

BACnet RIB®

July 7, 2017

Protocol Implementation Conformance Statement

Vendor Name: **Functional Devices, Inc.**
Product Name: **BACnet RIB with USB**
Product Model Number: **PSH600-UPS-BC**
Applications Software Version: **v1.5**
Firmware Revision: **v2.04**
BACnet Protocol Revision: **12**

1. Product Description

The BACnet RIB provides a software-implemented network interface between BACnet client devices and RIB control and monitoring points.

2. BACnet Standardized Device Profile (Annex L)

The BACdoor OEM Client-Server supports the B-ASC profile.

3. BACnet Interoperability Building Blocks Supported (Annex K)

DS-RP-B, DS-RPM-B, DS-WP-B, DS-WPM-B, DM-DDB-B, DM-DOB-B, DM-DCC-B, DB-RD-B

4. Segmentation Capability

Segmentation is not supported.

5. Standard Object Types (See Specification for product to see which are supported on the product)

No dynamic Creation or Deletion supported
No proprietary object types supported

Standard Object Types Supported:

- **Analog Input**
- **Binary Input**
- **Device**

Optional Properties Supported:

- **Analog Input**
 - Description
 - Reliability
 - Min-Pres-Value
 - Max-Pres-Value
 - Device-Type

- **Binary Input**
Description
Reliability
Inactive-Text
Active-Text
- **Device**
Description
Max-Master
Max-Info-Frames

Writable Properties:

- **Analog Input**
Object-Name (4 characters max)
- **Binary Input**
Object-Name (4 characters max)
Inactive-Text (19 characters max)
Active-Text (19 characters max)
Polarity
- **Device**
Object-Identifier
Object-Name (32 Characters Max)
Description (64 characters max)
APDU-Timeout
Number-Of-APDU-Retries
Max-Master

Object Details

DEx	Object_Identifier	default to DE277000	W
	Object_Name	Up to 32 characters	W
	Object_Type	DEVICE	R
	System_Status	OPERATIONAL or NON_OPERATIONAL	R
	Vendor_Name	"Functional Devices, Inc"	R
	Vendor_Identifier	277	R
	Model_Name	"PSH600-UPS-BC" (or similar)	R
	Firmware_Revision	"2.04" (or similar)	R
	Application_Software_Version	"1.5" (or similar)	R
	Description	Up to 64 characters	W
	Protocol_Version	1	R
	Protocol_Revision	12	R
	Protocol_Services_Supported	{readProperty,writeProperty,deviceCommunicationControl, who-Has,who-Is, reinitDevice }	R
	Protocol_Object_Types_Supported	{ AnalogInput, BinaryInput, Device, }	R
	Object_List	DEx, BI1, BI2, AI1, AI2, AI3, AI4	R
	Max_APDU_Length_Accepted	480	R

	Segmentation_Supported	NONE	R
	APDU_Timeout	3000 default	W
	Number_Of_APDU_Retries	1 default	W
	Max_Master	127 default	W
	Max_Info_Frames	Always 1	R
	Device_Address_Binding	always empty	R
	Database_Revision	1	R

BI1	Object_Identifier	BI1	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	"Line" Up to 19 characters	W
	Active_Text	"UPS" Up to 19 characters	W

BI2	Object_Identifier	BI2	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	"Not Connected" Up to 19 characters	W
	Active_Text	"Connected" Up to 19 characters	W

AI1	Object_Identifier	AI1	R
	Object_Name	Up to 4 characters	W
	Object_Type	Analog_Input	R
	Present_Value	floating point	R
	Device_Type	"UPS Percent Load"	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Units	Percent (98)	R
	Min_Pres_Value	REAL - 0	R
	Max_Pres_Value	REAL - 100	R

AI2	Object_Identifier	AI2	R
	Object_Name	Up to 4 characters	W
	Object_Type	Analog_Input	R
	Present_Value	floating point	R
	Device_Type	"VA Load"	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Units	VA (8)	R
	Min_Pres_Value	REAL - 0	R
	Max_Pres_Value	REAL - 600	R

AI3	Object_Identifier	AI3	R
	Object_Name	Up to 4 characters	W
	Object_Type	Analog_Input	R
	Present_Value	floating point	R
	Device_Type	"UPS Batt Capacity"	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Units	Percent (98)	R
	Min_Pres_Value	REAL - 0	R
	Max_Pres_Value	REAL - 100	R

AI4	Object_Identifier	AI4	R
	Object_Name	Up to 4 characters	W
	Object_Type	Analog_Input	R
	Present_Value	floating point	R
	Device_Type	"Time Remaining"	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Units	Minutes (72)	R
	Min_Pres_Value	REAL - 0	R
	Max_Pres_Value	REAL - 65531	R

6. Data Link Layer Options

- BACnet/IP, (Annex J)
- 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), configurable baud rate to 156K
- MS/TP master (Clause 9): 9600, 19200, 38400, 76800, 57600, 115200 baud
- PTP (Clause 10)

7. Device Address Binding

Static binding is not supported.

8. Networking Options

The RIB is not a router.

Annex H, BACnet Tunneling Router over IP is not supported

BACnet/IP Broadcast Management Device (BBMD) is not supported

9. Character Sets Supported

- ISO 10646(UTF-8) IBM/Microsoft DBCS JIS C 6226 ISO 10646 (UCS4) ISO 10646 (UCS2)
- ISO 8859-1

10. Network Security Options

The RIB is a non-secure device