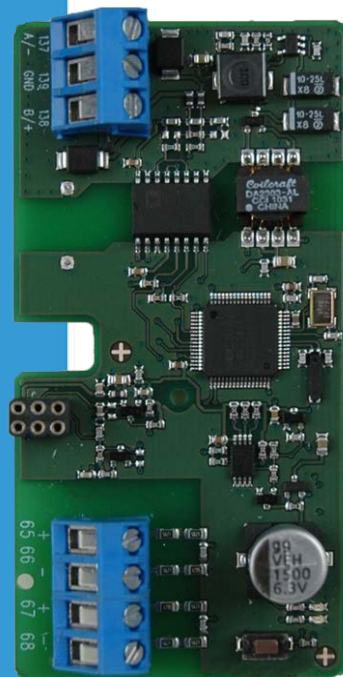


BACnet Protocol Implementation
Conformance Statement (PICS)

MULTICAL®
62/601/602/6L2/6M2/801



BACnet Protocol Implementation Conformance Statement (PICS)

Contents

Product Description	3
BACnet Standardized Device Profile (Annex L).....	3
List all BACnet Interoperability Building Blocks Supported (Annex K)	3
Segmentation Capability	4
Detailed Object information	5
Analog-input Object.....	6
Data Link Layer Options	6
Device Address Binding.....	6
Networking Options	6
Network Security Options	7
Character Sets Supported	7

BACnet Protocol Implementation Conformance Statement (PICS)

Date: 10.12.2014

Vendor Name: Kamstrup A/S

Vendor ID: 546

Product Name: MULTICAL BACnet

Product Model Number: 670066

Application Software Version: 1.0

Firmware Revision: F2

BACnet Protocol Revision: 9

Product Description

The BACnet base module for MULTICAL® heat cooling and water meters communicates with BACnet on MS/TP via RS-485 as master or slave.

The module is supported by following products: MULTICAL® 62/601/602/6L2/6M2/801.

BACnet Standardized Device Profile (Annex L)

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- 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)

List all BACnet Interoperability Building Blocks Supported (Annex K)

BIBB	Name	BACnet Service	Init	Exec
Data Sharing				
DS-RP-B	Data Sharing - Read Property-B	ReadProperty		X
DS-RPM-B	Data Sharing - Read Property Multiple-B	ReadPropertyMultiple		X
DS-WP-B	Data Sharing - Write Property-B	WriteProperty		X
DS-WPM-B	Data Sharing - Write Property Multiple-B	WritePropertyMultiple		X
Device Management				
DM-DDB-B	Device Management - Dynamic Device Binding-B	Who-Is		X
		I-Am	X	
DM-DOB-B	Device Management - Dynamic Object Binding-B	Who-Has		X
		I-Have	X	
DM-DCC-B	Device Management - Device Communication Control-B	DeviceCommunicationControl		X
DM-TS-B	Device Management - Time Synchronization-B	TimeSynchronization		X
DM-UTC-B	Device Management - UTC Time Synchronization-B	UTCTimeSynchronization		X
DM-RD-B	Device Management - Reinitialize Device-B	ReinitializeDevice		X

BACnet Protocol Implementation Conformance Statement (PICS)

Segmentation Capability

Able to transmit segmented messages Window Size _____

Able to receive segmented messages Window Size _____

Description	ID	Name	Used units	Read/Write
Device	Last 5 digits of meter number	MULTICAL BACnet	Dimensionless	Read
Analog Input	AI-0	Meter serial number	Dimensionless	Read
Analog Input	AI-1	Accumulated heat energy (E1)	kWh, MWh	Read
Analog Input	AI-2	Accumulated cooling energy (E3)	kWh, MWh	Read
Analog Input	AI-3	Accumulated volume (V1)	l, m ³	Read
Analog Input	AI-4	Actual flow	l/h, m ³ /h	Read
Analog Input	AI-5	Actual power	W, kW, MW	Read
Analog Input	AI-6	Pulse input A accumulated	l, m ³ , kWh, MWh	Read
Analog Input	AI-7	Pulse input B accumulated	l, m ³ , kWh, MWh	Read
Analog Input	AI-8	Info code	Dimensionless	Read
Analog Input	AI-9	Differential temperature	K	Read
Analog Input	AI-10	Flow temperature	°C	Read
Analog Input	AI-11	Return temperature	°C	Read

BACnet Protocol Implementation Conformance Statement (PICS)

Analog-input Object

Property Identifier	Property Datatype	Conformance Code	Value
Object_Identifier	BACnetObjectIdentifier	R	(analog-input, 0-11)
Object_Name	CharacterString	R	See standard object table above
Object_Type	BACnetObjectType	R	analog-input
Present_Value	REAL	R (W)	-
Status_Flags	BACnetStatusFlags	R	{ IN_ALARM, FAULT, OVERRIDDEN, OUT_OF_SERVICE }
Event_State	BACnetEventState	R	NORMAL
Out_Of_Service	BOOLEAN	W	TRUE or FALSE
Unit	BACnetEngineeringUnits	R	See standard object table above

Data Link Layer Options

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) _____
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800
- MS/TP slave (Clause 9), baud rate(s): 9600, 19200, 38400, 76800
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
- Point-To-Point, modem, (Clause 10), baud rate(s): _____
- LonTalk, (Clause 11), medium: _____
- BACnet/ZigBee (ANNEX O)
- Other: _____

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

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

Does the BBMD support network address translation? Yes No

BACnet Protocol Implementation Conformance Statement (PICS)

Network Security Options

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys:
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)

Character Sets Supported

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

- ISO 10646 (UTF-8)
- IBM™/Microsoft™ DBCS
- ISO 8859-1
- ANSI X3.4
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)
- JIS X 0208

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports: N/A