

BACnet PICS

(Protocol Implementation Conformance Statement)

DTW/009 • V1.1 • 09/2021



www.wit.fr

Summary

1	Definition	3
2	General Information	3
3	Product Description	3
4	List all BACnet Interoperability Building Blocks Supported (Annex K)	4
5	Segmentation Capability	4
6	Standard Object Types Supported	5
6.1	Device	5
6.2	Binary Input	6
6.3	Binary Output	6
6.4	Binary Value	6
6.5	Analog Input	7
6.6	Analog Output	7
6.7	Analog Value	7
6.8	Accumulator	8
6.9	Pulse-Converter	8
6.10	Schedule	8
7	Data Link Layer Options	9
8	Device Address Binding	9
9	Networking Options	9
10	Character Sets Supported	9

1 Definition

A PICS is a written document, created by the manufacturer of a device, that identifies the particular options specified by BACnet that are implemented in the device. A BACnet PICS is considered a public document that is available for use by any interested party. As a minimum, a BACnet PICS shall convey the following information.

2 General Information

Date:	21/09/2021
Vendor Name:	WIT S.A.
Product Name:	REDY
Product Model Number:	CPU Type MONITOR and PROCESS
Application Software Version:	12.3.2
Firmware Revision:	ALL
BACnet Protocol Revision:	Version 1, Revision 19 (ANSI/ASHRAE 135-2016)

3 Product Description

Created in 2017 and also called "Central Unit Plug", the REDY PLC performs certain tasks related to the building management system (calculations, control of HVAC equipment and other actuators, transmission of alarms, backups, data restitution, ...).

Depending on the model, the REDY integrates some physical layers like RS232, RS485, Ethernet, Wi-Fi, USB and others. The Redy works on a socket in order to exchange with other plugs (I/O plug, RS232 plug, ...) and is supplied by the Power Plug (230 Vac, 24 Vac/dc and 12 Vdc).

**The supported data link layer options are BACnet over MS/TP and BACnet over IPv4.
The REDY acting either as a BACnet-Client or as a BACnet-Server.**

BACnet Standardized Device Profile (Annex L):

<input type="checkbox"/>	BACnet Building Controller	B-BC
<input type="checkbox"/>	BACnet Advanced Application Controller	B-AAC
<input checked="" type="checkbox"/>	BACnet Application Specific Controller	B-ASC
<input type="checkbox"/>	BACnet Smart Actuator	B-SA
<input type="checkbox"/>	BACnet Smart Sensor	B-SS

4 List all BACnet Interoperability Building Blocks Supported (Annex K)

BACnet Interoperability Building Blocks (BIBBs) are collections of one or more BACnet services. These are prescribed in terms of an "A" and a "B" device. In most cases, the "A" device will act as the user of data (client), and the "B" device will be the provider of this data (server).

The REDY supports the followings BIBBs:

Data Sharing

<input checked="" type="checkbox"/>	Data Sharing-ReadProperty-A	DS-RP-A
<input checked="" type="checkbox"/>	Data Sharing-ReadProperty-B	DS-RP-B
<input checked="" type="checkbox"/>	Data Sharing-ReadPropertyMultiple-A	DS-RPM-A
<input checked="" type="checkbox"/>	Data Sharing-ReadPropertyMultiple-B	DS-RPM-B
<input checked="" type="checkbox"/>	Data Sharing-WriteProperty-A	DS-WP-A
<input checked="" type="checkbox"/>	Data Sharing-WriteProperty-B	DS-WP-B
<input checked="" type="checkbox"/>	Data Sharing-WritePropertyMultiple-B	DS-WPM-B
<input checked="" type="checkbox"/>	Data Sharing-Change Of Value-B	DS-COV-B
<input checked="" type="checkbox"/>	Data Sharing-Change Of Value Unsubscribed-B	DS-COVU-B

Scheduling

<input checked="" type="checkbox"/>	*Scheduling-Internal-B	SCHED-I-B
<input checked="" type="checkbox"/>	Scheduling-External-B	SCHED-E-B

**missing calendar object*

Device Management

<input checked="" type="checkbox"/>	Device Management-Dynamic Device Binding-A	DM-DDB-A
<input checked="" type="checkbox"/>	Device Management-Dynamic Device Binding-B	DM-DDB-B
<input checked="" type="checkbox"/>	Device Management-Dynamic Object Binding-A	DM-DOB-A
<input checked="" type="checkbox"/>	Device Management-Dynamic Object Binding-B	DM-DOB-B
<input checked="" type="checkbox"/>	Device Management-DeviceCommunicationControl-A	DM-DCC-A
<input checked="" type="checkbox"/>	Device Management-DeviceCommunicationControl-B	DM-DCC-B

5 Segmentation Capability

- Segmented requests supported
- Segmented responses supported

6 Standard Object Types Supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Device	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binary Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binary Output	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Binary Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analog Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analog Output	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analog Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multi-state Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multi-state Output	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multi-state Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulse Converter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accumulator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.1 Device

Object	Supported	Readable/Writable
Object_Identifier	<input checked="" type="checkbox"/>	R
Object_Name	<input checked="" type="checkbox"/>	R
Object_Type	<input checked="" type="checkbox"/>	R
System_Status	<input checked="" type="checkbox"/>	R
Vendor_Name	<input checked="" type="checkbox"/>	R
Vendor_Identifier	<input checked="" type="checkbox"/>	R
Model_Name	<input checked="" type="checkbox"/>	R
Firmware_Revision	<input checked="" type="checkbox"/>	R
Application_Software_Version	<input checked="" type="checkbox"/>	R
Description	<input checked="" type="checkbox"/>	R
Protocol_Version	<input checked="" type="checkbox"/>	R
Protocol_Revision	<input checked="" type="checkbox"/>	R
Protocol_Services_Supported	<input checked="" type="checkbox"/>	R
Max_APDU_Length_Accepted	<input checked="" type="checkbox"/>	R
Segmentation_Supported	<input checked="" type="checkbox"/>	R
APDU_Timeout	<input checked="" type="checkbox"/>	R
Number_Of_APDU_Retries	<input checked="" type="checkbox"/>	R

6.2 Binary Input

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Inactive Text	<input checked="" type="checkbox"/>	R/W
Active Text	<input checked="" type="checkbox"/>	R/W
Polarity	<input checked="" type="checkbox"/>	R/W

6.3 Binary Output

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Inactive Text	<input checked="" type="checkbox"/>	R/W
Active Text	<input checked="" type="checkbox"/>	R/W
PriorityArray	<input checked="" type="checkbox"/>	R/W
RelinquishDef	<input checked="" type="checkbox"/>	R/W
Polarity	<input checked="" type="checkbox"/>	R/W

6.4 Binary Value

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Inactive Text	<input checked="" type="checkbox"/>	R/W
Active Text	<input checked="" type="checkbox"/>	R/W
PriorityArray	<input checked="" type="checkbox"/>	R/W
RelinquishDef	<input checked="" type="checkbox"/>	R/W

6.5 Analog Input

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Unit	<input checked="" type="checkbox"/>	R/W
CovInc	<input checked="" type="checkbox"/>	R/W

6.6 Analog Output

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Unit	<input checked="" type="checkbox"/>	R/W
PriorityArray	<input checked="" type="checkbox"/>	R/W
RelinquishDef	<input checked="" type="checkbox"/>	R/W

6.7 Analog Value

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Unit	<input checked="" type="checkbox"/>	R/W
PriorityArray	<input checked="" type="checkbox"/>	R/W
RelinquishDef	<input checked="" type="checkbox"/>	R/W

6.8 Accumulator

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
ScaleIsReal	<input checked="" type="checkbox"/>	R
Scale	<input checked="" type="checkbox"/>	R
Unit	<input checked="" type="checkbox"/>	R/W

6.9 Pulse-Converter

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
StatusFlags	<input checked="" type="checkbox"/>	R
EventState	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
Unit	<input checked="" type="checkbox"/>	R/W
ScaleFactor	<input checked="" type="checkbox"/>	R
AdjustValue	<input checked="" type="checkbox"/>	R
Count	<input checked="" type="checkbox"/>	R

6.10 Schedule

Object	Supported	Readable/Writable
ObjectId	<input checked="" type="checkbox"/>	R
ObjectType	<input checked="" type="checkbox"/>	R
ObjectName	<input checked="" type="checkbox"/>	R
ObjectDesc	<input checked="" type="checkbox"/>	R/W
PresentValue	<input checked="" type="checkbox"/>	R/W
EffectivePeriod	<input checked="" type="checkbox"/>	R/W
Weekly	<input checked="" type="checkbox"/>	R/W
ExeptSchedule	<input checked="" type="checkbox"/>	R/W
ScheduleDefault	<input checked="" type="checkbox"/>	R/W
ObjetPropertyRef	<input checked="" type="checkbox"/>	R/W
PriorityWriting	<input checked="" type="checkbox"/>	R/W
StatusFlag	<input checked="" type="checkbox"/>	R
Reliability	<input checked="" type="checkbox"/>	R
OutOfService	<input checked="" type="checkbox"/>	R/W

7 Data Link Layer Options

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8)
- MS/TP master (Clause 9), baud rate(s): 9600/19200/38400/57600/115200bauds
- MS/TP slave (Clause 9)
- Point-To-Point, EIA 232 (Clause 10)
- Point-To-Point, modem, (Clause 10)
- LonTalk, (Clause 11)

8 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

9 Networking Options

- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices? Yes No

10 Character Sets Supported

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

- UTF-8 (or ANSI X3.4)
- IBM™/Microsoft™ DBCS
- ISO 8859-1
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)
- JIS C 6226