

BACnet RIB®

April, 9 2020

Protocol Implementation Conformance Statement

Vendor Name: **Functional Devices, Inc.**
Product Name: **BACnet RIB®**
Product Model Number: **RIBPM413-BC**
Applications Software Version: **3.1700**
Firmware Revision: **3.0a-1.0300**
BACnet Protocol Revision: **14**

1. Product Description

The BACnet RIB provides a software-implemented network interface between BACnet client devices and RIB control and monitoring points. This device is a 3-Phase, 4-Quadrant, revenue grade sub-meter.

2. BACnet Standardized Device Profile (Annex L)

BACnet Application Specific Controller (B-ASC)

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, DM-RD-B, DM-TS-B, DM-UTC-B

4. Segmentation Capability

Able to transmit and receive segmented messages

Window Size: 3

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**
- **Analog Value**
- **Binary Value**
- **DateTime Value**
- **Device**

Object Details

	Property Identifier	Property Datatype, description, etc.	Property Writable/Readable	Optional Property
DE	Object Identifier	DE277050	W, R	
	Object Name	RIB: <i>Serial Number</i>	R	
	Object Type	DEVICE	R	
	System Status	OPERATIONAL or NON_OPERATIONAL	R	
	Vendor Name	Functional Devices, Inc	R	
	Vendor Identifier	277	R	
	Model Name	RIBPM413-BC	R	
	Firmware Revision	3.0a-1.0300	R	
	Application Software Version	3.1700 (or similar)	R	
	Description	The RIB is a 3-Phase, 4-Quadrant revenue grade sub-meter (63 characters max)	W, R	✓
	Protocol Version	1	R	
	Protocol Revision	14	R	
	Protocol_Services_Supported	{readProperty, readPropertyMultiple, writeProperty, writePropertyMultiple, deviceCommunicationControl, reinitializeDevice, timeSynchronization, who-Has,who-Is, utcTimeSynchronization }	R	
	Protocol_Object_Types_Supported	{ AnalogInput, AnalogValue, BinaryValue, DateTime Value, Device }	R	
	Object List	<i>See Bulletin 2646</i>	R	
	Max APDU Length Accepted	300	R	
	Segmentation Supported	Segmented - Both	R	
	Max Segments Accepted	8	R	✓
	Local Time	12:00 AM default	R	✓
	Local Date	January 1, 1970 default	R	✓
	UTC Offset	0 default (-840 – 720)	W, R	✓
	Daylight Savings Status	0 default (1 = True, 0 = False)	W, R	✓
	APDU Segment Timeout	5000 default (0 – 65535)	W, R	✓
	APDU Timeout	10000 default (0 – 65535)	W, R	
	Number Of APDU Retries	3 default (0 – 10)	W, R	
	Max Master	127 default (1 – 127)	W, R	✓
	Max Info Frames	1	R	✓
	Device Address Binding	Empty default	R	
	Database Revision	1	R	
	Property List	List of supported properties	R	

AI	Object Identifier	AI-xxxx (<i>See Bulletin 2646</i>)	R	
	Object Name	<i>See Bulletin 2646</i>	R	
	Object Type	Analog Input	R	
	Present Value	floating point	R	
	Description	<i>See Bulletin 2646</i>	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	<i>See Bulletin 2646</i>	R	
	Property List	List of supported properties	R	

AV	Object_Identifier	AV-xxxx <i>See Bulletin 2646</i>	R	
	Object_Name	<i>See Bulletin 2646</i>	R	
	Object_Type	Analog_Value	R	
	Present_Value	REAL	W, R	
	Description	<i>See Bulletin 2646</i>	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	<i>See Bulletin 2646</i>	R	
	Property_List	List of supported properties	R	

BV	Object_Identifier	BV-xxxx (<i>See Bulletin 2646</i>)	R	
	Object_Name	<i>See Bulletin 2646</i>	R	
	Object_Type	Binary_Value	R	
	Present_Value	floating point	W, R	
	Description	<i>See Bulletin 2646</i>	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	
	Property_List	List of supported properties	R	

DT	Object_Identifier	DT-7029	R	
	Object_Name	DmdP_TotTime	R	
	Object_Type	DateTime_Value	R	
	Present_Value	YYYY-MM-DD DOTW HH:MM:SS.SS	R	
	Description	DmdP_TotTime	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	✓
	Is_UTC	TRUE	R	✓
	Property_List	List of supported properties	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, 115200 baud
- PTP (Clause 10)

7. Device Address Binding

Static binding is supported for two-way communication with MS/TP slaves and certain other devices.

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