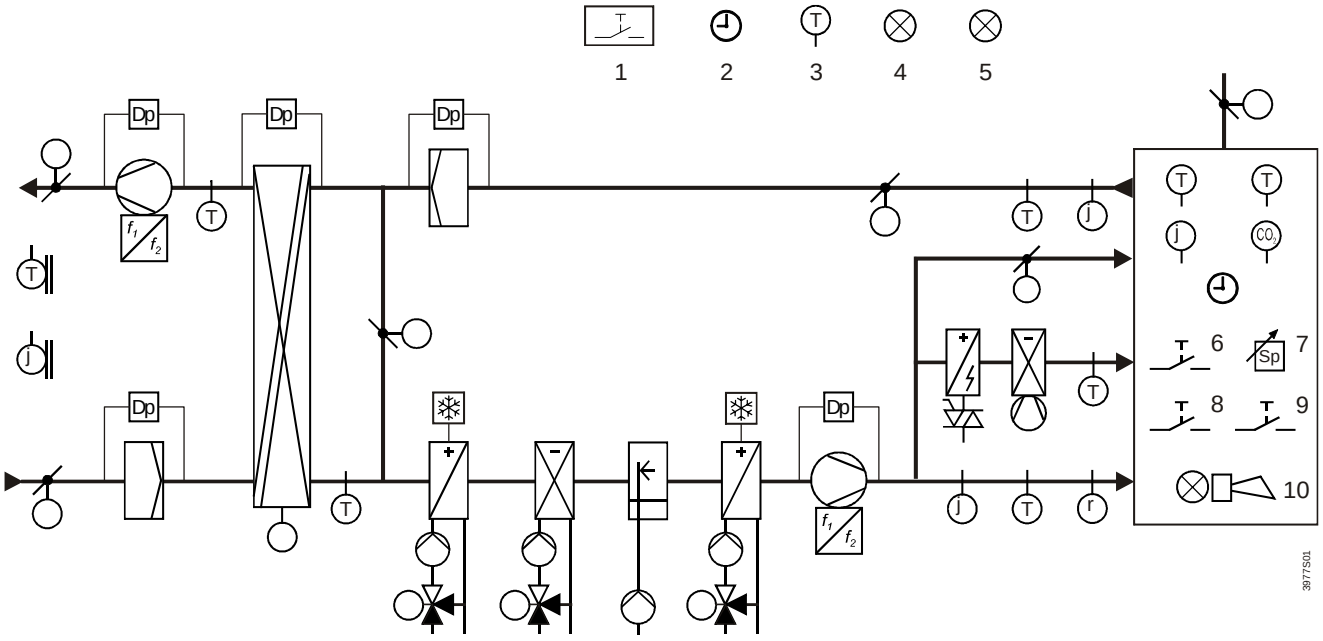
What are configurable applications?

Configurable applications for Climatix comprise predefined monitoring and control functions for a particular plant type.
Features:

- OEM customers receive applications as a set of loadable files. They can be loaded in the controller via SD card.
- An HMI operator unit allows for assigning inputs and outputs to the respective plant as well as select, configure and parameterize the required functions.

Climatix application AHU

Climatix application AHU contains all common functions to control and monitor air conditioning units (**A**ir **H**andling **U**nits). The following diagram provides an overview of selectable measured values and control equipment:



Detailed information

See document CE1P3977en for a detailed description of Climatix application AHU.

BACnet objects

The set of loadable files mentioned above also includes a mapping file for integration in a higher building automation and control system via communications module. The Climatix controller automatically assumes the BACnet objects required for integration as per the plant data points and functions configured and parameterized previously.

The following tables list all BACnet objects supported by Climatix application AHU.

Only the objects for the configured and activated functions and I/Os are present on BACnet.

Use the MultistateValue **AckAlmPls** object for alarm acknowledge.

Some AV and MV objects have default the OutOfService property set to TRUE. These objects may newer be set to OutOfService=FALSE

3 BACnet objects

3.1 General

Purpose

This section describes the BACnet objects available in the specific application, see chapter 1.2 "Before you start" under "Validity".

Present objects

All present BACnet objects for the specific unit are found in the EDE files. See the integration guide how to export the EDE files.

3.2 BACnet object types

Overview

Special care must be taken to the BACnet standard and what object types and properties that are supported both on the Climatix and the client side.
This application supports the object types listed below:

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	ý	¨	¨
Analog Output	ý	¨	¨
Analog Value	ý	¨	¨
Binary Input	ý	¨	¨
Binary Output	ý	¨	¨
Binary Value	ý	¨	¨
Calendar	ý	¨	¨
Command	¨	¨	¨
Device	ý	¨	¨
Event Enrollment	ý	ý	ý
File	ý	¨	¨
Group	¨	¨	¨
Loop	¨	¨	¨
Multi-State Input	ý	¨	¨
Multi-State Output	ý	¨	¨
Multi-State Value	ý	¨	¨
Notification Class	ý	¨	¨
Program	¨	¨	¨
Schedule	ý	¨	¨
Averaging	¨	¨	¨
Trend Log	ý	¨	¨
Life-Safety-Point	¨	¨	¨
Life-Safety-Zone	¨	¨	¨
Accumulator	¨	¨	¨
Pulse-Converter	¨	¨	¨

Description

See the following basic document for a detailed description of the individual object types:

CB1P3939en "BACnet Protocol Implementation Conformance Statement (PICS)"

3.3 BACnet objects

Introduction

Normally either the object-name or the object-instance can be used as a BACnet reference.

Analog Inputs, Type No: 0

Object name	Object instance	Object description	LOL	HIL	Dim.
SupplyTmp	45150	Supply air temp	-64.0	99.0	°C
RoomTmp	60643	Room temperature	-64.0	99.0	°C
RoomTmp2	51635	Room temperature 2	-64.0	99.0	°C
RmUTmp1	33923	Roomunit 1 temp	-64.0	99.0	°C
RmUTmp2	46304	Roomunit 2 temp	-64.0	99.0	°C
ReturnAirTmp	28256	Exhaust air temp	-64.0	99.0	°C
OutTmp	53218	Outside air temp	-64.0	99.0	°C
HtgFrstTmp	50341	Heating frost temp	-64.0	99.0	°C
HrecWtrTmp	12446	Heat recovery water temp	-64.0	99.0	°C
ExhaustTmp	40895	Extract air temp	-64.0	99.0	°C
HrecSupplyTmp	44798	Heat recovery supply air temp	-64.0	99.0	°C
ExtraSupplyTmp	20915	Supply air temp 2	-64.0	99.0	°C
ExtraFrstTmp	4854	Heating 2 frost temp	-64.0	99.0	°C
SupplyPrs	20400	Supply air pressure	0.0	5000.0	Pa
ReturnPrs	39576	Exhaust air pressure	0.0	5000.0	Pa
SupplyFlow	9497	Supply air flow	0.0	40000.0	l/s
ReturnFlow	38593	Exhaust air flow	0.0	40000.0	l/s
HrecFrstPrs	39125	Heat recovery frost pressure	0.0	5000.0	Pa
SupplyHum	53018	Supply air humidity relative	0.0	100.0	%rH
RoomHum	37799	Room humidity relative	0.0	100.0	%rH
OutHum	45222	Outside air humidity relative	0.0	100.0	%rH
AirQuality	3737	Air quality	0.0	3000.0	ppm
ExtSetpointSpv	12205	External setpoint	-64.0	64.0	°C
AuxTmp	115	Auxiliary temp	-64.0	99.0	°C
SplyFilAlm	40720	Supply filter pressure	-500.0	5000.0	Pa
ExhFilAlm	13692	Exh. filter preesure	-500.0	5000.0	Pa

Analog Outputs, Type No: 1

Object name	Object instance	Object description	LOL	HIL	Dim.
SplyFanVarPos	59037	Supply fan	0	100	%
ExhFanVarPos	40119	Exhaust fan	0	100	%
HumidityCtrlPos	39618	Humidity	0	100	%
ElectricalHtgPos	37442	Electrical heating	0	100	%
HrecDampPos	42156	Heat recovery damper	0	100	%
HrecPos	5922	Heat recovery	0	100	%
CoolingPos	30925	Cooling	0	100	%
HeatingPos	26209	Heating	0	100	%
ExtraElHtgPos	45777	Elelctrical heating 2	0	100	%
ExtraHtgPos	46994	Heating 2	0	100	%
ExtraClgPos	60283	Cooling 2	0	100	%
AuxOutput	22813	Auxiliary output (fan)	0	100	%

Analog Values, Type No: 2

Object name	Object instance	Object description	HIL	LOL
ValidRoomTmp	2878	Actual room temp		
ExtControlDlyOfTm	4853	External control off delay		
NightCoolRmSpv	7412	Night cooling room setpoint		
NightCoolRmHys	17755	Night cooling room hysteres		
NightCoolMinOutTmp	4465	Night cooling min outtemp		
NightCoolOnDiff	1475	Night cooling on delta		
TmpStartHtgStrt	32003	Temp start heating start		
TmpStartHtgSpv	40193	Temp start heating setpoint		
TmpStartClgStrt	8682	Temp start cooling start		
TmpStartClgSpv	22740	Temp start cooling setpoint		
BoostRmSpv	13266	Boost room temp setpoint		
BoostPreStrtTm	3510	Boost compensation time		
BoostHtgSpv	27113	Boost heating setpoint		
BoostClgSpv	44092	Boost cooling setpoint		
SlaveOffset	24823	Fan slave offset		
SuCmpFanPrVal	8596	Actual summer compensation fan	100%	-100%
SuCmpFanDta	4600	Summer compensation fan	100%	-100%
SuCmpFanStrt	55465	Fan summer compensation start		
SuCmpFanEnd	39637	Fan summer compensation stop		
WiCmpFanPrVal	50290	Actual winter compensation fan	100%	-100%
WiCmpFanDta	47832	Winter compensation fan	100%	-100%
WiCmpFanStrt	64552	Fan winter compensation start		
WiCmpFanEnd	12789	Fan winter compensation stop		
SplyFanSpvSt1Spv	52572	Supply fan step 1 setpoint	40000	0.0
SplyFanSpvSt2Spv	22144	Supply fan step 2 setpoint	40000	0.0
SplyFanSpvSt3Spv	8244	Supply fan step 3 setpoint	40000	0.0
SplyFanSpvMaxForce	25092	Supply fan max force	40000	0.0
ExhFanSpvSt1Spv	45030	Exhaust fan step 1 setpoint	40000	0.0
ExhFanSpvSt2Spv	13370	Exhaust fan step 2 setpoint	40000	0.0
ExhFanSpvSt3Spv	17038	Exhaust fan step 3 setpoint	40000	0.0
ExhFanSpvMaxForce	2525	Exhaust fan max force	40000	0.0
SplyFanActVal	56628	Actual value supply fan		
ExhFanActVal	59694	Actual value exhaust fan		
SplyFanActSpv	46589	Actual supply fan setpoint		
SplyFanDevAlmMaxDev	57203	Max deviation supply fan		
ExhFanActSpv	33255	Actual exhaust fan setpoint		
ExhFanDevAlmMaxDev	56254	Max deviation exhaust fan		
AirQSpv	22649	Air quality setpoint		
AirQCmpPrVal	10236	Actual airquality compensation		

Analog Values, Type No: 2, *cont.*

Object name	Object instance	Object description	HIL	LOL
SplyEnth	29558	Supply air enthalpy		
SplyHumAbs	13958	Supply air humidity absolute		
RmEnth	61369	Room enthalpy		
RmHumAbs	17315	Room humidity absolute		
HumSpvRelSpv	2194	Humidity base setpoint relative		
HumSpvRelDz	37532	Humidity deadzone relative		
HumSpvRelSpvDehum	11342	Dehumidity setpoint relative	100.0	0.0
HumSpvRelSpvHum	10627	Humidity setpoint relative	100.0	0.0
HumSpvAbsSpv	20105	Humidity base setpoint absolute		
HumSpvAbsDz	61029	Humidity deadzone absolute		
HumSpvAbsSpvDehum	62747	Dehumidity setpoint absolute	100.0	0.0
HumSpvAbsSpvHum	22791	Humidity setpoint absolute	100.0	0.0
HumMaxCtlrMaxSpv	57438	Supply humidity max setpoint		
ActCascSpvHum	58111	Actual supply humidity setpoint (when use of cascade control)		
ActCascSpvDeh	50248	Actual supply dehumidity setpoint (when use of cascade control)		
ActMainSpvHum	40393	Actual humidity setpoint, Main (depending on actual controlmode)		
ActMainSpvDeh	47998	Actual dehumity setpoint, Main (depending on actual controlmode)		
ActCtrlValHum	38385	Actual controlled humidity		
FanCmpHumSpv	53848	Fan compensation humidity setpoint		
FanCmpHumPrVal	15399	Actual fan compensation humidity		
DeHumidityPrVal	18150	Actual dehumidity output		
SplyHumDevAlmMaxDev	22230	Max deviation supply humidity		
RmHumDevAlmMaxDev	39703	Max deviation room humidity		
OutEnth	57226	Outside air enthalpy		
OutHumAbs	16390	Outside air humidity absolute		
DewpointDz	41175	Dew point dead zone		
Dewpoint	21292	Dew point	64.0	-64.0

Analog Values, Type No: 2, *cont.*

Object name	Object instance	Object description	HIL	LOL
TmpSpvCoSpv	55992	Comfort temp base setpoint		
TmpSpvCoDz	65251	Comfort temp deadzone		
TmpSpvCoSpvClg	8970	Comfort cooling setpoint	99.0	22.0
TmpSpvCoSpvHtg	22817	Comfort heating setpoint	99.0	0.0
TmpSpvEcSpv	22543	Economy temp base setpoint		
TmpSpvEcDz	44059	Economy temp deadzone		
TmpSpvEcSpvClg	61866	Economy cooling setpoint	99.0	24.0
TmpSpvEcSpvHtg	35713	Economy heating setpoint	99.0	0.0
SuCmpTmpDta	34417	Summer compensation temp delta		
SuCmpTmpPrVal	41033	Actual summer compensation temp		
SuCmpTmpStrt	41719	Summer compensation temperatur start		
SuCmpTmpEnd	3420	Summer compensation temperatur stop		
WiCmpTmpDta	11601	Winter compensation temp delta		
WiCmpTmpPrVal	17839	Actual winter compensation temp		
WiCmpTmpStrt	34422	Winter compensation temperatur start		
WiCmpTmpEnd	42620	Winter compensation temperatur stop		
SwtchSplyCmp	7989	Summer/winter supply compensation		
CascFlowLmtMaxDevLmt	57930	Draught heating max deviation		
CascFlowLmtMinDevLmt	27342	Draught cooling max deviation		
TmpMinMaxCtlrMaxSpv	2907	Supply temp max setpoint	50.0	17.0
TmpMinMaxCtlrMinSpv	13640	Supply temp min setpoint	26.0	15.0
ActCascSpvHtg	28804	Actual supply heating setpoint (when use of cascade control)		
ActCascSpvClg	2735	Actual supply cooling setpoint (when use of cascade control)		
ActMainSpvHtg	4018	Actual heating setpoint, Main (depending on actual controlmode)		
ActMainSpvClg	30105	Actual cooling setpoint, Main (depending on actual controlmode)		
ActCtrlVal	52988	Actual controlled temp		

Analog Values, Type No: 2, *cont.*

Object name	Obj. instance	Object description	HIL	LOL
HrecPrsFrstSpv	2152	Heat recovery frost setpoint step 1		
HrecPrsFrstSpvStBy	55606	Heat recovery frost setpoint step 2		
DeFrstMxSpd	28660	Max speed defrost		
FanCmpHtgDz	41346	Fan heating deadzone		
FanCmpClgDz	54041	Fan cooling deadzone		
FanCmpTmpSpv	59241	Fan compensation temp setpoint		
FanCmpTmpPrVal	9430	Actual fan compensation temp		
ExtraSpv	58349	Extra sequence setpoint		
HrecDampminFrshAir	41552	Min fresh air		
HrecDampRec	14134	Heat recovery damper recovery value		
HrecFrstSpv	51620	Heat recovery frost setpoint		
CoolingOffTmp	16471	Cooling disable outside temp		
FanHtgPrVal	49915	Actual fan heating value		
FanClgPrVal	58670	Actual fan cooling value		
HeatingFrstSpv	35635	Heating frost setpoint		
HeatingFrstSpvStBy	12781	Heating standby setpoint		
HeatingPreHtgX1	23412	Pre heating outside temp X1		
HeatingPreHtgY1	26693	Pre heating posision Y1		
HeatingPreHtgX2	27415	Pre heating outside temp X2		
HeatingPreHtgY2	22566	Pre heating posision Y2		
SplyTmpDevAlmMaxDev	9756	Max deviation supply temp		
RtRmTmpDevAlmMaxDev	61586	Max deviation room temp		
ExtraHtgFrstSpv	4625	Heating 2 frost setpoint		
ExtraHtgFrstSpvStBy	60579	Heating 2 standby setpoint		
ExtraHtgPreHtgX1	27620	Heating 2 Pre heating outside temp X1		
ExtraHtgPreHtgY1	22741	Heating 2 Pre heating posision Y1		
ExtraHtgPreHtgX2	23431	Heating 2 Pre heating outside temp X2		
ExtraHtgPreHtgY2	26806	Heating 2 Pre heating posision Y2		
ExtraClgOffTmp	54677	Cooling 2 disable outside temp		
HrecEffEff	17247	Heat recovery efficiency	101.0	50.0
SuWiSwtchCheckOutTmpDampd	24338	Outside air temp damped		
CG_EM24_1ActPower	40280	Energy actual power		
CG_EM24_1AvePower	36000	Energy average power		
CG_EM24_1TotEnergy	61249	Energy total		
CG_EM24_1ParEnergy	19610	Energy partial		
CG_EM24_1OpHours	49048	Energy operation hours		

(Values to/from Modbus integrated fans)

Analog Values, Type No: 2, *cont.*

Object name	Object instance	Object 1description	HIL	LOL
SplyFanOutFreq	57785	Supply fan Out freqvens		
SplyFanOutVolt	4369	Supply fan Out Volt		
SplyFanCurrent	53987	Supply fan Current		
SplyFanPower	23951	Supply fan Power		
SplyFanEnergy	54408	Supply fan Energy		
SplyFanSpdSp	59734	Supply fan Speed set point		
SplyFanSpdActlVal	47377	Supply fan act. speed		
SplyFanDCLink	18342	Supply fan DC-link		
SplyFanTorque	33931	Supply fan Torque		
SplyFanOpHrs	36916	Supply fan Op.hours		
ExhFanOutFreq	9628	Exhaust fan Out freqvens		
ExhFanOutVolt	54580	Exhaust fan Out Volt		
ExhFanCurrent	5830	Exhaust fan Current		
ExhFanPower	22850	Exhaust fan Power		
ExhFanEnergy	22796	Exhaust fan Energy		
ExhFanSpdSp	60827	Exhaust fan Speed set point		
ExhFanSpdActlVal	47669	Exhaust fan act. speed		
ExhFanDCLink	51746	Exhaust fan DC-link		
ExhFanTorque	2319	Exhaust fan Torque		
ExhFanOpHrs	38137	Exhaust fan Op.hours		

Binary Inputs, Type No: 3

Object name	Object instance	Object description	State texts
HtgFrstDtctr	21294	Heating frost monitor	– OK – Frost
HtgPmpAlm	47847	Heating pump alarm	– OK – Alarm
ElHtgAlm	4964	Electrical heating alarm	– OK – Alarm
HrecFrstDtctr	31092	Heat recovery frost monitor	– OK – Frost
HRecPmpAlm	18003	Heat recovery pump alarm	– OK – Alarm
HRecAlm	62931	Heat recovery alarm	– OK – Alarm
HRecFdbk	22981	Heat recovery feedback alarm	– OK – Alarm
ClgPmpAlm	40242	Cooling pump alarm	– OK – Alarm
ClgAlm	45154	Cooling DX alarm	– OK – Alarm
HumPmpAlm	3706	Humidity pump alarm	– OK – Alarm
ExtraFrstDtctr	34361	Heating 2 frost monitor	– OK – Frost
ExtraHtgPmpAlm	23306	Heating 2 pump alarm	– OK – Alarm
ExtraElHtgAlm	23132	Electrical heating 2 alarm	– OK – Alarm
ExtraClgPmpAlm	31967	Cooling 2 pump alarm	– OK – Alarm
ExtraClgAlm	48824	Cooling 2 DX alarm	– OK – Alarm
FanAlm	8558	Fan alarm	– OK – Alarm
SplyFanAlm	28757	Supply fan alarm	– OK – Alarm
ExhFanAlm	55865	Exhaust fan alarm	– OK – Alarm
FilterAlm	13699	Filter alarm	– OK – Alarm
SplyFilterAlm	34066	Supply filter alarm	– OK – Alarm
ExhFilterAlm	45320	Exhaust filter alarm	– OK – Alarm
FireAlm	28514	Fire alarm	– OK – Alarm
FFgtExFan	24397	Fire extract fan	– Off – On
FFgtSuFan	44820	Fire supply fan	– Off – On
SmkAlm	4426	Smoke Alarm	– OK – Alarm
SmkDetAlm	40437	Smoke Det. dirty	– OK – Alarm
HPAlm	38477	Heatpump alarm	– OK – Alarm
HPDfrAlm	29096	Heatpump defrost	– OK – Alarm

Binary Inputs, Type No: 3, *cont.*

Object name	Object instance	Object description	State texts
ExtCtrl1	11643	External control input 1	– Off – On
ExtCtrl2	7448	External control input 2	– Off – On
EmergencyStop	9864	Emergency stop	– Off – On
SuWiSwtch	26679	Summer/Winter input	– Winter – Summer
DamperSplyFBFbVal	6336	Outside air damper feedback	– OK – No
DamperExhFBFbVal	27338	Extract air damper feedback	– OK – No
FireDamperFdbkOpn	3118	Fire damper opened	– OK – No
FireDamperNoMove	44469	Fire damper no move	– OK – Alarm
FireDamperFdbkClsd	53169	Fire damper closed	– OK – No
SplyFanFBFbVal	64102	Supply fan feedback	– OK – Alarm
ExhFanFBFbVal	32844	Exhaust fan feedback	– OK – Alarm
HumidityCtrlCmdFBFbVal	14608	Humidifier feedback	– OK – No Fdbk
HumidityCtrlPmpCmdFBFbVal	24144	Humidity pump feedback	– OK – No Fdbk
HrecPmpCmdFBFbVal	34557	Heat recovery pump feedback	– OK – No Fdbk
CoolingPmpCmdFBFbVal	51912	Cooling pump feedback	– OK – No Fdbk
CoolingFBFbVal	43526	Cooling DX feedback	– OK – No Fdbk
HeatingPmpCmdFBFbVal	15639	Heating pump feedback	– OK – Alarm
ExtraHtgPmpCmdFBFbVal	13329	Heating 2 pump feedback	– OK – No Fdbk
ExtraClgPmpCmdFBFbVal	54719	Cooling 2 pump feedback	– OK – No Fdbk
ExtraClgFBFbVal	47898	Cooling 2 DX feedback	– OK – Alarm
AuxAlm	22605	Auxiliary alarm	– Passive – Active
AuxInp	21522	Auxiliary input	– Off – On
AckAlmPls	122566	Alarm acknowledge puls	– – Execute

Multistate Input, Type No: 13

Object name	Object instance	Object description	State texts
MBCommAlm	15396	Modbus failure	– OK – General – Sensor – SuplyFan – ExhFan – HeatMtr

Binary Outputs, Type No: 4

Object name	Object instance	Object description	State texts
DamperSplyOnOff	6170	Outside air damper command	– Off – On
DamperExhOnOff	43251	Extract air damper command	– Off – On
FireDamperCmd	12328	Fire damper command	– Off – On
HumidityCtrlCmdOnOff	18044	Humidifier command	– Off – On
HumidityCtrlPmpCmdOnOff	49625	Humidifier pump command	– Off – On
HrecPmpCmdOnOff	59969	Heat recovery (pump) command	– Off – On
CoolingPmpCmdOnOff	10276	Cooling pump command	– Off – On
HeatingPmpCmdOnOff	10264	Heating pump command	– Off – On
ExtraHtgPmpCmdOnOff	31944	Heating 2 pump command	– Off – On
ExtraClgPmpCmdOnOff	63601	Cooling 2 pump command	– Off – On
AuxTspOutput	22528	Auxiliary TSP output	– Off – On
AuxOpModeInd	5163	Auxiliary operation mode output	– Off – On
AlmOutHigh	5714	Alarm output 1	– Normal – Alarm
AlmOutLow	8035	Alarm output 2	– Normal – Alarm

Binary Values, Type No: 5

Object name	Object instance	Object description	State texts
SplyTmpFireAlm	44098	Supply temp fire alarm	– OK – Alarm
RtTmpFireAlm	4286	Exhaust temp fire alarm	– OK – Alarm
SplyFanDevAlmAlm	6486	Supply fan deviation	– Passive – Active
ExhFanDevAlmAlm	31724	Exhaust fan deviation	– Passive – Active
FanOpHrsAlm	36120	Fan operation hours alarm	– Passive – Active
SplyHumDevAlmAlm	57113	Supply humidity deviation	– Passive – Active
RmHumDevAlmAlm	21718	Room humidity deviation	– Passive – Active
SplyTmpDevAlmAlm	38175	Supply temp deviation	– Passive – Active
RtRmTmpDevAlmAlm	7373	Room temp deviation	– Passive – Active
CommTest	60516	Communication test **Note! Use Prio 14 for pulse**	– 0 – 1
ManualMode	24032	Manual mode	– Auto – Manual
PBCommAlm	48527	Processbus communication alarm	– OK – Alarm
MBCommAlm	27810	Modbus communication alarm	– OK – Alarm
MBManualMode	64967	Manual mode set in integraded modbus device	– OK – Alarm
SplyFanWarn	29899	Supply fan warning message	– OK – Alarm
ExhFanWarn	7954	Exhaust fan warning message	– OK – Alarm
SplyFanAlmWarn	9067	Supply fan alarm	– OK – Alarm
ExhFanAlmWarn	59214	Exhaust fan alarm	– OK – Alarm

CharacterString Value, Type No: 40

Object name	Object instance	Object description	String
InfActrASN	25077	InfActr.ASN	
InfActrProdDa	1648	InfActr.ProdDa	

Positive Interger Value, Type No: 48

Object name	Object instance	Object description	Nr.
ExhFanAlmWarn	59214	Extract fan alarm	
InfActrCntDevJam	5647	InfActr.CntDevJam	
InfActrCntPwrUp	15093	InfActr.CntPwrUp	
InfActrCntRepos	15588	InfActr.CntRepos	
InfActrSerFlg	36368	InfActr.SerFlg	
InfActrSrlNr	7730	InfActr.SrlNr	
SplyFanAlmWarn	9067	Supply fan alarm	

Multistate Output, Type No: 14

Object name	Object instance	Object description	State texts
SplyFanCmdSt	21928	Supply fan command	– Off – Stage1 – Stage2 – Stage3
ExhFanCmdSt	14719	Exhaust fan command	– Off – Stage1 – Stage2 – Stage3
ElectricalHtgCmdStSt	11590	Electrical heating command	– Off – Stage1 – Stage2 – Stage3
CoolingCmdDxSt	30094	Cooling DX command	– Off – Stage1 – Stage2 – Stage3
ExtraElHtgCmdStSt	30897	Electrical heating 2 command	– Off – Stage1 – Stage2 – Stage3
ExtraClgCmdDxSt	27550	Cooling 2 DX command	– Off – Stage1 – Stage2 – Stage3

Schedule, Type No: 17

Object name	Object instance	Object description	State texts
ScheduleSt	31059	Schedule (variant steps)	– Off – St1 – St2 – St3
ScheduleStTmp	32703	Schedule (variant steps/temp)	– Off – Ec1 – Co1 – Ec2 – Co2 – Ec3 – Co3
ScheduleAux	55253	Schedule aux output	– Off – On

Calendar, Type No: 6

Object name	Object instance	Object description
CalendarEx	38114	Calendar exception
CalendarOff	51936	Calendar fix off
CalendarAux	29758	Calendar aux

Device, Type No: 8

Object name	Object instance	Object description
POL908_FF2C8D *	1693899 *	POL908_FF2C8D-Climatix *
Device Model		Application name
Version		Application version
Object Description		Application info 4*
Location		Application info 5*

* Depending on setting.

Multistate Value, Type No: 19

Object name	Object instance	Object description	State texts
TimeSchedSt	12316	Actual TSP (variant steps)	– Off – Stage1 – Stage2 – Stage3
TimeSchedStTmp	596	Actual TSP (variant steps/temp)	– Off – Eco St1 – Comf St1 – Eco St2 – Comf St2 – Eco St3 – Comf St3
OpModeTspCopyUnitPls *	33544	Copy schedule	– MondayTo – Tu-Fr
ExtControlStep	28852	External control fan step	– Auto – Off – Stage1 – Stage2 – Stage3
ExtControlActMode	30799	Act operation mode external control	– Auto – Off – Stage1 – Stage2 – Stage3
OpModeAutoManStSwtch	31604	Manual operation (variant steps)	– Auto – Off – Stage1 – Stage2 – Stage3
OpModeAutoManStTmpSwtch	60288	Manual operation (variant steps/temp)	– Auto – Off – Eco St1 – Comf St1 – Eco St2 – Comf St2 – Eco St3 – Comf St3
OpModeBmsTimeStSwtch	8442	BMS control/overide time switch program (variant steps)	– Auto – Off – Stage1 – Stage2 – Stage3
OpModeBmsTimeStTmpSwtch	32040	BMS control/overide time switch program (variant steps/temp)	– Auto – Off – Eco St1 – Comf St1 – Eco St2 – Comf St2 – Eco St3 – Comf St3
ActOpMode	6080	Actual operating mode (State is depending on configuration)	– Off – On – Off – Comfort – Economy

Multistate Value, Type No: 19, *cont.*

Object name	Object instance	Object description	State texts
ActOpSta	32321	Actual operating state (Reason for actual operation mode)	– Not used – Configuration – Fire – Alarm class 0 – Emegency – Alarm class 1 – Firedamper – Manual cont – External cont – Room unit – Osstp – Unoccupied – Free cooling – BMS control – TSP control – Nightkick – Calendar
FireDamperTestStrtHMIPls	64867	Fire damper test	– Passive – Active
FireDamperState	24347	Fire damper state	– NotDefined – Closed – Move – Opened
FireDamperOperation	9703	Fire damper mode	– NotDefined – OK – Test – Alarm
ActFanStep	28279	Actual fan step	– Off – Stage1 – Stage2 – Stage3
ActCtrlModeHum	25131	Actual control mode humidity	– Room – Supply
ActCtrlMode	28561	Actual control mode temp	– Room – Return – Supply
HeatingPreHtgactv	55722	Pre heating state	– Passive – Active
ExtraHtgPreHtgactv	24454	Pre heating 2 state	– Passive – Active
MECHactv	59996	Cooling recovery status	– Passive – Active
SplyEngUnit	54155	Supply fan eng. unit	– % – Pa – l/s – m3/h
ExhEngUnit	43819	Extract fan eng. unit	– % – Pa – l/s – m3/h
HumEngUnit	13725	Humidity eng. unit	– %rH – g/kg
SeqHumEngUnit	13725	Humidity sequence eng. unit	– %rH – g/kg
TimeSchedAux	52222	Auxiliary TSP output	– Off – On
AuxiliaryTspCopyAuxPls	44050	Copy schedule	– MondayTo – Tu-Fr
AuxiliaryBmsTimeAuxSwtch	48172	Auxiliary BMS TSP output	– Auto – Off – On
AckAlmPls *	131493	Alarm acknowledge puls Note! Acknowledge all alarms.	– – Execute

SuWiSwtchCheckState	24616	SummerWinter mode	– Winter – Summer
CommTestEn	1708	Enable communication test	– No – Yes
AlmCl0	46769	Danger alarm (A)	– Normal – Alarm
AlmCl1	42640	Critical alarm (A)	– Normal – Alarm
AlmCl2	38643	Low alarm (B)	– Normal – Alarm
AlmCl3	34514	Warning alarm (C)	– Normal – Alarm
CG_EM24_1ResetParPls	53050	Energy reset partial	– Passive – Active

* Use this object for alarm acknowledge.

For configuration readout only:

Object name	Object instance	Object description	State texts
CfgTSPFunction	30140	Time switch type	0=None 1=Step 2=Step+Temp
CfgTSPSteps	63139	Time switch number of steps	0=1 Steps 1=2 Steps 2=3 Step
CfgFanCrtMode	46124	Fan control mode, Type of fan control	0=Direct, 1=DirectVar., 2=Fix Speed, 3=Pressure, 4=Flow, 5=Sppl.Slave, 6=ExhSlave
CfgTmpCrlMode	56125	Temp control mode, Type of temperature control	0=Supply, 1=Room Cascade 2=Return Cascade 3=Room/Suppl. Change Summer/Winter 4=Return/Suppl. Change Summer/Winter 5=Room 6=Return 7=HOTC (not used)
CfgFanAlm	8558	Fan alarm, type	0=No, 1=Combined 2=Supply 3=Exhaust 4=Supply + Exhaust
CfgFanFdbk	28476	Fan Feedback alarm, type	0=No 1=Combined 2=Supply 3=Exhaust 4=Supply + Exhaust
CfgTmpSpvSel	23912	Temp. Set point Selector	0= Heating+Dz 1= Heating/Cooling 2= Set point + Half-Dz 3= Cooling - Dz
CfgOutTmpCmp	15114	Summer/Winter Comp. temp.	0=No 1=Yes

Notification classes for alarms, Type No: 15

Object name	Object instance	Object description
NC11	11	Alarm class Danger alarm (A) status
NC21	21	Alarm class Critical alarm (A) status
NC31	31	Alarm class Low alarm (B) status
NC41	41	Alarm class Warning alarm (C) status
NC61	61	Alarm class Trend notification

BACnet priority for each notification class

	Prio			Ack		
Object name	ToOff Normal	To Fault	To Normal	Off Normal	To Fault	To Normal
NC11	1	1	5	1	1	0
NC21	1	1	5	1	1	0
NC31	2	2	6	1	1	0
NC41	3	3	8	1	1	0
NC61	5	5	5	0	0	0

Trend Objects,Type No: 20

Object name	Object instance	Object description
TrendObj1	1	Trend object 01
TrendObj2	2	Trend object 02
TrendObj3	3	Trend object 03
TrendObj4	4	Trend object 04
TrendObj5	5	Trend object 05
TrendObj6	6	Trend object 06
TrendObj7	7	Trend object 07
TrendObj8	8	Trend object 08
TrendObj9	9	Trend object 09
TrendObj10	10	Trend object 10
TrendObj11	11	Trend object 11
TrendObj12	12	Trend object 12
TrendObj13	13	Trend object 13
TrendObj14	14	Trend object 14
TrendObj15	15	Trend object 15
TrendObj16	16	Trend object 16
TrendObj17	17	Trend object 17
TrendObj18	18	Trend object 18
TrendObj19	19	Trend object 19
TrendObj20	20	Trend object 20
TrendObj21	21	Trend object 21
TrendObj22	22	Trend object 22
TrendObj23	23	Trend object 23
TrendObj24	24	Trend object 24
TrendObj25	25	Trend object 25
TrendObj26	26	Trend object 26
TrendObj27	27	Trend object 27
TrendObj28	28	Trend object 28
TrendObj29	29	Trend object 29
TrendObj30	30	Trend object 30

Trend Log objects are always available but could have different values connected, this is normally project specific and could not be described here (check EDE file).

3.4 BACnet client

Introduction

Following objects can be used as BACnet client. This means that the objects either can receive (Read) or send (Write) data from/to other BACnet devices. The binding to the remote BACnet device is done by a connection name in the BACNET.CSV file that also must contain the uniqe IDs of the remote device, object and property. Inputs needs to be set up to recieive values from communication (Value selector).

Analog Input, Connections

Connection name	Read/Send	Object description	LOL	HIL	Dim.
AirQualityR	Read	Air quality	0	3000	ppm
AuxTmpR	Read	Auxiliary temp	-64.0	99.0	°C
ExtSetpointSpvR	Read	External setpoint	-64.0	64.0	°C
OutHumR	Read	Outside air humidity relative	0.0	100.0	%rH
OutTmpR	Read	Outside air temp	-64.0	99.0	°C
RoomHumR	Read	Room humidity relative	0.0	100.0	%rH
RoomTmpR	Read	Room temperature	-64.0	99.0	°C
RoomTmp2R	Read	Room temperature 2	-64.0	99.0	°C

Binary Input, Connections

Connection name	Read/ Send	Object description	State texts
AuxAlmR	Read	Auxiliary alarm	Passive, Active
AuxInpR	Read	Auxiliary input	Off, On
EmergencyStopR	Read	Emergency stop	Off, On
ExtCtrl1R	Read	External control input 1	Off, On
ExtCtrl2R	Read	External control input 2	Off, On
FireAlmR	Read	Fire alarm	OK, Alarm
SuWiSwtchR	Read	Summer/Winter input	Winter, Summer

Analog Output, Connections

Connection name	Read/ Send	Object description	LOL	HIL	Dim.
AuxOutputW	Send	Auxiliary output (fan)	0	100	%

Binary Output, Connections

Connection name	Read/ Send	Object description	State texts
AlmOutHighW	Send	Alarm output 1	Normal, Alarm, Auto
AlmOutLowW	Send	Alarm output 2	Normal, Alarm, Auto
AuxOpModeIndW	Send	Auxiliary operation mode output	Off, On, Auto
AuxTspOutputW	Send	Auxiliary scheduler output	Off, On, Auto

Index

Siemens Switzerland Ltd
Building Technologies Division
International Headquarters
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 58-724 24 24
www.siemens.com/buildingtechnologies