

ANNEX A - PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (NORMATIVE)

(This annex is part of this standard and is required for its use.)

BACnet Protocol Implementation Conformance Statement**Date:** January 21, 2026**Vendor Name:** Armstrong Monitoring Corporation**Product Name:** AMC UTx-REF Series Gas Sensor/Transmitter**Product Model Number:** AMC-UTx-REF-B-SM-R-SM-R;

SM = Sensor Refrigerant Code: N, R123, R1234ZE, R134A, R22, R32, R410A, R454B, R513A

Note N = Not Populated

R = Sensor Range: P, F

Where P = ppm and F = %LFL

Note this only applies if the SM code is populated. Otherwise, this field is blank.

Variants in production

- | | |
|---------------------------------|---|
| • AMC-UTx-REF-B-R123-P-N | UTx REF, BACnet, 1 Sensor Module, R123 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R1234ZE-P-N | UTx REF, BACnet, 1 Sensor Module, R1234ZE 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R134A-P-N | UTx REF, BACnet, 1 Sensor Module, R134A 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R22-P-N | UTx REF, BACnet, 1 Sensor Module, R22 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R32-F-N | UTx REF, BACnet, 1 Sensor Module, R32 0-100% LFL, Relay |
| • AMC-UTx-REF-B-R32-P-N | UTx REF, BACnet, 1 Sensor Module, R32 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R32-P-R32-F | UTx REF, BACnet, 2 Sensor Modules, R32 0-2000ppm, R32 0-100% LFL, Relay |
| • AMC-UTx-REF-B-R410A-P-N | UTx REF, BACnet, 1 Sensor Module, R410A 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R454B-F-N | UTx REF, BACnet, 1 Sensor Module, R454B 0-100% LFL, Relay |
| • AMC-UTx-REF-B-R454B-P-N | UTx REF, BACnet, 1 Sensor Module, R454B 0-2000ppm, Relay |
| • AMC-UTx-REF-B-R454B-P-R454B-F | UTx REF, BACnet, 2 Sensor Modules, R454B 0-2000ppm, R454B 0-100% LFL, Relay |
| • AMC-UTx-REF-B-R513A-P-N | UTx REF, BACnet, 1 Sensor Module, R513A 0-2000ppm, Relay |

Application Software Version: 5.18 **Firmware Revision:** 5.18 **BACnet Protocol Revision:** 23**Product Description:**

The AMC UTx-REF-B BACnet gas transmitter is a configurable transmitter and controller designed for refrigerant gas detection. The AMC UTx-REF-B BACnet gas transmitter can be used in stand alone or networked applications where a BACnet network is available.

BACnet Standardized Device Profiles Supported (Annex L):

- ☐ BACnet Cross-Domain Advanced Operator Workstation (B-XAWS)
- ☐ BACnet Advanced Operator Workstation (B-AWS)
- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Operator Display (B-OD)
- ☐ BACnet Advanced Lighting Workstations (B-ALWS)
- ☐ BACnet Lighting Operator Display (B-LOD)
- ☐ BACnet Advanced Life Safety Workstation (B-ALSWS)
- ☐ BACnet Life Safety Workstation (B-LSWS)

- ☐ BACnet Life Safety Annunciator Panel (B-LSAP)
- ☐ BACnet Advanced Access Control Workstation (B-AACWS)
- ☐ BACnet Access Control Workstation (B-ACWS)
- ☐ BACnet Access Control Security Display (B-ACSD)
- ☐ BACnet Advanced Elevator Workstation (B-AEWS)
- ☐ BACnet Elevator Workstation (B-EWS)
- ☐ BACnet Elevator Display (B-ED)
- ☐ BACnet Advanced Lighting Control Station (B-ALCS)
- ☐ BACnet Lighting Control Station (B-LCS)
- ☐ BACnet Building Controller (B-BC)
- ☐ BACnet Advanced Application Controller (B-AAC)
- ☒ BACnet Application Specific Controller (B-ASC)
- ☐ BACnet Smart Actuator (B-SA)
- ☐ BACnet Smart Sensor (B-SS)
- ☐ BACnet Lighting Supervisor (B-LS)
- ☐ BACnet Lighting Device (B-LD)
- ☐ BACnet Advanced Life Safety Controller (B-ALSC)
- ☐ BACnet Life Safety Controller (B-LSC)
- ☐ BACnet Advanced Access Control Controller (B-AACC)
- ☐ BACnet Access Control Controller (B-ACC)
- ☐ BACnet Advanced Elevator Controller (B-AEC)
- ☐ BACnet Elevator Controller (B-EC)
- ☐ BACnet Elevator Monitor (B-EM)
- ☐ BACnet Router (B-RTR)
- ☐ BACnet Gateway (B-GW)
- ☐ BACnet Broadcast Management Device (B-BBMD)
- ☐ BACnet Access Control Door Controller (B-ACDC)
- ☐ BACnet Access Control Credential Reader (B-ACCR)
- ☐ BACnet Secure Connect Hub (B-SCHUB)

☐ BACnet General (B-GENERAL)

BACnet Interoperability Building Blocks Supported (Annex K): _____

Data Sharing-ReadProperty-B (DS-RP-B) _____

Data Sharing-ReadPropertyMultiple-B (DS-RPM-B) _____

Data Sharing-WriteProperty-B (DS-WP-B) _____

Data Sharing-Change Of Value-B (DS-COV-B) _____

Device Management-Dynamic Device Binding-B (DM-DDB-B) _____

Device Management-Dynamic Object Binding-B (DM-DOB) _____

Device Management-DeviceCommunicationControl-B (DM-DCC-B) _____

Device Management-ReinitializeDevice-B (DM-RD-B) _____

BACnet Service	Initiate	Execute
ReadProperty		x

ReadPropertyMultiple		X
WriteProperty		X
Who-Is		X
I-Am	X	
Who-Has		X
I-Have	X	
DeviceCommunicationControl		X
ConfirmedCOVNotification	X	
UnconfirmedCOVNotification	X	
SubscribeCOV		X
ReinitializeDevice		X

Segmentation Capability:

- ☐ Able to transmit segmented messages Window Size _____
- ☐ Able to receive segmented messages Window Size _____

Standard Object Types Supported:

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

- 1) Whether objects of this type are dynamically creatable using the CreateObject service
- 2) Whether objects of this type are dynamically deletable using the DeleteObject service
- 3) List of the optional properties supported
- 4) List of all properties that are writable where not otherwise required by this standard
- 5) List of all properties that are conditionally writable where not otherwise required by this standard
- 6) List of proprietary properties and for each its property identifier, datatype, and meaning
- 7) List of any property range restrictions

Note: None of the object types listed in this section is dynamically creatable or dynamically deletable.

Note: The BACnet conformance codes are as follows:

O - Optional (may be required under some conditions)

R - Required, but not required to be writable (may be required to be writable under some conditions)

W - Not only required, but also required to be writable

The following codes are used in this document to describe how the properties are implemented:

R/W - Read/write

R/O - Read-only

Device Object

Property	BACnet Code	Conformance	Implementation	Range of Value/Value
Object Identifier	R		R/W	
Object Name	R		R/W	Up to 31 characters
Object Type	R		R/O	device
System Status	R		R/O	operational
Vendor_Name	R		R/O	“Armstrong Monitoring Corp.”
Vendor Identifier	R		R/O	677
Model_Name	R		R/O	“AMC UT _x -REF-B Series Refrigerant Sensor/Transmitter”
Firmware Revision	R		R/O	
Application Software Version	R		R/O	

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Protocol Version	R	R/O	1
Protocol Revision	R	R/O	23
Protocol Services Supported	R	R/O	
Protocol Object Types Supported	R	R/O	
Object List	R	R/O	
Max APDU Length Accepted	R	R/O	480
Segmentation Supported	R	R/O	no segmentation
APDU Timeout	R	R/O	10000
Number Of APDU Retries	R	R/O	1
Device Address Binding	R	R/O	empty list
Database Revision	R	R/O	
Property List	R	R/O	
Max Master	O	R/W	[0, 127]
Max Info Frames	O	R/W	[1, 255]
Active COV Subscriptions	O	R/O	
Serial Number	O	R/O	
Description	O	R/O	

Network Port Object

Property	BACnet Conformance Code	Implementation	Range of Value/Value
Object Identifier	R	R/O	
Object Name	R	R/O	
Object Type	R	R/O	networkPort
Status Flag	R	R/O	
Reliability	R	R/O	
Out Of Service	R	R/O	False
Network Type	R	R/O	mstp
Protocol Level	R	R/O	BACNET_APPLICATION
Changes Pending	R	R/O	
Property List	R	R/O	
Network Number	O	R/O	0
Network Number Quality	O	R/O	unknown
APDU Length	O	R/O	480
Link Speed	O	R/W	
Link Speeds	O	R/O	
Max Master	O	R/W	[0, 127]
Max Info Frames	O	R/W	[1, 255]
MAC Address	O	R/W	[0, 127]

Analog Input Object

Property	BACnet Conformance Code	Implementation	Range of Value/Value
Object Identifier	R	R/O	
Object Name	R	R/O	
Object Type	R	R/O	analogInput
Present Value	R	R/W (W when OoS is true)	
Status Flag	R	R/O	
Event State	R	R/O	
Out Of Service	R	R/W	True/False
Units	R	R/O	
Property List	R	R/O	
COV Increment	O	R/W	
Reliability	O	R/O	
Device Type	O	R/O	

Description	O	R/O	
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Analog Output Object

Property	BACnet Code	Conformance	Implementation	Range of Value/Value
Object Identifier	R		R/O	
Object Name	R		R/O	
Object Type	R		R/O	analogOutput
Present Value	R		R/W	[0.0, 20.0]
Status Flag	R		R/O	
Event State	R		R/O	Normal
Out Of Service	R		R/W	True/False
Units	R		R/O	Volt or mA
Priority Array	R		R/O	
Relinquish Default	R		R/W	
Current Command Priority	R		R/O	
Property List	R		R/O	
Reliability	O		R/O	
Min Pre Value	O		R/O	0.0
Max Pre Value	O		R/O	20.0
Device Type	O		R/W	Up to 31 characters
Description	O		R/O	

Binary Value Object

Property	BACnet Code	Conformance	Implementation	Range of Value/Value
Object Identifier	R		R/O	
Object Name	R		R/O	
Object Type	R		R/O	binaryValue
Present Value	R		R/W	Active/Inactive
Status Flag	R		R/O	
Event State	R		R/O	Normal
Out Of Service	R		R/W	True/False
Property List	R		R/O	
Priority Array	O		R/O	
Relinquish Default	O		R/O	Inactive
Current Command Priority	O		R/O	
Reliability	O		R/O	
Inactive Text	O		R/O	"Alarm Off"
Active Text	O		R/O	"Alarm On"
Description	O		R/O	

Binary Output Object

Property	BACnet Code	Conformance	Implementation	Range of Value/Value
Object Identifier	R		R/O	
Object Name	R		R/O	
Object Type	R		R/O	binaryOutput
Present Value	R		R/W	Active/Inactive
Status Flag	R		R/O	
Event State	R		R/O	Normal
Out Of Service	R		R/W	True/False

Polarity	R	R/W	Normal/Reverse
Priority Array	R	R/O	
Relinquish Default	R	R/O	
Current Command Priority	R	R/O	
Property List	R	R/O	
Device Type	O	R/W	Up to 31 characters
Reliability	O	R/O	
Inactive Text	O	R/O	"Inactive"
Active Text	O	R/O	"Active"
Description	O	R/O	

Multistate Input Object

Property	BACnet Code	Conformance	Implementation	Range of Value/Value
Object Identifier	R		R/O	
Object Name	R		R/O	
Object Type	R		R/O	MultiStateInput
Present Value	R		R/W (W when OoS is true)	
Status Flag	R		R/O	
Event State	R		R/O	Normal
Out Of Service	R		R/W	True/False
Number Of States	R		R/O	
Property List	R		R/O	
State Text	O		R/O	
Device Type	O		R/O	
Reliability	O		R/O	
Description	O		R/O	

BACnet Data Link Layer Options:

- ☐ ARCNET (ATA 878.1), 2.5 Mb. (Clause 8)
☐ ARCNET (ATA 878.1), EIA-485 (Clause 8), baud rate(s) _____
☐ BACnet IP, (Annex J)
☐ BACnet IP, (Annex J), BACnet Broadcast Management Device (BBMD)
☐ BACnet IP, (Annex J), Network Address Translation (NAT Traversal)
☐ BACnet IPv6, (Annex U)
☐ BACnet IPv6, (Annex U), BACnet Broadcast Management Device (BBMD)
☐ BACnet/ZigBee (Annex O) _____
☐ Ethernet, ISO 8802-3 (Clause 7)
☐ LonTalk, ISO/IEC 14908.1 (Clause 11), medium: _____
☒ MS/TP master (Clause 9)
 - ☒ Master ☐ Slave
 - ☐ Non-isolated transceiver ☐ Isolated transceiver
 - ☐ Local 47K ohms bias resistors ☐ None ☒ Other: Local 120 Ohm resistor
 - Transceiver unit loading: ☐ 1 ☐ 1/2 ☐ 1/4 ☐ 1/8
 - Data rates: ☒ 9600 ☒ 19200 ☒ 38400 ☒ 57600 ☒ 76800 ☒ 115200
- ☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
☐ Point-To-Point, modem, (Clause 10), baud rate(s): _____
☐ BACnet Secure Connect (Annex AB)
 - ☐ BACnet Secure Connect Node
 - If direct connections are supported:

Maximum number of simultaneous direct connections initiated: _____

Maximum number of simultaneous direct connections accepted: _____

☐ BACnet Secure Connect Hub Function

Maximum number of simultaneous hub connections accepted: _____

☐ HTTPS Proxy Support

List the types of HTTPS proxies supported: _____

☐ Additional cipher suites supported beyond those required for TLS V1.3

The additional cipher suites supported using the cipher suite names as of the TLS Cipher Suite Registry at IANA (See RFC 8446):

☐ Additional Transport Layer Security versions other than V1.3 supported

The TLS versions other than V1.3 that are supported, including the supported cipher suites for the version beyond those required, using the cipher suite names as defined by the TLS version supported:

☐ Generates private keys internally, and provides matching certificate signing requests.

☐ DNS host name resolution supported (RFC 1123)

☐ mDNS host name resolution supported (RFC 6762)

☐ 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

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

☐ ISO 10646 (UCS-2)

☐ ISO 10646 (UCS-4)

☐ JIS X 0208

Gateway Options:

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

_____ N/A _____

If this product is a communication gateway which presents a network of virtual BACnet devices, a separate PICS shall be provided that describes the functionality of the virtual BACnet devices. That PICS shall describe a superset of the functionality of all types of virtual BACnet devices that can be presented by the gateway.

N/A