

# **BACnet Gateway for VRF System**

## **UTY-VBGX**

**Instruction Manual**

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**FUJITSU GENERAL LIMITED**

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Gateway for the integration of Fujitsu air conditioning systems in BACnet/IP enabled monitoring and control systems.

**Order Code:**

**UTY-VBGX**

Model supporting up to 128 indoor units.

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## 1 Description

### 1.1 Introduction

This document describes the integration of Fujitsu VRF air conditioning systems into BACnet compatible devices and systems using the BACnet Gateway for VRF System.

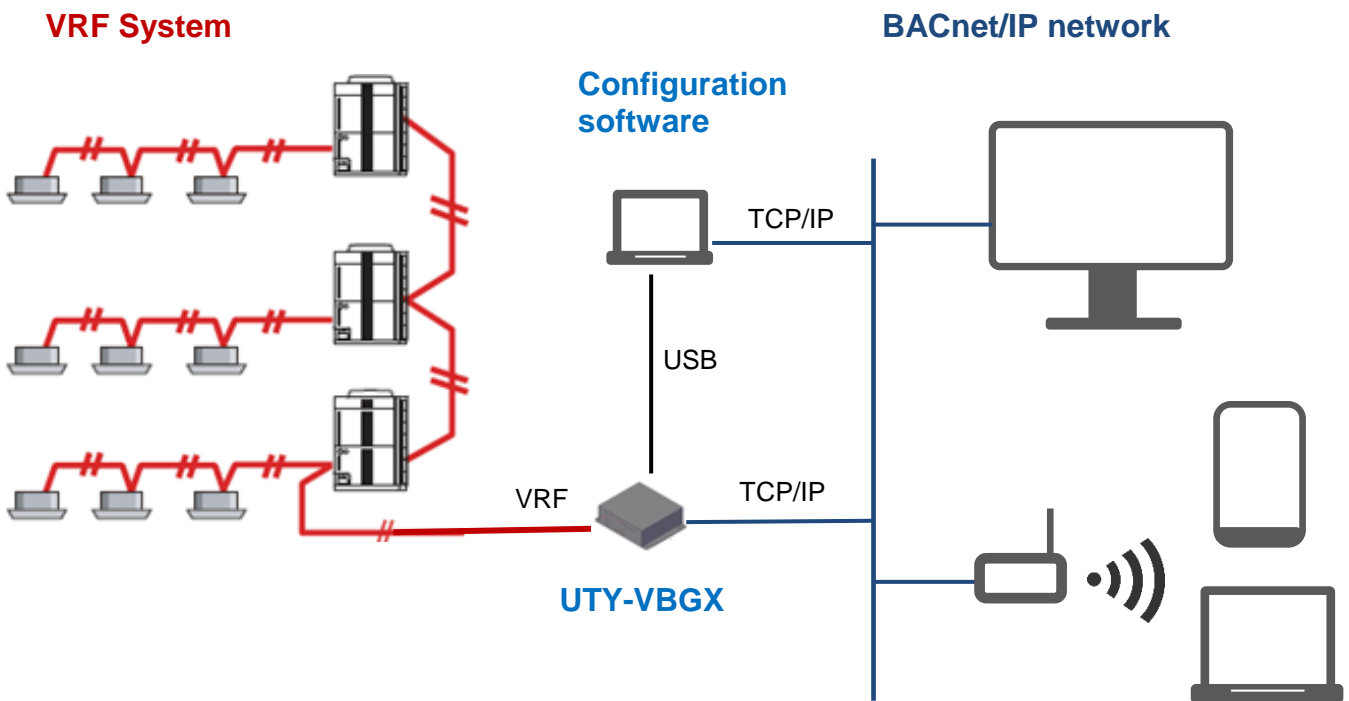
The aim of this integration is to monitor and control your Fujitsu VRF air conditioning system, remotely, from your Control Center using any commercial SCADA or monitoring software that includes a BACnet/IP driver. To do it so, the BACnet Gateway for VRF System allows BACnet/IP communication, acting as a server, allowing polling or subscription requests (COV).

The BACnet Gateway for VRF System makes available the Fujitsu air conditioning system indoor and outdoor units and its abstraction of Fujitsu air conditioning system properties and functionalities as fixed and independent BACnet Objects.

Simple configuration is needed: just select the appropriate communication parameters.

Up to 128 indoor units supported.

This document assumes that the user is familiar with BACnet and Fujitsu technologies and their technical terms.



## 1.2 Functionality

The gateway continuously polls (reads) the VRF network for all configured signals and keeps the updated status of all of them in its memory, ready to be served when requested from the BACnet side.

The role of the gateway consists in associate the elements of the FGL indoor and outdoor units with BACnet objects.

The control of the indoor and outdoor units through the FGL bus is permitted, so commands toward the FGL indoor and outdoor units are allowed.

Each indoor and outdoor unit is offered in a set of BACnet objects.

Element	Object supported
Gateway	<ul style="list-style-type: none"> <li>• Status</li> <li>• Command</li> <li>• Error</li> </ul>
Indoor Unit	<ul style="list-style-type: none"> <li>• Status</li> <li>• Command</li> <li>• Error</li> </ul>
Outdoor Unit	<ul style="list-style-type: none"> <li>• Status</li> <li>• Command</li> <li>• Error</li> </ul>

## 1.3 Capacity of UTY-VBGX

Element	Max.	Notes
Number of indoor units	128	Number of indoor units that can be controlled through UTY-VBGX
Number of outdoor units	128	Number of outdoor units that can be controlled through UTY-VBGX
Number of VRF systems	1	Number of independent VRF systems that can be controlled through UTY-VBGX
Number of Refrigerant systems	32	Number of refrigerant system that can be controlled through UTY-VBGX
Number of Objects	5000	Number of FGL control and status objects available into UTY-VBGX.

The number of *Indoor Units* and *Outdoor Units* may vary on each project. These parameters can be configured through Configuration Tool (See section 0).

## 2 Protocol Implementation Conformance Statement

### BACnet Protocol Implementation Conformance Statement (PICS)

Date: 2016-12-20

Vendor Name: Fujitsu General Limited

Product Name: BACnet Gateway for VRF

Product Model Number: UTY-VBGX

Application Software Version: 1.0.0.0

Firmware Revision: 1.0.0.0

BACnet Protocol Revision: 12

#### Product Description:

BACnet Gateway for VRF System

### 2.1 BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- 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)

Additional BACnet Interoperability Building Blocks Supported (Annex K):  
Reference of BIBBs List

### 2.2 Segmentation Capability:

Segmented request supported  No  Yes Window Size 16 .

Segmented responses supported  No  Yes Window Size 16 .

### 2.3 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), baud rate(s) \_\_\_\_\_
- MS/TP master (Clause 9), baud rate(s): \_\_\_\_\_
- MS/TP slave (Clause 9), baud rate(s): \_\_\_\_\_
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): \_\_\_\_\_
- Point-To-Point, modem, (Clause 10), baud rate(s): \_\_\_\_\_
- LonTalk, (Clause 11), medium: \_\_\_\_\_
- Other: \_\_\_\_\_

## 2.4 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

## 2.5 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

## 2.6 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

## 2.7 Gateway

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

**Fujitsu VRF Air Conditioning Network.**

### 3 BACnet Interoperability Building Blocks Supported (BIBBs)

#### 3.1 Data Sharing BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
DS-RP-A	Data Sharing-ReadProperty-A	<input type="checkbox"/>	ReadProperty	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-RP-B	Data Sharing-ReadProperty-B	<input checked="" type="checkbox"/>	ReadProperty	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-RPM-A	Data Sharing-ReadPropertyMultiple-A	<input type="checkbox"/>	ReadPropertyMultiple	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B	<input checked="" type="checkbox"/>	ReadPropertyMultiple	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-RPC-A	Data Sharing-ReadPropertyConditional-A	<input type="checkbox"/>	ReadPropertyConditional	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-RPC-B	Data Sharing-ReadPropertyConditional-B	<input type="checkbox"/>	ReadPropertyConditional	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-WP-A	Data Sharing-WriteProperty-A	<input type="checkbox"/>	WriteProperty	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-WP-B	Data Sharing-WriteProperty-B	<input checked="" type="checkbox"/>	WriteProperty	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-WPM-A	Data Sharing-WritePropertyMultiple-A	<input type="checkbox"/>	WritePropertyMultiple	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-WPM-B	Data Sharing-WritePropertyMultiple-B	<input checked="" type="checkbox"/>	WritePropertyMultiple	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-COV-A	Data Sharing-COV-A	<input type="checkbox"/>	SubscribeCOV	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	ConfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-COV-B	Data Sharing-COV-B	<input checked="" type="checkbox"/>	SubscribeCOV	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	ConfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input checked="" type="checkbox"/>	UnconfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-COVP-A	Data Sharing-COVP-A	<input type="checkbox"/>	SubscribeCOVProperty	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	ConfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-COVP-B	Data Sharing-COVP-B	<input type="checkbox"/>	SubscribeCOVProperty	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	ConfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DS-COVU-A	Data Sharing-COV-Unsubscribed-A	<input type="checkbox"/>	UnconfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DS-COVU-B	Data Sharing-COV-Unsubscribed-B	<input type="checkbox"/>	UnconfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.2 Alarm and Event Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
AE-N-A	Alarm and Event-Notification-A	<input type="checkbox"/>	ConfirmedEventNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedEventNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AE-N-I-B	Alarm and Event-Notification Internal-B	<input checked="" type="checkbox"/>	ConfirmedEventNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input checked="" type="checkbox"/>	UnconfirmedEventNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-N-E-B	Alarm and Event-Notification External-B	<input type="checkbox"/>	ConfirmedEventNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedEventNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-ACK-A	Alarm and Event-ACK-A	<input type="checkbox"/>	AcknowledgeAlarm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-ACK-B	Alarm and Event-ACK-B	<input checked="" type="checkbox"/>	AcknowledgeAlarm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AE-ASUM-A	Alarm and Event-Alarm Summary-A	<input type="checkbox"/>	GetAlarmSummary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-ASUM-B	Alarm and Event-Alarm Summary-B	<input checked="" type="checkbox"/>	GetAlarmSummary	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AE-ESUM-A	Alarm and Event-Enrollment Summary-A	<input type="checkbox"/>	GetEnrollmentSummary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-ESUM-B	Alarm and Event-Enrollment Summary-B	<input type="checkbox"/>	GetEnrollmentSummary	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AE-INFO-A	Alarm and Event-Information-A	<input type="checkbox"/>	GetEventInformation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-INFO-B	Alarm and Event-Information-B	<input checked="" type="checkbox"/>	GetEventInformation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AE-LS-A	Alarm and Event-LifeSafety-A	<input type="checkbox"/>	LifeSafetyOperation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AE-LS-B	Alarm and Event-LifeSafety-B	<input type="checkbox"/>	LifeSafetyOperation	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.3 Scheduling BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
SCHED-A	Scheduling-A (must support DS-RP-A and DS-WP-A)	<input type="checkbox"/>			
SCHED-I-B	Scheduling-Internal-B (shall support DS-RP-B and DS-WP-B) (shall also support either DM-TS-B or DS-UTC-B)	<input type="checkbox"/>			
SCHED-E-B	Scheduling-External-B (shall support SCHED-I-B and DS-WP-A)	<input type="checkbox"/>			

3.4 Trending BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
T-VMT-A	Trending - Viewing and Modifying Trends-A	<input type="checkbox"/>	ReadRange	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T-VMT-I-B	Trending - Viewing and Modifying Trends Internal-B	<input type="checkbox"/>	ReadRange	<input type="checkbox"/>	<input checked="" type="checkbox"/>
T-VMT-E-B	Trending - Viewing and Modifying Trends External-B	<input type="checkbox"/>	ReadRange	<input type="checkbox"/>	<input checked="" type="checkbox"/>
T-ATR-A	Trending - Automated Trend Retrieval-A	<input type="checkbox"/>	ConfirmedEventNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	ReadRange	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T-ATR-B	Trending - Automated Trend Retrieval-B	<input type="checkbox"/>	ConfirmedEventNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	ReadRange	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.5 Network Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
NM-CE-A	Network Management - Connection Establishment-A	<input type="checkbox"/>	Establish-Connection-To-Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	Disconnect-Connection-To-Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NM-CE-B	Network Management - Connection Establishment- B	<input type="checkbox"/>	Establish-Connection-To-Network	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	Disconnect-Connection-To-Network	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NM-RC-A	Network Management - Router Configuration-A	<input type="checkbox"/>	Who-Is-Router-To-Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	I-Am-Router-To-Network	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	I-Could-Be-Router-To-Network	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	Initialize-Routing-Table	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NM-RC-B	Network Management - Router Configuration-B	<input type="checkbox"/>	Initialize-Routing-Table-ACK	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	Who-Is-Router-To-Network	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	I-Am-Router-To-Network	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	Initialize-Routing-Table	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	Initialize-Routing-Table-ACK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6 Device Management BIBBs

BIBB Type		Active	BACnet Service	Initiate	Execute
DM-DDB-A	Device Management - Dynamic Device Binding-A	<input checked="" type="checkbox"/>	Who-Is	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input checked="" type="checkbox"/>	I-Am	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-DDB-B	Device Management - Dynamic Device Binding-B	<input checked="" type="checkbox"/>	Who-Is	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	I-Am	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-DOB-A	Device Management - Dynamic Object Binding-A	<input type="checkbox"/>	Who-Has	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	I-Have	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-DOB-B	Device Management - Dynamic Object Binding-B	<input checked="" type="checkbox"/>	Who-Has	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	I-Have	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-DCC-A	Device Management - DeviceCommunicationControl-A	<input type="checkbox"/>	DeviceCommunicationControl	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-DCC-B	Device Management - DeviceCommunicationControl-B	<input checked="" type="checkbox"/>	DeviceCommunicationControl	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-PT-A	Device Management - PrivateTransfer-A	<input type="checkbox"/>	ConfirmedPrivateTransfer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedPrivateTransfer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-PT-B	Device Management - PrivateTransfer-B	<input type="checkbox"/>	ConfirmedPrivateTransfer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedPrivateTransfer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-TM-A	Device Management - Text Message-A	<input type="checkbox"/>	ConfirmedTextMessage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedTextMessage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-TM-B	Device Management - Text Message-B	<input type="checkbox"/>	ConfirmedTextMessage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	UnconfirmedTextMessage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-TS-A	Device Management - TimeSynchronization-A	<input type="checkbox"/>	TimeSynchronization	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-TS-B	Device Management - TimeSynchronization-B	<input checked="" type="checkbox"/>	TimeSynchronization	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-UTC-A	Device Management - UTCTimeSynchronization-A	<input type="checkbox"/>	UTCTimeSynchronization	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-UTC-B	Device Management - UTCTimeSynchronization-B	<input type="checkbox"/>	UTCTimeSynchronization	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-RD-A	Device Management - ReinitializeDevice-A	<input type="checkbox"/>	ReinitializeDevice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-RD-B	Device Management - ReinitializeDevice-B	<input checked="" type="checkbox"/>	ReinitializeDevice	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-BR-A	Device Management - Backup and Restore-A	<input type="checkbox"/>	AtomicReadFile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	AtomicWriteFile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	CreateObject	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	ReinitializeDevice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-BR-B	Device Management - Backup and Restore-B	<input type="checkbox"/>	AtomicReadFile	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	AtomicWriteFile	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	ReinitializeDevice	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-R-A	Device Management - Restart-A	<input type="checkbox"/>	UnconfirmedCOVNotification	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-R-B	Device Management - Restart-B	<input type="checkbox"/>	UnconfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-LM-A	Device Management - List Manipulation-A	<input type="checkbox"/>	AddListElement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	RemoveListElement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-LM-B	Device Management - List Manipulation-B	<input type="checkbox"/>	AddListElement	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	RemoveListElement	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-OCD-A	Device Management - Object Creation and Deletion-A	<input type="checkbox"/>	CreateObject	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	DeleteObject	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DM-OCD-B	Device Management - Object Creation and Deletion-B	<input type="checkbox"/>	CreateObject	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	DeleteObject	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DM-VT-A	Device Management - Virtual Terminal-A	<input type="checkbox"/>	VT-Open	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	VT-Close	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	VT-Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DM-VT-B	Device Management - Virtual Terminal-B	<input type="checkbox"/>	VT-Open	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	VT-Close	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	VT-Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## 4 Service Types

Service type	Service name	Supported	Remarks
Alarm and Event Services	AcknowledgeAlarm	<input checked="" type="checkbox"/>	
	ConfirmedCOVNotification	<input type="checkbox"/>	
	ConfirmedEventNotification	<input type="checkbox"/>	
	GetAlarmSummary	<input checked="" type="checkbox"/>	
	GetEnrollmentSummary	<input type="checkbox"/>	
	SubscribeCOV	<input checked="" type="checkbox"/>	
File Access Services	AtomicReadFile	<input type="checkbox"/>	
	AtomicWriteFile	<input type="checkbox"/>	
Object Access Services	AddListElement	<input type="checkbox"/>	
	RemoveListElement	<input type="checkbox"/>	
	CreateObject	<input type="checkbox"/>	
	DeleteObject	<input type="checkbox"/>	
	ReadProperty	<input checked="" type="checkbox"/>	
	ReadPropertyConditional	<input type="checkbox"/>	
	ReadPropertyMultiple	<input checked="" type="checkbox"/>	
	ReadRange	<input type="checkbox"/>	
	WriteProperty	<input checked="" type="checkbox"/>	
	WritePropertyMultiple	<input checked="" type="checkbox"/>	
Remote Device Management Services	DeviceCommunicationControl	<input checked="" type="checkbox"/>	
	ConfirmedPrivateTransfer	<input type="checkbox"/>	
	ConfirmedTextMessage	<input type="checkbox"/>	
	ReinitializeDevice	<input checked="" type="checkbox"/>	
Virtual Terminal Services	VtOpen	<input type="checkbox"/>	
	VtClose	<input type="checkbox"/>	
	VtData	<input type="checkbox"/>	
Security Services	Authenticate	<input type="checkbox"/>	
	RequestKey	<input type="checkbox"/>	
Unconfirmed Services	I-Am	<input checked="" type="checkbox"/>	
	I-Have	<input type="checkbox"/>	
	UnconfirmedCOVNotification	<input type="checkbox"/>	
	UnconfirmedEventNotification	<input type="checkbox"/>	
	UnconfirmedPrivateTransfer	<input type="checkbox"/>	
	UnconfirmedTextMessage	<input type="checkbox"/>	
	TimeSynchronization	<input type="checkbox"/>	
	UtcTimeSynchronization	<input type="checkbox"/>	
	Who-Has	<input checked="" type="checkbox"/>	
	Who-Is	<input checked="" type="checkbox"/>	
	LifeSafetyOperation	<input type="checkbox"/>	
	SubscribeCOVProperty	<input type="checkbox"/>	
GetEventInformation	<input checked="" type="checkbox"/>		



## 5 Objects

### 5.1 Supported Object Types

The objects supported are shown in the table below.

Object Type	ID	Supported	Management Point
Analog-Input	0	<input checked="" type="checkbox"/>	IU_rr_uu_SetTemp_Status IU_rr_uu_SpaceTemp_Status IU_rr_uu_AutoTempLoLim_Status IU_rr_uu_AutoTempHiLim_Status IU_rr_uu_CoolTempLoLim_Status IU_rr_uu_CoolTempHiLim_Status IU_rr_uu_HeatTempLoLim_Status IU_rr_uu_HeatTempHiLim_Status
Analog-Output	1	<input checked="" type="checkbox"/>	Batch_SetTemp_Setting IU_rr_uu_SetTemp_Setting IU_rr_uu_AutoTempLoLim_Setting IU_rr_uu_AutoTempHiLim_Setting IU_rr_uu_CoolTempLoLim_Setting IU_rr_uu_CoolTempHiLim_Setting IU_rr_uu_HeatTempLoLim_Setting IU_rr_uu_HeatTempHiLim_Setting
Analog-Value	2	<input type="checkbox"/>	
Averaging	18	<input type="checkbox"/>	
Binary-Input	3	<input checked="" type="checkbox"/>	Gateway_ES_Status Gateway_Error_Status IU_rr_uu_Exists_Status IU_rr_uu_Operation_Status IU_rr_uu_ThermostatOFF_Status IU_rr_uu_FilterSign_Status IU_rr_uu_Emergency_Status IU_rr_uu_Error_Status IU_rr_uu_TempLimValid_Status OU_rr_uu_Error_Status OU_rr_uu_ForcedOff_Status
Binary-Output	4	<input checked="" type="checkbox"/>	Gateway_ES_Setting Batch_Operation_Setting IU_rr_uu_Operation_Setting IU_rr_uu_ThermostatOFF_Setting IU_rr_uu_Reset_Filter_Setting IU_rr_uu_TempLimValid_Setting OU_rr_uu_ForcedOff_Setting
Binary-Value	5	<input type="checkbox"/>	
Calendar	6	<input type="checkbox"/>	
Command	7	<input type="checkbox"/>	
Device	8	<input checked="" type="checkbox"/>	UTY-VBGX
Event-Enrollment	9	<input type="checkbox"/>	
File	10	<input type="checkbox"/>	
Group	11	<input type="checkbox"/>	
Life-Safety-Point	21	<input type="checkbox"/>	
Life-Safety-Zone	22	<input type="checkbox"/>	
Loop	12	<input type="checkbox"/>	
Multistate-Input	13	<input checked="" type="checkbox"/>	Gateway_ErrorCode_Status IU_rr_uu_OperationMode_Status IU_rr_uu_FanSpeed_Status IU_rr_uu_AirFlowDirVT_Status IU_rr_uu_AirFlowDirHZ_Status IU_rr_uu_RC_Prohibit_Status IU_rr_uu_ErrorCode_Status

			OU_rr_uu_ErrorCode_Status OU_rr_uu_CapacitySave_Status OU_rr_uu_LowNoiseOp_Status
Multistate-Output	14	<input checked="" type="checkbox"/>	Batch_OperationMode_Setting Batch_FanSpeed_Setting Batch_RC_Prohibition_Setting IU_rr_uu_OperationMode_Setting IU_rr_uu_FanSpeed_Setting IU_rr_uu_AirFlowDirVT_Setting IU_rr_uu_AirFlowDirHZ_Setting IU_rr_uu_RC_Prohibit_Setting OU_rr_uu_LowNoiseOp_Setting OU_rr_uu_CapacitySave_Setting
Multistate-Value	19	<input type="checkbox"/>	
Notification-Class	15	<input checked="" type="checkbox"/>	NotificationClass_x
Program	16	<input type="checkbox"/>	
Schedule	17	<input type="checkbox"/>	
Trend-Log	20	<input type="checkbox"/>	

## 5.2 Member objects

### 5.2.1 Type: Gateway

Object-name	Description	Object-type	Object-instance
UTY-VBGX	BACnet Gateway for VRF System	Device	144000
Gateway_ES_Status	-	BI	0
Gateway_Error_Status	-	BI	1
Gateway_ES_Setting	-	BO	0
Gateway_ErrorCode_Status	-	MI	0

### 5.2.2 Type: Batch objects

Object-name	Object-type	Object-instance
Batch_SetTemp_Setting	AO	0
Batch_Operation_Setting	BO	1
Batch_OperationMode_Setting	MO	0
Batch_FanSpeed_Setting	MO	1
Batch_RC_Prohibition_Setting	MO	2

### 5.2.3 Type: Indoor Unit

Object-name	Object-type	Object-instance
IU_rr_uu_SetTemp_Status	AI	10rruu
IU_rr_uu_SpaceTemp_Status	AI	11rruu
IU_rr_uu_AutoTempLoLim_Status	AI	12rruu
IU_rr_uu_AutoTempHiLim_Status	AI	13rruu
IU_rr_uu_CoolTempLoLim_Status	AI	14rruu
IU_rr_uu_CoolTempHiLim_Status	AI	15rruu
IU_rr_uu_HeatTempLoLim_Status	AI	16rruu
IU_rr_uu_HeatTempHiLim_Status	AI	17rruu
IU_rr_uu_SetTemp_Setting	AO	10rruu
IU_rr_uu_AutoTempLoLim_Setting	AO	11rruu
IU_rr_uu_AutoTempHiLim_Setting	AO	12rruu
IU_rr_uu_CoolTempLoLim_Setting	AO	13rruu
IU_rr_uu_CoolTempHiLim_Setting	AO	14rruu
IU_rr_uu_HeatTempLoLim_Setting	AO	15rruu
IU_rr_uu_HeatTempHiLim_Setting	AO	16rruu
IU_rr_uu_Exists_Status	BI	10rruu
IU_rr_uu_Operation_Status	BI	11rruu
IU_rr_uu_ThermostatOFF_Status	BI	12rruu
IU_rr_uu_FilterSign_Status	BI	13rruu
IU_rr_uu_Emergency_Status	BI	14rruu
IU_rr_uu_Error_Status	BI	15rruu
IU_rr_uu_TempLimValid_Status	BI	16rruu
IU_rr_uu_Operation_Setting	BO	10rruu
IU_rr_uu_ThermostatOFF_Setting	BO	11rruu
IU_rr_uu_Reset_Filter_Setting	BO	12rruu
IU_rr_uu_TempLimValid_Setting	BO	13rruu
IU_rr_uu_OperationMode_Status	MI	10rruu
IU_rr_uu_FanSpeed_Status	MI	11rruu

IU_rr_uu_AirFlowDirVT_Status	MI	12rruu
IU_rr_uu_AirFlowDirHZ_Status	MI	13rruu
IU_rr_uu_RC_Prohibit_Status	MI	14rruu
IU_rr_uu_ErrorCode_Status	MI	15rruu
IU_rr_uu_OperationMode_Setting	MO	10rruu
IU_rr_uu_FanSpeed_Setting	MO	11rruu
IU_rr_uu_AirFlowDirVT_Setting	MO	12rruu
IU_rr_uu_AirFlowDirHZ_Setting	MO	13rruu
IU_rr_uu_RC_Prohibit_Setting	MO	14rruu

5.2.4 Type: Outdoor Unit

Object-name	Object-type	Object-instance
OU_rr_uu_Error_Status	BI	30rruu
OU_rr_uu_ForcedOff_Status	BI	31rruu
OU_rr_uu_ForcedOff_Setting	BO	31rruu
OU_rr_uu_ErrorCode_Status	MI	30rruu
OU_rr_uu_CapacitySave_Status	MI	31rruu
OU_rr_uu_LowNoiseOp_Status	MI	32rruu
OU_rr_uu_LowNoiseOp_Setting	MO	30rruu
OU_rr_uu_CapacitySave_Setting	MO	31rruu

5.3 Objects and properties

Below you can find relevant information for the objects and properties.

**Object\_Identifier:** In the **Device Object**, the value of object instance is configurable through Configuration Tool. See Table 5.1 to obtain the name of each object.

Variable	Description
"rr"	Refrigerant Address (0..99)
"uu"	Outdoor Unit address (0..3)
	Indoor Unit address (0..63)

Table 5.1 Objects and properties variables and descriptions

**Object\_Name:** In the **Device Object**, this string is configurable through Configuration Tool. See Table 5.1 to obtain the name of each object.

**Description:** In the **Device Object**, this string is configurable through Configuration Tool. See Table 5.1 to obtain the description of each object.

**Relinquish\_Default:** In **Binary Outputs**, **Multistate Outputs** and **Multistate Values**, the value of *Present\_Value* property will be read.

**Priority\_Array:** In **Binary Outputs**, **Multistate Outputs** and **Multistate Values**, *Priority\_Array[16]* will acquire the value of *Present\_Value* property and *Priority\_Array[1]~[15]* will be NULL.

**State\_Text:** In **Multistate Outputs**, **Multistate Outputs** and **Multistate Values**, it cannot be read the whole array at once, so "Array Index" must be specified in order to obtain the text of the corresponding state.

## 5.3.1 Fujitsu AC Gateway (Device Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Device, 144000)	R	R
Object_Name	CharacterString	"Device UTY-VBGX"	R	R
Object_Type	BACnetObjectType	DEVICE (8) (Device Object Type)	R	R
System_Status	BACnetDeviceStatus	OPERATIONAL (0)	R	R
Vendor_Name	CharacterString	"Fujitsu General Limited"	R	R
Vendor_Identifier	Unsigned16	144	R	R
Model_Name	CharacterString	"UTY-VBGX"	R	R
Firmware_Revision	CharacterString	"1.0.0.0"	R	R
Application_Software_Version	CharacterString	"1.0.0.0"	R	R
Location	CharacterString	""	O	-
Description	CharacterString	"BACnet Gateway for VRF System"	O	-
Protocol_Version	Unsigned	1	R	R
Protocol_Revision	Unsigned	12	R	R
Protocol_Services_Supported	BACnetServiceSupported	Refer to section 4 [Service Types].	R	R
Protocol_Object_Types_Supported	BACnetObjectTypes Supported	Refer to section 5.1 [Object Types].	R	R
Object_List	BACnetArray[N] of BACnetObjectIdentifier	BACnetARRAY[N]	R	R
Structured_Object_List	BACnetArray[N] of BACnetObjectIdentifier	-	O	-
Max_APDU_Length_Accepted	Unsigned	1476	R	R
Segmentation_Supported	BACnetSegmentation	SEGMENTED-BOTH (0)	R	R
Max_Segments_accepted	Unsigned	16	O	R
VT_Classes_Supported	List of BACnetVTClass	-	O	-
Active_VT_Sessions	List of BACnetVTSession	-	O	-
Local_Date	Date	Current date	O	R
Local_Time	Time	Current time	O	R
UTC_Offset	INTEGER	-	O	-
Daylight_Savings_Status	BOOLEAN	-	O	-
APDU_Segment_Timeout	Unsigned	3000	R	R
APDU_Timeout	Unsigned	3000	R	R
Number_of_APDU_Retries	Unsigned	3	R	R
List_Of_Session_Keys	List of BACnetSessionKey	-	O	-
Time_Synchronization_Recipients	List of BACnetRecipient	-	O	-
Device_Address_Binding	List of BACnetAddressBinding	NULL (empty)	R	R

Database_Revision	Unsigned	4294967295	R	R
Configuration_Files	BACnetArray[N] of BACnetObjectIdentifier	-	O	-
Last_Restore_Time	BACnetTimeStamp	-	O	-
Backup_Failure_Timeout	Unsigned16	-	O	-
Active_COV_Subscriptions	List of BACnetCOVSubscription	List of BACnetCOVSubscription	O	R
Slave_Proxy_Enable	BACnetArray[N] of BOOLEAN	-	O	-
Manual_Slave_Address_Binding	List of BACnetAddressBinding	-	O	-
Auto_Slave_Discovery	BACnetArray[N] of BOOLEAN	-	O	-
Slave_Address_Binding	BACnetAddressBinding	-	O	-
Last_Restart_Reason	BACnetRestartReason	-	O	-
Time_Of_Device_Restart	BACnetTimeStamp	-	O	-
Restart_Notification_Recipients	List of BACnetRecipient	-	O	-
UTC_Time_Synchronization_Recipients	List of BACnetRecipient	-	O	-
Time_Synchronization_Interval	Unsigned	-	O	-
Align_Intervals	BOOLEAN	-	O	-
Interval_Offset	Unsigned	-	O	-
Profile_Name	CharacterString	-	O	-

## 5.3.2 Gateway\_ES\_Status (Binary Input Object Type)

The current Energy Saving status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 0)	R	R
Object_Name	CharacterString	"Gateway_ES_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Not used"	O	R
Active_Text	CharacterString	"Energy Saving"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.3 Gateway\_ES\_Setting (Binary Output Object Type)

The current Energy Saving status can be set.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 0)	R	R
Object_Name	CharacterString	"Gateway_ES_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Not Used"	O	R
Active_Text	CharacterString	"Energy Saving"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured



## 5.3.4 Gateway\_Error\_Status (Binary Input Object Type)

The normal and error statuses of the Gateway can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 1)	R	R
Object_Name	CharacterString	"Gateway_Error_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Abnormal"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.5 Gateway\_ErrorCode\_Status (Multistate Input Object Type)

The error code when a Gateway error occurs can be checked.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 0)	R	R
Object_Name	CharacterString	"Gateway_ErrorCode_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 3	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	3	R	R
State_Text	BACnetArray[N] of CharacterString	-	O	-
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## Gateway Error Code table

Gateway Error Code can be interpreted using the values in the following correspondence table.

Present_Value	Description
1	No Error
2	Hardware Error
3	No Configuration Present

## 5.3.6 Batch\_SetTemp\_Setting (Analog Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 0)	R	R
Object_Name	CharacterString	"Batch_SetTemp_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	<b>V-II/J-II/VR-II Series</b> 0.0 ~ 63.5(°C) // 30.0 ~ 148(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	1	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.7 Batch\_Operation\_Setting (Binary Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 1)	R	R
Object_Name	CharacterString	"Batch_Operation_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.8 Batch\_OperationMode\_Setting (Multistate Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 0)	R	R
Object_Name	CharacterString	"Batch_OperationMode_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 5	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Operation Mode settings</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	1	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	Unsigned	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Operation Mode settings table

Mode commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Cool
2	Heat
3	Fan
4	Dry
5	Auto

5.3.9 Batch\_FanSpeed\_Setting (Multistate Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 1)	R	R
Object_Name	CharacterString	"Batch_FanSpeed_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 7	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	7	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Fan Speed settings</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	1	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	Unsigned	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

**Fan Speed settings table**

Fan Speed commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Low
2	High
3	Med
4	Auto

Present_Value	Contents displayed in State_Text
5	Quiet
6	Med-Low
7	Med-High

## 5.3.10 Batch\_RC\_Prohibition\_Setting (Multistate Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 2)	R	R
Object_Name	CharacterString	"Batch_RC_Prohibition_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 65	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	65	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check RC Prohibition table</i> (section 12.2)	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	1	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	Unsigned	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.11 IU\_rr\_uu\_SetTemp\_Status (Analog Input Object Type)

Indoor unit temperature setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_SetTemp_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	<b>V-II/J-II/VR-II Series</b> 0.0 ~ 63.5(°C) // 30.0 ~ 148(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) / Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured



## 5.3.12 IU\_rr\_uu\_SpaceTemp\_Status (Analog Input Object Type)

Indoor unit surrounding temperature status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_SpaceTemp_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	<b>V-II/J-II/VR-II Series</b> 0.0 ~ 63.5(°C) // 30.0 ~ 148(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.13 IU\_rr\_uu\_AutoTempLoLim\_Status (Analog Input Object Type)

The indoor unit temperature lower limit values status when Auto Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AutoTempLoLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.14 IU\_rr\_uu\_AutoTempHiLim\_Status (Analog Input Object Type)

The indoor unit temperature upper limit values status when Auto Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AutoTempHiLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.15 IU\_rr\_uu\_CoolTempLoLim\_Status (Analog Input Object Type)

The indoor unit temperature lower limit values status when Cool Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 14rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_CoolTempLoLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.16 IU\_rr\_uu\_CoolTempHiLim\_Status (Analog Input Object Type)

The indoor unit temperature upper limit values status when Cool Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 15rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_CoolTempHiLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.17 IU\_rr\_uu\_HeatTempLoLim\_Status (Analog Input Object Type)

The indoor unit temperature lower limit values status when Heat Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 16rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_HeatTempLoLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.18 IU\_rr\_uu\_HeatTempHiLim\_Status (Analog Input Object Type)

The indoor unit temperature upper limit values status when Heat Mode is active can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, 17rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_HeatTempHiLim_Status"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT (0)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured.

## 5.3.19 IU\_rr\_uu\_SetTemp\_Setting (Analog Output Object Type)

Set temperature can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_SetTemp_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	<b>V-II/J-II/VR-II Series</b> 0.0 ~ 63.5(°C) // 30.0 ~ 148(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured



## 5.3.20 IU\_rr\_uu\_AutoTempLoLim\_Setting (Analog Output Object Type)

Set temperature lower limit values when Auto Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AutoTempLoLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.21 IU\_rr\_uu\_AutoTempHiLim\_Setting (Analog Output Object Type)

Set temperature upper limit values when Auto Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AutoTempHiLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.22 IU\_rr\_uu\_CoolTempLoLim\_Setting (Analog Output Object Type)

Set temperature lower limit values when Cool Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_CoolTempLoLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured.

## 5.3.23 IU\_rr\_uu\_CoolTempHiLim\_Setting (Analog Output Object Type)

Set temperature upper limit values when Cool Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 14rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_CoolTempHiLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.24 IU\_rr\_uu\_HeatTempLoLim\_Setting (Analog Output Object Type)

Set temperature lower limit values when Heat Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 15rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_HeatTempLoLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.25 IU\_rr\_uu\_HeatTempHiLim\_Setting (Analog Output Object Type)

Set temperature upper limit values when Heat Mode is active can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, 16rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_HeatTempHiLim_Setting"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT (1)	R	R
Present_Value	REAL	0.0 ~ 63.0(°C) // 30.0 ~ 147(°F) (Default: 0.0)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	Degrees Celsius (62) // Fahrenheit (64)	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	0	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	x	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
High_Limit	REAL	-	O	R*
Low_Limit	REAL	-	O	R*
Deadband	REAL	-	O	R*
Limit_Enable	BACnetLimitEnable	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.26 IU\_rr\_uu\_Exists\_Status (Binary Input Object Type)

Check the presence of the specified indoor units in the AC system.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Exists_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Not Exists"	O	R
Active_Text	CharacterString	"Exists"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.27 IU\_rr\_uu\_Operation\_Status (Binary Input Object Type)

Indoor unit operation ON/OFF setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Operation_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured



## 5.3.28 IU\_rr\_uu\_ThermostatOFF\_Status (Binary Input Object Type)

Indoor unit forced thermostat OFF setting status can be monitored

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_ThermostatOFF_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.29 IU\_rr\_uu\_FilterSign\_Status (Binary Input Object Type)

Indoor unit filter sign status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_FilterSign_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Unsigned"	O	R
Active_Text	CharacterString	"Signed"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.30 IU\_rr\_uu\_Emergency\_Status (Binary Input Object Type)

Indoor unit emergency stop operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 14rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Emergency_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Stop"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.31 IU\_rr\_uu\_Error\_Status (Binary Input Object Type)

The normal and error statuses of indoor unit can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 15rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Error_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Fault"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.32 IU\_rr\_uu\_TempLimValid\_Status (Binary Input Object Type)

Indoor unit set temperature upper and lower limit values valid/invalid setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 16rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_TempLimValid_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Invalid"	O	R
Active_Text	CharacterString	"Valid"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.33 IU\_rr\_uu\_Operation\_Setting (Binary Output Object Type)

Operation ON/OFF can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Operation_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.34 IU\_rr\_uu\_ThermostatOFF\_Setting (Binary Output Object Type)

Forced thermostat OFF operation setting can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_ThermostatOFF_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.35 IU\_rr\_uu\_Reset\_Filter\_Setting (Binary Output Object Type)

Filter sign reset can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_Reset_Filter_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Not Reset"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured



## 5.3.36 IU\_rr\_uu\_TempLimValid\_Setting (Binary Output Object Type)

Temperature upper and lower limit setting valid/invalid setting can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_TempLimValid_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Invalid"	O	R
Active_Text	CharacterString	"Valid"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

5.3.37 IU\_rr\_uu\_OperationMode\_Status (Multistate Input Object Type)

Indoor unit operation mode setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_OperationMode_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 5	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Operation Mode status</b> below</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

**Operation Mode status table**

Mode status can be read using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Cool
2	Heat
3	Fan
4	Dry
5	Auto

## 5.3.38 IU\_rr\_uu\_FanSpeed\_Status (Multistate Input Object Type)

Indoor unit air flow setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_FanSpeed_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 7	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	7	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Fan Speed status</b> below</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Fan Speed status table

Fan speed status can be read using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Low
2	High
3	Med
4	Auto

Present_Value	Contents displayed in State_Text
5	Quiet
6	Med-Low
7	Med-High

## 5.3.39 IU\_rr\_uu\_AirFlowDirVT\_Status (Multistate Input Object Type)

Indoor unit vertical air flow position setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AirFlowDirVT_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 5	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check Air Flow Dir VT status below</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Air Flow Dir VT status table

Vertical Air Flow direction status can be read using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	1
2	2
3	3
4	4
5	Swing

## 5.3.40 IU\_rr\_uu\_AirFlowDirHZ\_Status (Multistate Input Object Type)

Indoor unit horizontal air flow position setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AirFlowDirHZ_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 6	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	6	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check Air Flow Dir HZ status below</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Air Flow Dir HZ status table

Horizontal Air Flow Direction status can be read using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	1
2	2
3	3
4	4
5	5
6	Swing

## 5.3.41 IU\_rr\_uu\_RC\_Prohibit\_Status (Multistate Input Object Type)

Indoor unit remote controller prohibition setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 14rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_RC_Prohibit_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 65	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	65	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>RC Prohibition table</b> (section 12.2)</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.42 IU\_rr\_uu\_ErrorCode\_Status (Multistate Input Object Type)

The error code when an indoor unit error occurs can be checked.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 15rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_ErrorCode_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 255	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	<b>Indoor Unit</b> V-II/J-II/VR-II Series:72 <b>Outdoor Unit</b> V-II/J-II/VR-II Series:72	R	R
State_Text	BACnetArray[N] of CharacterString	-	O	-
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

**NOTE:** For the error content, refer to the "Error content table" using the Present\_Value of the appropriate series. Error contents may be added without prior notice.

## 5.3.43 IU\_rr\_uu\_OperationMode\_Setting (Multistate Output Object Type)

Operation mode can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 10rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_OperationMode_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 5	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Operation Mode settings</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	Unsigned	1	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	Unsigned	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Operation Mode settings table

Mode commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Cool
2	Heat
3	Fan
4	Dry
5	Auto



## 5.3.44 IU\_rr\_uu\_FanSpeed\_Setting (Multistate Output Object Type)

Air flow can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 11rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_FanSpeed_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 7	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	7	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Fan Speed settings</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Fan Speed settings table

Fan speed commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Low
2	High
3	Med
4	Auto

Present_Value	Contents displayed in State_Text
5	Quiet
6	Med-Low
7	Med-High

## 5.3.45 IU\_rr\_uu\_AirFlowDirVT\_Setting (Multistate Output Object Type)

Vertical air flow direction position can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 12rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AirFlowDirVT_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 5	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check Air Flow Dir VT settings below</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Air Flow Dir VT settings table

Vertical Air Flow Direction commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	1
2	2
3	3
4	4
5	Swing

## 5.3.46 IU\_rr\_uu\_AirFlowDirHZ\_Setting (Multistate Output Object Type)

Horizontal air flow direction position can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 13rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_AirFlowDirHZ_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 6	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	6	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check Air Flow Dir HZ settings below</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Air Flow Dir HZ settings table

Horizontal Air Flow Direction commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	1
2	2
3	3
4	4
5	5
6	Swing

## 5.3.47 IU\_rr\_uu\_RC\_Prohibit\_Setting (Multistate Output Object Type)

Remote controller prohibition can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 14rruu)	R	R
Object_Name	CharacterString	"IU_rr_uu_RC_Prohibit_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 65	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	65	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>RC Prohibition table</b> (section 12.2)</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.48 OU\_rr\_uu\_Error\_Status (Binary Input Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 30rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_Error_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Fault"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

## 5.3.49 OU\_rr\_uu\_ErrorCode\_Status (Multistate Input Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 30rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_ErrorCode_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 255	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	255	R	R
State_Text	BACnetArray[N] of CharacterString	-	O	-
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

You can check the error codes for each AC system on section **Error codes** (section 12.1)

## 5.3.50 OU\_rr\_uu\_ForcedOff\_Status (Binary Input Object Type)

Outdoor unit forced stop setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, 31rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_ForcedOff_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT (3)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Value	BACnetBinaryPV	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

5.3.51 OU\_rr\_uu\_CapacitySave\_Status (Multistate Input Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 32rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_CapacitySave_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 8	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	8	R	R
State_Text	BACnetArray[N] of CharacterString	Check <b>Capacity Save status</b> below	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

**Capacity Save status table**

Capacity Save status can be read using the values in the following correspondence table.

Pesent_Value	Contents displayed in State_Text
1	Not set
2	100%
3	90%
4	80%

Pesent_Value	Contents displayed in State_Text
5	70%
6	60%
7	50%
8	40%



5.3.52 OU\_rr\_uu\_CapacitySave\_Setting (Multistate Output Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 33rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_CapacitySave_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 8	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	8	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Capacity Save setting</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Capacity Save setting table

Capacity Save can be set using the values in the following correspondence table.

Present Value	Contents displayed in State_Text
1	Not set
2	100%
3	90%
4	80%

Present Value	Contents displayed in State_Text
5	70%
6	60%
7	50%
8	40%

## 5.3.53 OU\_rr\_uu\_ForcedOff\_Setting (Binary Output Object Type)

Forced stop setting can be commanded for outdoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Binary Output, 30rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_ForcedOff_Setting"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT (4)	R	R
Present_Value	BACnetBinaryPV	INACTIVE (0) / ACTIVE (1)	W	W
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Polarity	BACnetPolarity	NORMAL (0)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	R
Change_Of_State_Count	Unsigned	-	O	R
Time_Of_State_Count_Reset	BACnetDatetime	-	O	R
Elapsed_Active_Time	Unsigned	-	O	R
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	R
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	BACnetPriorityArray	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (0)	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Feedback_Value	BACnetBinaryPV	-	O	W
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured.

5.3.54 OU\_rr\_uu\_LowNoiseOp\_Status (Multistate Input Object Type)

Low noise operation status for an outdoor unit can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Multistate Input, 32rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_LowNoiseOp_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT (13)	R	R
Present_Value	Unsigned	1 ~ 16	R	R
Description	CharacterString	-	O	-
Device_Type	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE/TRUE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0), UNRELIABLE_OTHER (7)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	16	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Low Noise Operation status</b> below</i>	O	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	List of Unsigned	-	O	R*
Fault_Values	List of Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

**Low Noise Operating status table**

Low Noise Operation Status can be checked using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Not Set
2	-/-/E
3	-/A/-
4	-/A/E
5	1/-/-
6	1/-/E
7	1/A/-
8	1/A/E

Present_Value	Contents displayed in State_Text
9	2/-/-
10	2/-/E
11	2/A/-
12	2/A/E
13	3/-/-
14	3/-/E
15	3/A/-
16	3/A/E

## 5.3.55 OU\_rr\_uu\_LowNoiseOp\_Setting (Multistate Output Object Type)

Low noise operation can be commanded for an outdoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBG
Object_Identifier	BACnetObjectIdentifier	(Multistate Output, 30rruu)	R	R
Object_Name	CharacterString	"OU_rr_uu_LowNoiseOp_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT (14)	R	R
Present_Value	Unsigned	1 ~ 7	W	W
Description	CharacterString	-	O	-
Status_Flags	BACnetStatusFlags	{FALSE, FALSE, FALSE, FALSE}	R	R
Event_State	BACnetEventState	STATE_NORMAL (0)	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	O	R
Out_Of_Service	BOOLEAN	FALSE	R	R
Number_Of_States	Unsigned	7	R	R
State_Text	BACnetArray[N] of CharacterString	<i>Check <b>Low Noise Opeation setting</b> below</i>	O	R
Priority_Array	BACnetPriorityArray	-	R	R
Relinquish_Default	Unsigned	-	R	R
Time_Delay	Unsigned	-	O	R*
Notification_Class	Unsigned	-	O	R*
Alarm_Values	Unsigned	-	O	R*
Fault_Values	Unsigned	-	O	R*
Event_Enable	BACnetEventTransitionBits	-	O	R*
Acked_Transitions	BACnetEventTransitionBits	-	O	R*
Notify_Type	BACnetNotifyType	-	O	R*
Event_Time_Stamps	BACnetArray[N] of BACnetTimeStamp	-	O	R*
Profile_Name	CharacterString	-	O	-

\* Only available when specific object has a Notification Class configured

### Low Noise Operating setting table

Low Noise Operating commands can be set using the values in the following correspondence table.

Present_Value	Contents displayed in State_Text
1	Stop
2	Level1-Quiet
3	Level1-Ability
4	Level2-Quiet

Present_Value	Contents displayed in State_Text
5	Level2-Ability
6	Level3-Quiet
7	Level3-Ability

## 5.3.56 Notification Class Object Type

Property Identifier	Property Datatype	Value	ASHRAE	UTY-VBGX
Object_Identifier	BACnetObjectIdentifier	(Notification_Class, 15)	R	R
Object_Name	CharacterString	"NotificationClass_0" ~ "NotificationClass_9"	R	R
Object_Type	BACnetObjectType	NOTIFICATION_CLASS (15)	R	R
Description	CharacterString	-	O	-
Notification_Class	Unsigned	-	R	R
Priority	BACnetARRAY[3] of Unsigned	-	R	R
Ack_Required	BACnetEventTransitionBits	-	R	R
Recipient_List	BACnetLIST of BACnetDestination	-	R	R
Profile_Name	CharacterString	-	O	-

## 6 Connections

**NOTE:** Torque to be applied on the ties and power connector screws (1,2,3) is 1.2 Nm

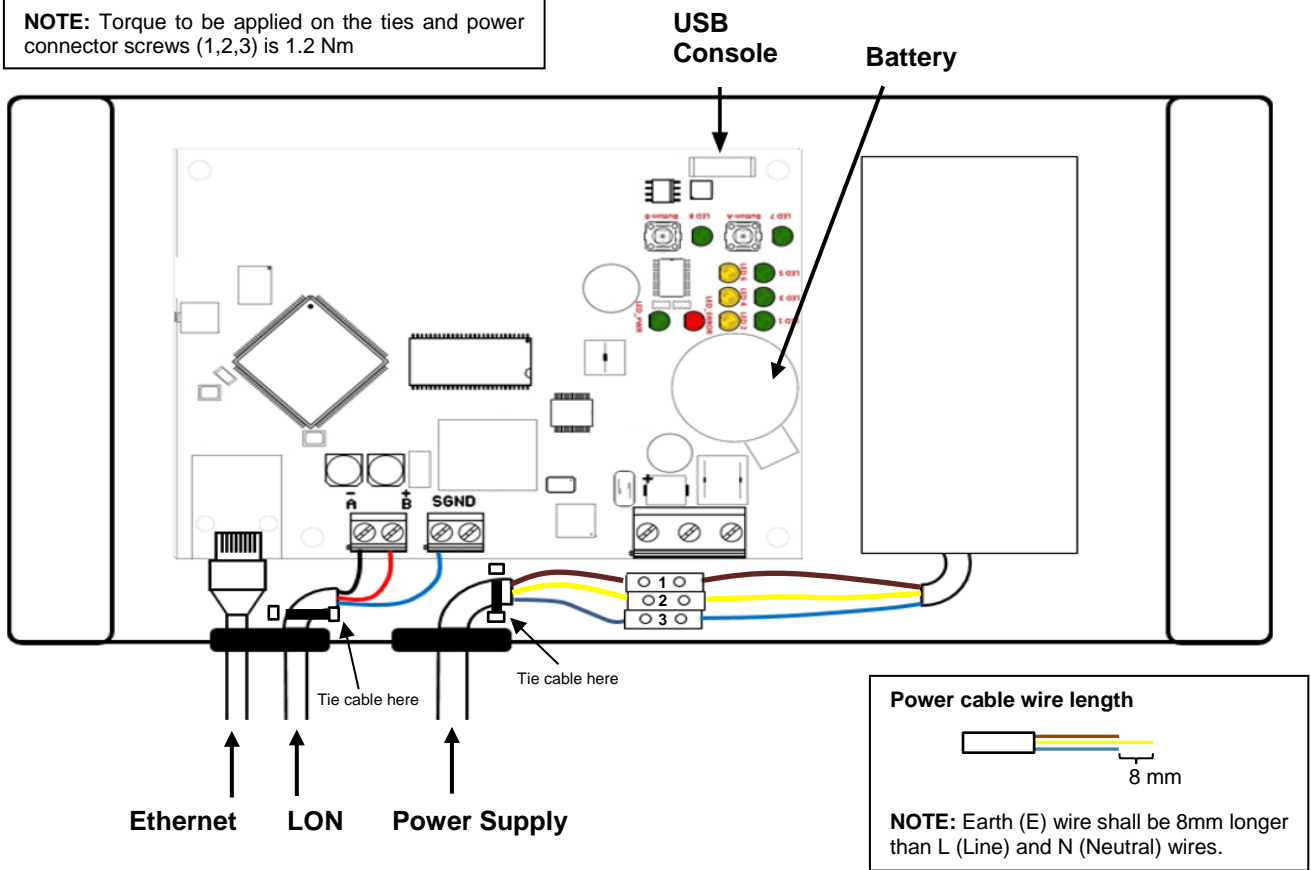


Figure 6.1 Gateway connections

**NOTE:** Mount the device in a vertical position and ensure proper space for all connectors when mounted. Product is to be connected only to Ethernet and LON networks without routing to the outside plant and connect to outdoor devices through SELV ports.

**CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

**IMPORTANT:** Tight the Power Supply and the LON cables to one of the 4 cable tie holes fixed to the casing with the plastic ties inside the BACnet Gateway for VRF System. Do not use 2 holes to tie one cable.

### Power Supply

Connect mains to the power supply connector as:

- 1.- Brown: Line (L)
- 2.- Yellow: Earth / Ground (E)
- 3.- Blue: Neutral (N)

A readily accessible disconnect device shall be incorporated in the building installation wiring.

### Ethernet / BACnet IP (UDP) / Console (UDP & TCP)

Connect the cable coming from the IP network to the connector ETH of the gateway. Use an Ethernet CAT5 cable.

### VRF Network

Connect the LON bus to connectors A3 (+), A4 (-) and A1/A2 (SNGD) of gateway's PCB. Respect the polarity.

### Console Port

Connect a mini-type B USB cable from your computer to the gateway to allow communication between the Configuration Software and the gateway. Remember that Ethernet connection is also allowed for configuration.

## 6.1 Power device

The first step to perform is to power up the device. To do so, a power supply working with any of the voltage range allowed is needed (check section 10). Once connected the ON led will turn on.

## 6.2 Connect to BACnet

Connect the communication cable coming from the network hub or switch to the Ethernet port (Figure above) of the gateway. The cable to be used depends on where the gateway is connected:

- Connecting directly to a BACnet/IP device: a straight Ethernet UTP/STP CAT5 cable
- Connecting to a hub or switch of the LAN of the building: a straight Ethernet UTP/STP CAT5 cable

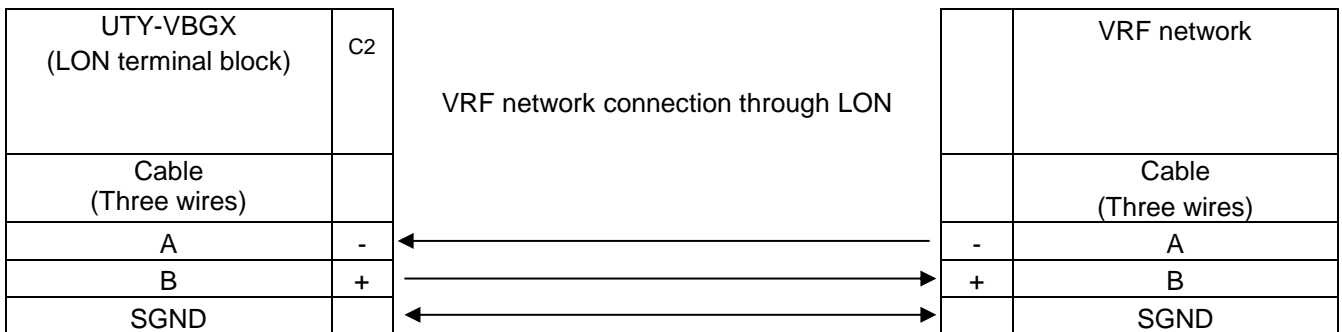
In case there is no response from the BACnet devices to the frames sent by gateway, check that they are operative and reachable from the network connection used by the gateway. Check the gateway Ethernet interface sending Pings to its IP address using a PC connected to the same Ethernet IP network. If the problem persists communicating through the LAN of the building, contact the network administrator and make sure traffic on the port used is allowed through all the LAN path.

The BACnet Gateway for VRF System comes with DHCP functionality enabled by default.

## 6.3 Connect to Fujitsu interface

Use the LON connector in the left bottom corner of the gateway in order to connect the VRF network to the UTY-VBGX. Remember to follow all safety precautions indicated by Fujitsu.

Modifying some other parameters can affect proper communication.



## 6.4 Connect to PC (Configuration tool)

This action allows the user to have access to configuration and monitoring of the device. Two methods to connect to the PC can be used:

- Ethernet: Using the ETH port of the gateway. How to check connectivity is explained in section 6.1.
- USB cable: To connect the device to the PC the USB cable supplied should be plugged to the USB Console port.

## 7 Set-up process and troubleshooting

### 7.1 Pre-requisites

It is necessary to have the BACnet/IP client device (BMS side device) operative and properly connected to the BACnet/IP port of the gateway. It is also required to have the VRF network connected to the gateway through LON wiring as defined by the standard.

Connectors, connection cables, PC for the Configuration Tool usage and other auxiliary material, if needed, are not supplied by FGL for this standard integration.

Items supplied with this product for this integration are:

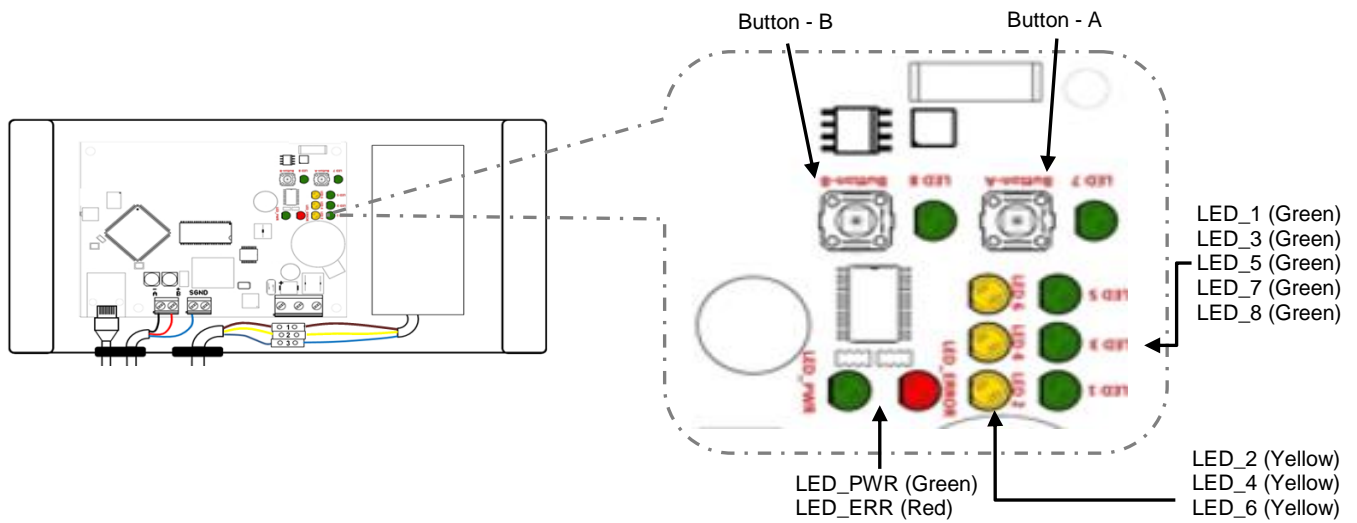
- BACnet Gateway for VRF device with firmware loaded.
- Configuration Tool to configure the BACnet Gateway for VRF.
- USB Console cable to communicate with the BACnet Gateway for VRF.
- Product documentation.

### 7.2 Set-up procedure

1. Install the Configuration Tool in your laptop, use the setup program supplied in the USB memory stick supplied with this product and follow the instructions given by the installation wizard.
2. Install the gateway in the desired installation site. The mounting can be on a stable not vibrating surface. The direction of the mounting of the case must be such that there are no cable opening towards the bottom side.
3. Connect the communication cable coming from the BACnet/IP network to the port marked as **Ethernet** of the gateway (More details in section 6.1).
4. Connect the communication cable coming from the FGL bus to the port marked as **AB SGND** of the gateway (More details in section 6.3).
5. Power up the gateway. Take care of the polarity of the supply voltage applied (More details in section 6.3).
6. Connect your laptop or desktop to the gateway (More details in section 6.4).
7. Open the Configuration Tool, create a new project. Select the connection mode to be used to connect to the gateway and click on the **Connect** button.
8. Modify the configuration as desired, save it and download the configuration file to the gateway (More details in section 0).
9. Open the *BACnet Communication Viewer* window and check that there is communication activity, some TX frames and some other RX frames. This means that the communication with the BACnet master device is OK. In case there is no communication activity between the gateway and the BACnet device check that it is operative and the communication cable used to connect both devices.
10. Open the *Fujitsu Communication Viewer* window and check that there is communication activity, some RX frames. This means that the communication with the VRF network is OK. In case of no communication activity, check that the VRF network is operative and well configured and check also the communication cable used to connect both systems.



## 7.3 LEDs status and push buttons



LED	Description
<b>LED_ERR (red)</b>	Gateway error state indication. If active, contact your supplier.
<b>LED_PWR (green)</b>	Power-on. HW-controlled / non-FW.
<b>LED_1 (green)</b>	Ethernet LNK led. Same as Ethernet green led.
<b>LED_2 (yellow)</b>	Ethernet ACT led. Same as Ethernet yellow led.
<b>LED_3 (green)</b>	Fujitsu bus TX activity.
<b>LED_4 (yellow)</b>	Fujitsu bus RX activity.
<b>LED_5 (green)</b>	BACnet TX LED.
<b>LED_6 (yellow)</b>	BACnet RX LED.
<b>LED_7 (green)</b>	Service led of LON port.
<b>LED_8 (green)</b>	Device has IP address (after DHCP or manually assigned).

Button	Description
<b>PUSH_A</b>	Sends I-Am msg on bacnet-ip side.
<b>PUSH_B</b>	Service pin of LON port.

## 8 Configuration Tool for BACnet Gateway (UTY-VBGX)

### 8.1 Introduction

The Configuration Tool for BACnet Gateway is a Windows® compatible software developed specifically to monitor and configure the UTY-VBGX gateway.

In order to install the software, simply execute the installer within the USB memory stick supplied with this product and follow instructions on the wizard.

### 8.2 Welcome screen

From the welcome screen, access is granted to: the Fujitsu General Limited Website, start a new project, load a previous project from our computer or get the current project running on the gateway.

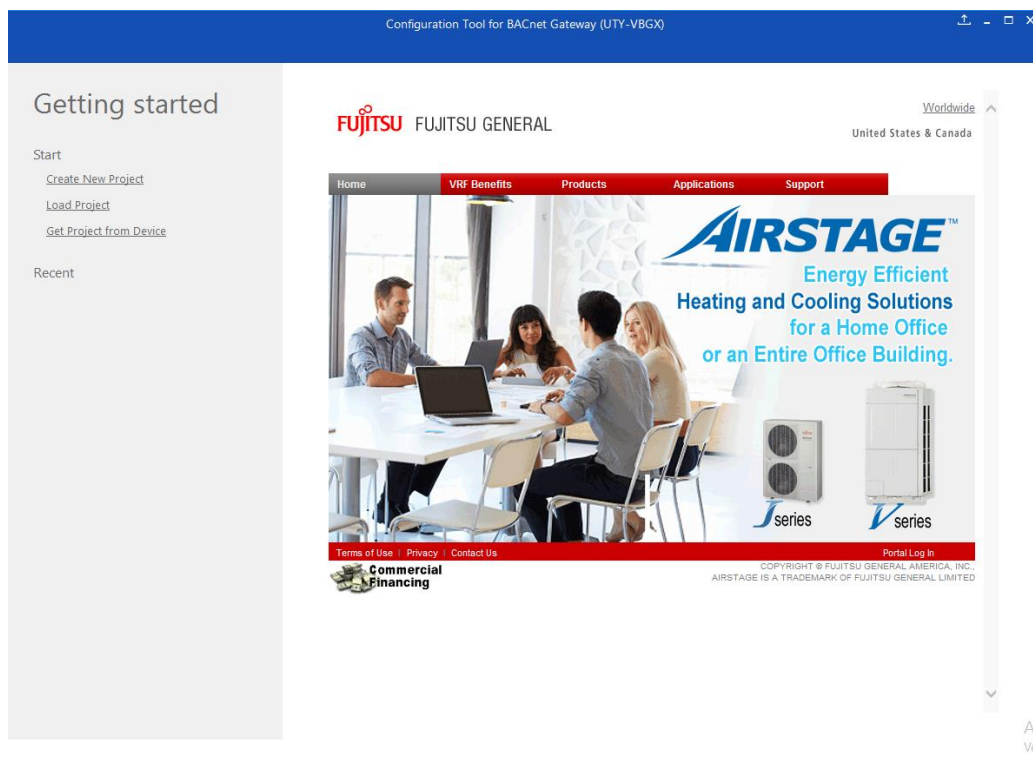


Figure 8.1 Welcome screen

#### 1. Create New Project

When pressing this button, you will be directed to the connection view. More information can be found in 8.3

#### 2. Load Project

Use this option to select a previous project you have been working with and it is already stored in your PC or an accessible storage device.

#### 3. Get Project from Device

Use this option to get the current configuration running on the gateway. Notice that to do that, you need to be connected to the gateway.

- **IP connection:** This requires Ethernet connection to the gateway and also knowing the connection password. More information about the password can be found in section 8.4.1.
- **USB connection:** This requires USB connection to the gateway.

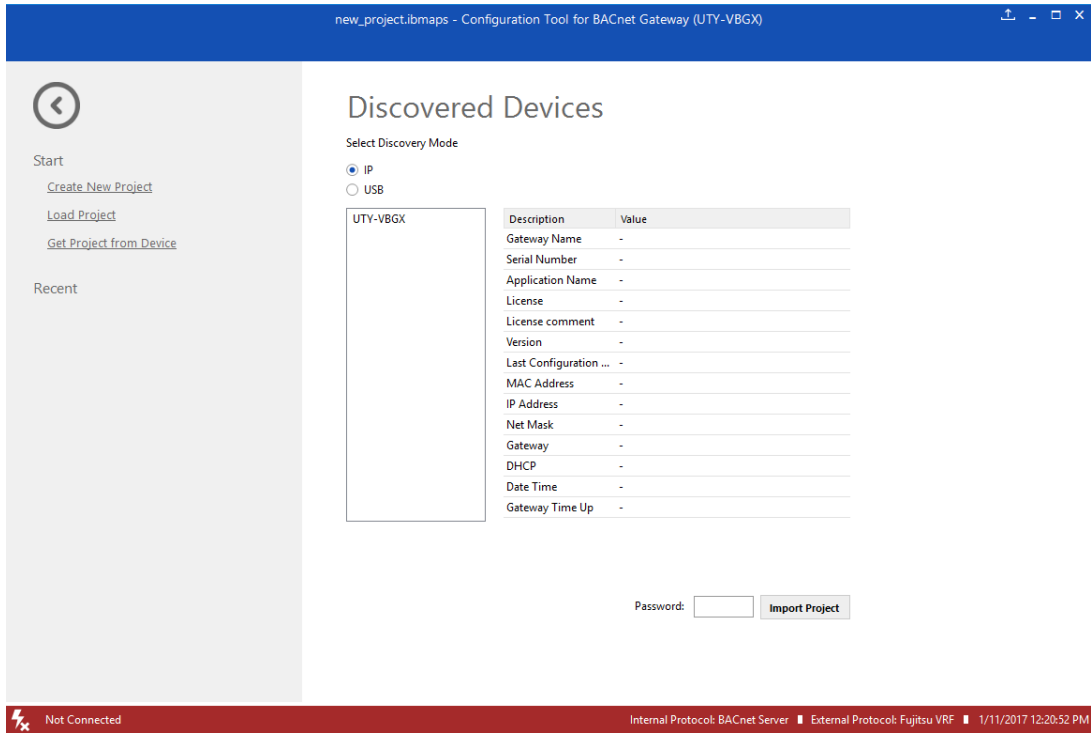


Figure 8.2 Get Project from Device view

### 8.3 Connection

Use this section to configure the connection between the laptop or desktop to the gateway.

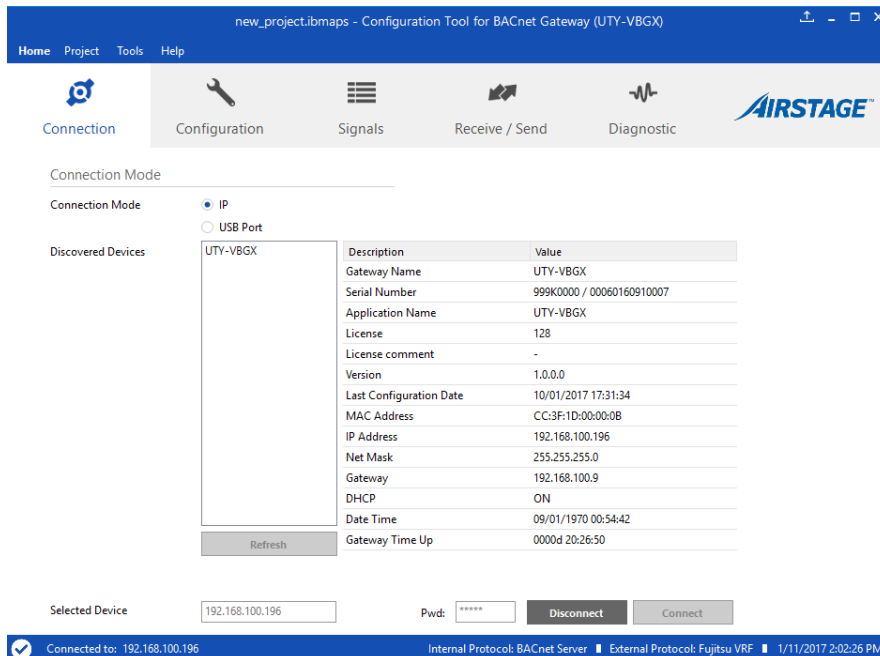


Figure 8.3 Connection configuration

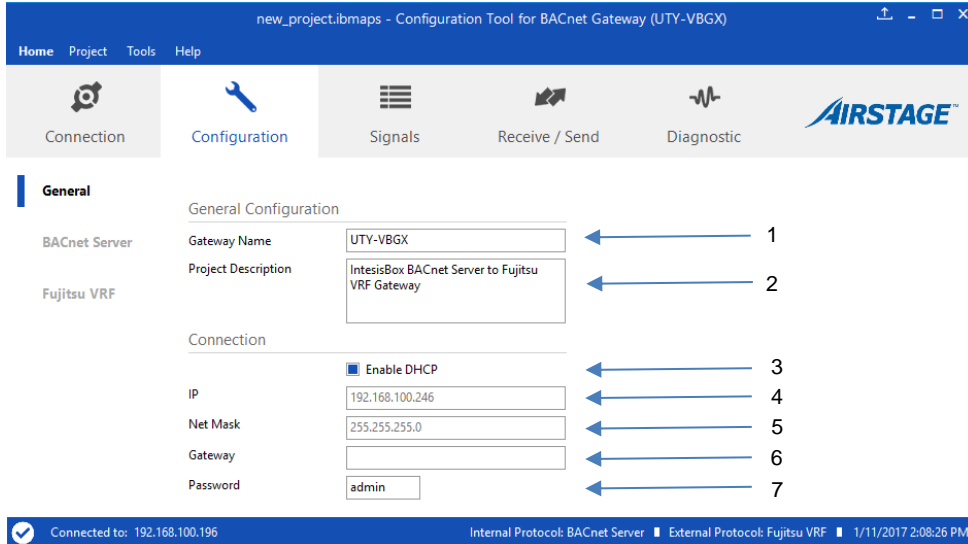
**NOTE:** If using IP connection, the Configuration Tool will automatically scan the IP network for the gateway and will show it in the list. Notice that in that case, a password is required. Default values for IP connection are: **IP: 192.168.100.144 / Password: admin**  
If installing more than one BACnet Gateway for VRF System, connect them one by one and assign an IP to each of them in case DHCP is not available.

## 8.4 Configuration

In this section is where main configuration for the signals is carried out.

### 8.4.1 General

Set the general gateway parameters.



**Figure 8.4** General configuration

1. **Gateway Name:** Descriptive name for the gateway in its use on the Configuration Tool.
2. **Project Description:** Short description of the project.
3. **Enable DHCP:** Enables and disables DHCP usage by the gateway.
4. **IP:** Enter the IP address for the gateway (**192.168.100.144** by default).
5. **NetMask:** Enter the gateway net mask address (**255.255.255.0** by default).
6. **Gateway:** Enter the router or default gateway address if needed. In case you don't want to use it, leave it blank.
7. **Password:** Enter the access password to allow IP connection to the box (**admin** by default).

8.4.2 BACnet Server

Set the BACnet parameters

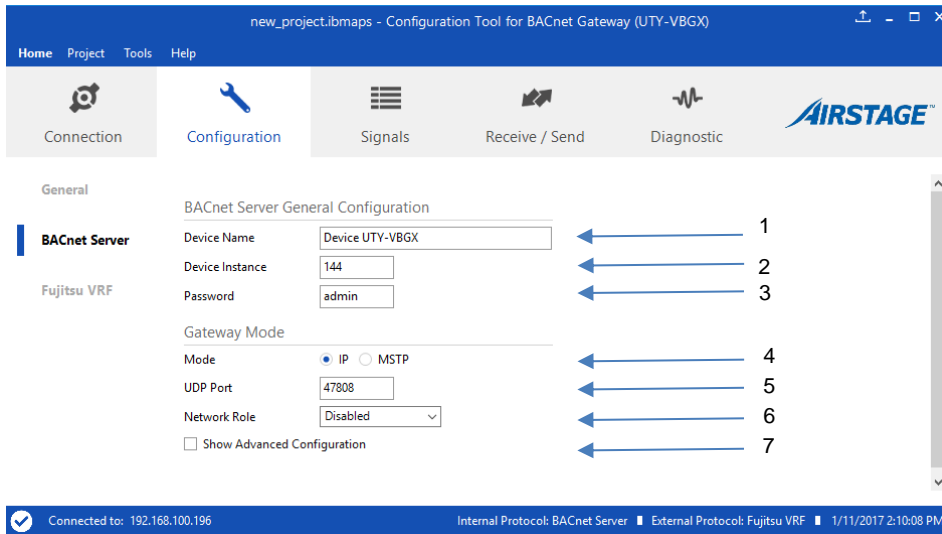


Figure 8.5 BACnet/IP interface configuration

1. **Device Name:** Device BACnet name and description (*Device UTY-VBGX* by default).
2. **Device Instance:** Device BACnet number (*144* by default, if more than one UTY-VBGX is present, this have to be a unique number for each BACnet Gateway for VRF System).
3. **Password:** Password to allow IP connection (*admin* by default).
4. **Mode:** BACnet IP mode is the only one available.
5. **UDP Port:** Used port for BACnet IP communications (*47808* by default)
6. **Network Role:** Select the gateway role from a BACnet network device point of view:
  - a. **Disabled**
  - b. **Foreign device**
  - c. **BBMD**
7. **Show advanced configuration:** Enables Notification Classes configuration.

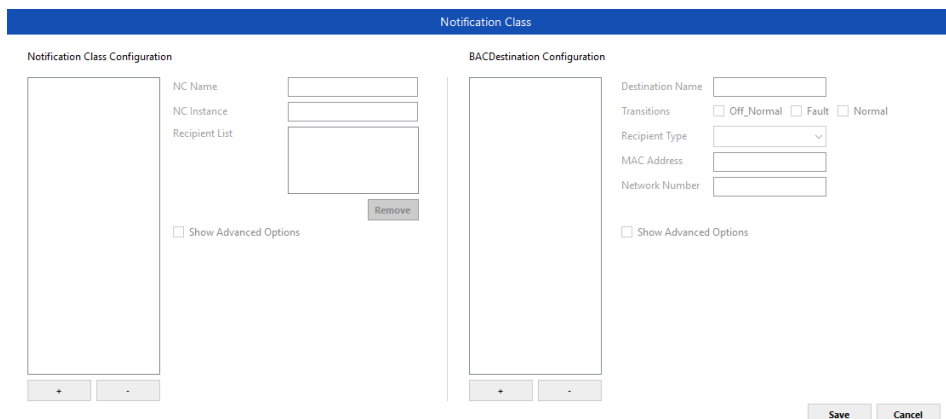


Figure 8.6 Notification Class configuration

### 8.4.3 Fujitsu VRF

Set the Fujitsu VRF parameters

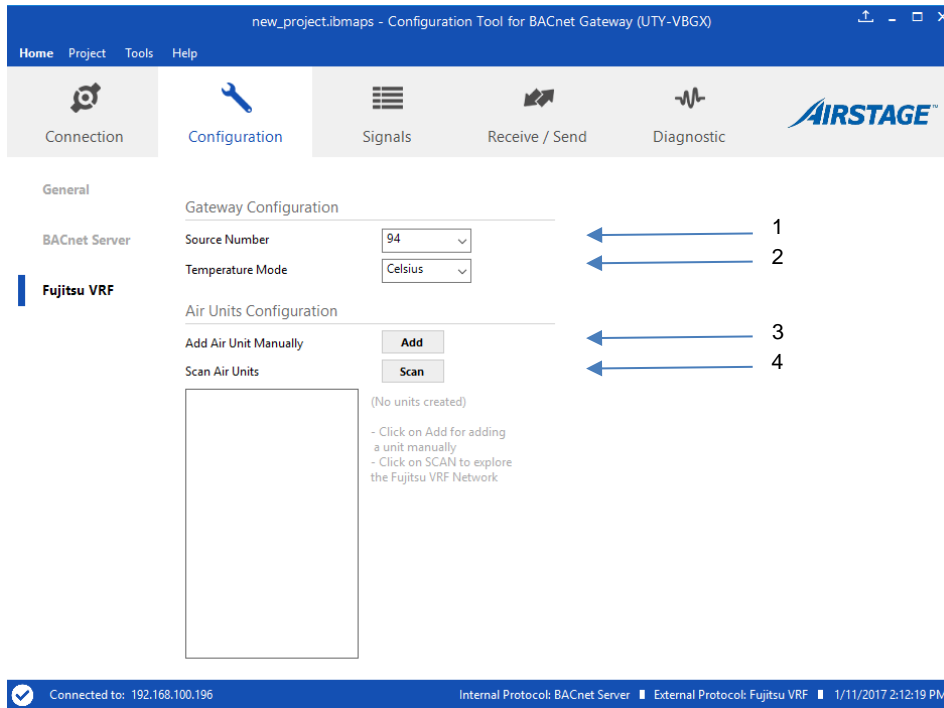


Figure 8.7 Fujitsu VRF interface configuration

1. **Unit Address:** Enter the BACnet gateway unit address of LON (values from 92 to 95 with no duplication within the same VRF network).
2. **Temperature Mode:** Enter the desired temperature units to be used (Celsius or Fahrenheit).
3. **Add Air Unit Manually:** Use this option to introduce units manually in the configuration.

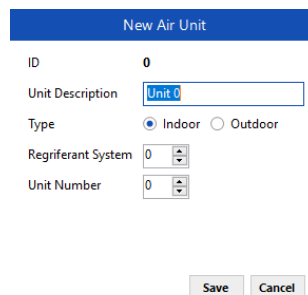


Figure 8.8 Add units manually

4. **Scan Air Units:** Use this function to scan the VRF network automatically to look for the current units connected to the system.

**Note:** Scan may take from 5 to 6 minutes depending on each installation specs.

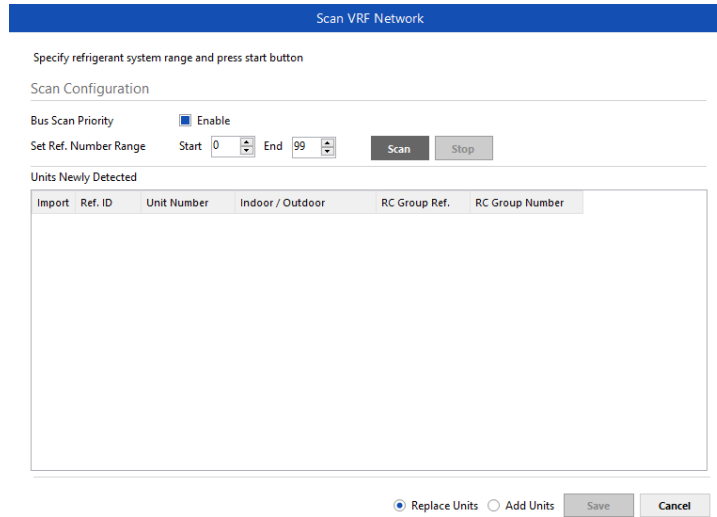


Figure 8.9 Units scan on the FGL bus

### 8.5 Signals

Check the current available signals according to the units configured on the configuration tab (see section 8.4.3).

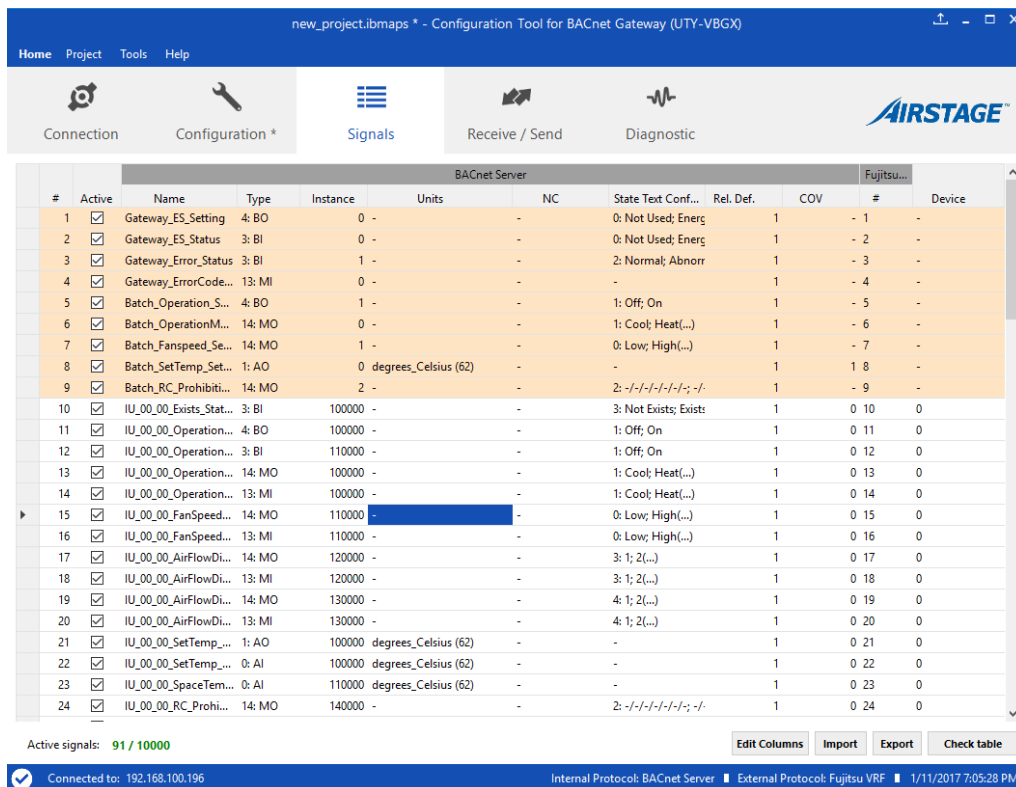


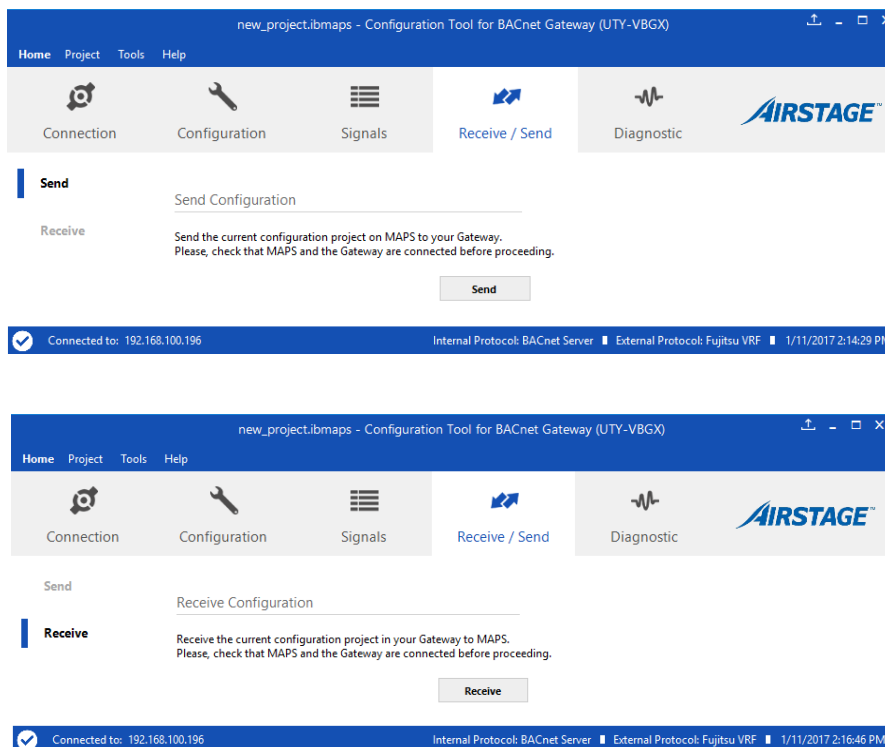
Figure 8.10 Signals' Viewer

- Signal number:** Configuration Tool internal reference.
- Active:** Indicates if the signal is currently active for this configuration. If not, it will not be considered by the tool when downloading it to the gateway.
- Object BACnet name:** Signal's descriptive name that identifies the signal.
- BACnet type:** Type of BACnet object.

5. **Object Instance:** BACnet object instance. This can be a fixed number or a formula for the identification of each element.
  6. **Units:** Units applied to each object.
  7. **NC:** Notification Class.
  8. **State text configuration:** Enums the State text to be shown.
  9. **Relinquish default value:** Indicates the current relinquish default value for this object.
  10. **COV:** Sets the COV increment value for this object.
  11. **#:** Internal gateway address for each register.
  12. **Device:** FGL device number associated to this register.
- a) **Edit Columns:** Enables or disables visible columns.
  - b) **Import:** Imports a previous existing configuration. Only Excel format is supported.
  - c) **Export:** Exports the current configuration. Only Excel format is supported.
  - d) **Check table:** Checks the current configuration to make sure

## 8.6 Receive/Send

Send or receive the current configuration of the gateway.



**Figure 8.11** Send and receive options



### 8.7 Diagnostic

Use this setting to check the current communication status of the gateway on both: BACnet and FGL.

Communication with the box, the BACnet side and the Fujitsu system can be check using the viewer available.

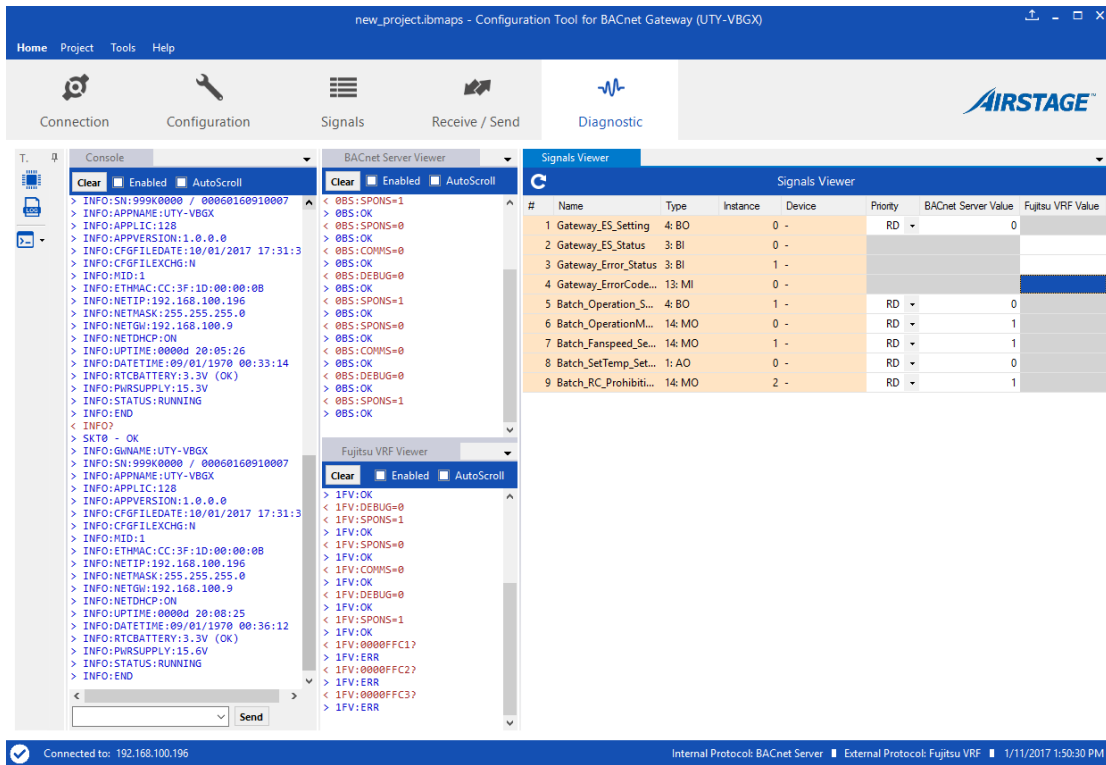


Figure 8.12 Diagnostic tool

1. **Hardware Test:** Checks the current hardware status of the gateway to ensure that is not faulty.
2. **Log:** Enables the LOG Record Mode which starts logging communications from all viewers and stores it in a zip file. This file can be sent directly to the support team to check any unexpected behavior of the box.
3. **Commands:** It sends specific commands to the gateway to perform general actions.
  - **INFO?** Asks the gateway to identify itself and show basic information.
  - **RESET!** Resets the gateway. This is not a back to factory settings action.
  - **Enable COMMS** Enables communication between the gateway and the Configuration Tool
  - **Disable COMMS** Disables communication between the gateway and the Configuration Tool

#### 8.7.1 Console

Shows basic information about the gateway and communication between BACnet and VRF systems.

#### 8.7.2 BACnet Server Viewer

Shows specific information about the BACnet communication.

#### 8.7.3 Fujitsu VRF Viewer

Shows specific information about the VRF network communication.

## 8.7.4 Signals Viewer

Check the current signal values on both: BACnet and VRF network side (connection to the VRF network and/or BACnet client is required).

The Signals Viewer can be used even though only one system is connected to the gateway, BACnet or Fujitsu AC. Therefore, it becomes convenient for supervision and testing the system.

In order to force a specific value to a signal, double-click the corresponding **BACnet Server Value** or **Fujitsu VRF Value** cell in the table. Notice that grey cells can't be read or written. Changing its value in this way, will make:

- The content of the corresponding object will be changed to this value.
- If the signal is write-enabled, it will trigger a suitable command to Fujitsu AC system.

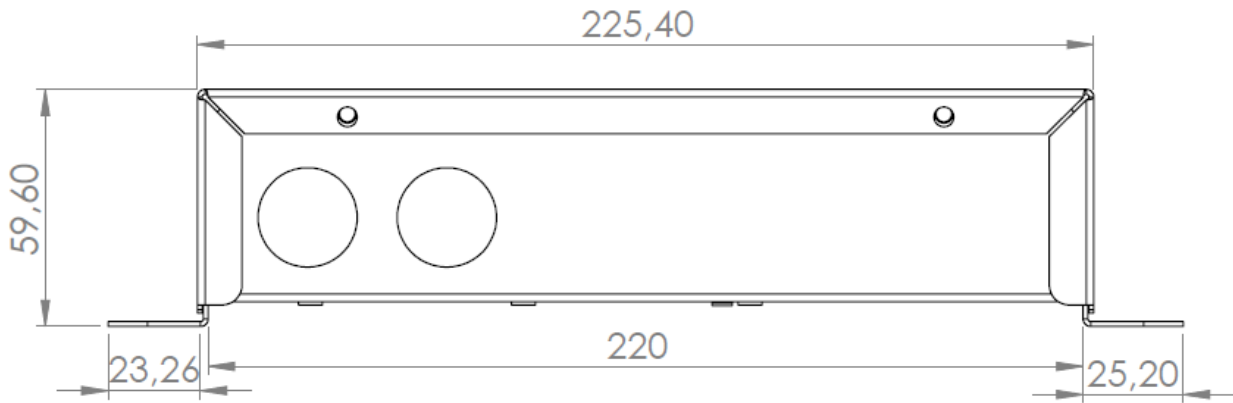
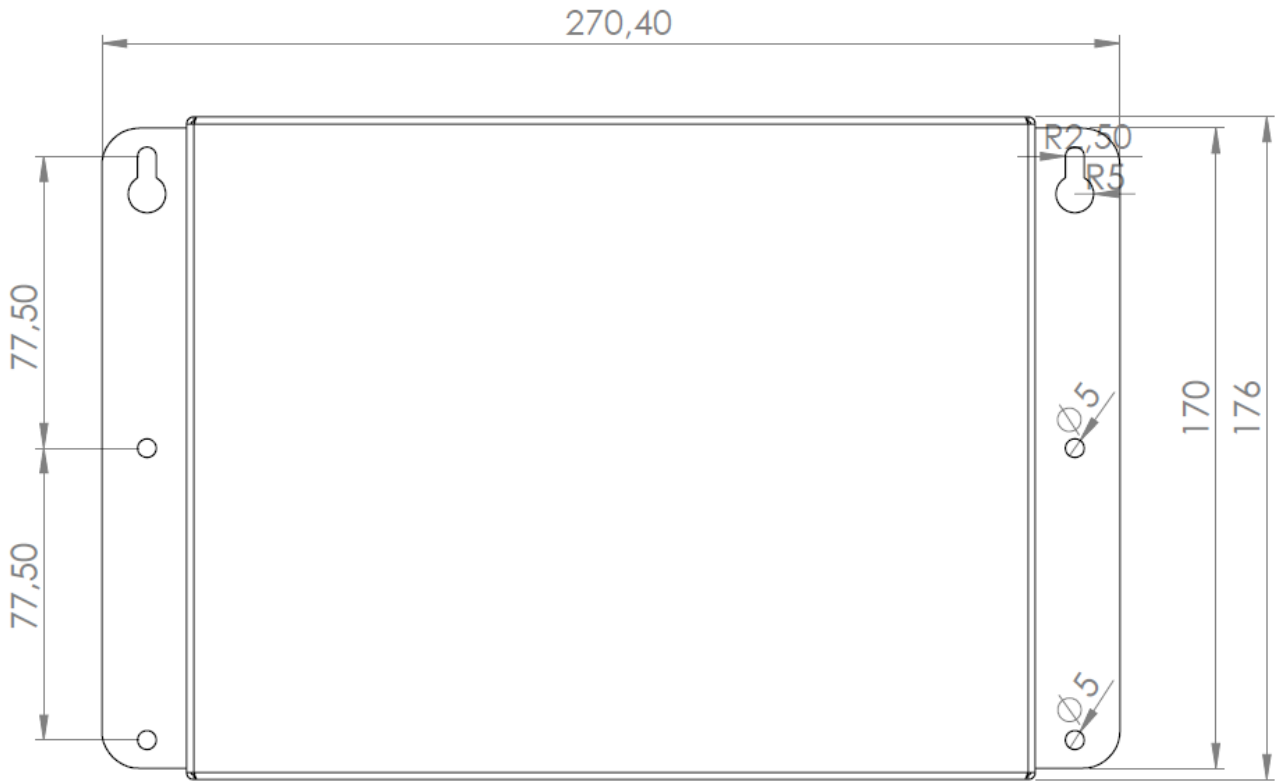
## 9 AC Unit Types compatibility

VRF Gateway for VRF System is compatible with units that are later than VRF-II series.

## 10 Mechanical & electrical characteristics

<b>Enclosure</b>	Material: Plastic, type PC (UL 94 V-0) Dimensions: 90mm x 88mm x 56mm Weight: 1.2 Kg Color: Light Grey RAL 7035
<b>Mounting</b>	Vertical Wall
<b>Power</b>	Screw terminal block for power connection (3 poles) 100 to 240VAC 50 to 60Hz 4.6W max.
<b>Terminal wiring</b> Power supply and low-voltage signals	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5 ... 2.5mm <sup>2</sup> 2 cores: 0.5 ... 1.5mm <sup>2</sup> 3 cores: not permitted
<b>Ethernet port</b>	Connector: RJ45 for shielded cat5 or higher class cable  Communication speed: 10/100 Mbps  Communicates with: BACnet IP network PC for gateway configuration
<b>Port A LON</b>	A1 A2 (2 poles screw terminal) Signal Ground  A3 A4 (2 poles screw terminal) Fujitsu VRF network connection
<b>USB port</b>	Mini Type-B receptacle connector and USB 2.0 compliant Only for gateway configuration and diagnostic 1500VDC isolation from others ports
<b>Battery</b>	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
<b>LED indicators</b>	1 x Power 1 x Error
<b>Operational temperature</b>	0°C to +60°C
<b>Operational humidity</b>	5% to 95%, non-condensing
<b>Protection</b>	IP20 (IEC60529).
<b>RoHS conformity</b>	Compliant with RoHS directive (2002/95/CE).

11 Dimensions



## 12 Annex

### 12.1 Error codes

Below you can find a list of error codes from Fujitsu air conditioning system.

#### V-II/J-II/VR-II Series

Present_Value	Error Code	Error Description
1	-	-
2	12	Remote controller communication error
3	13	Communication error between Outdoor unit
4	14	Network communication error
5	15	Scan error
6	16	Peripheral device communication error
7	21	Initial setting error
8	26	Address setting error
9	27	Master unit, slave unit set-up error
10	28	Other setting error
11	31	Indoor unit power supply abnormal
12	32	Indoor unit main PCB error
13	35	Manual auto switch error
14	37	Indoor unit transmission PCB error
15	38	Network convertor PCB error
16	41	Room temp. sensor error
17	42	Indoor unit Heat Ex. sensor error
18	51	Indoor unit fan motor1 error
19	53	Water Drain Abnormal
20	5U	Indoor unit error
21	61	Outdoor unit power supply abnormal
22	62	Outdoor unit main PCB error
23	63	Inverter PCB error
24	67	Short interruption detection protected operation
25	68	Magnetic relay error
26	69	Outdoor unit transmission PCB error
27	71	Discharge Temp Sensor Error
28	72	Compressor Temp Sensor Error
29	73	Outdoor unit Heat Ex. sensor error
30	74	Outdoor Temp Sensor Error
31	75	Suction Gas Temp Sensor Error
32	77	Heat sink temp. sensor error
33	82	Sub-cool Heat Ex. gas temp. sensor error
34	83	Liquid pipe temp. sensor error
35	84	Current sensor error
36	86	Pressure sensor error
37	92	Compressor 2 error
38	93	Compressor start up error
39	94	Trip detection
40	95	Compressor motor control error
41	97	Outdoor unit fan motor 1 error
42	99	4-way valve error
43	9U	Outdoor unit error
44	A1	Discharge temperature 1 abnormal
45	A2	Discharge temperature 2 abnormal
46	A3	Compressor temperature abnormal

47	A4	Pressure abnormal 1
48	A5	Pressure abnormal 2
49	AA	Special operation error
50	AC	Ambient temperature abnormal
51	C1	Main PCB error
52	C2	Transmission PCB error
53	C3	PCB 1 error
54	C4	PCB 2 error
55	C5	PCB 3 error
56	C6	PCB 4 error
57	C7	PCB 5 error
58	C8	Input device error
59	C9	Display device error
60	CA	EEPROM error
61	CC	Sensor error
62	CF	External connector error (USB memory)
63	CJ	Other parts error
64	-	Unknown
65	17	Electricity charge apportionment error
66	98	Outdoor unit fan motor 2 error
67	9A	Coil (Expansion Valve) error
68	52	Coil (Expansion Valve) error
69	J1	RB unit error
70	A6	Outdoor heat exchanger temperature abnormal
71	29	Connection unit number error in wired remote controller system
72	3A	Indoor unit communication circuit (wired remote controller) error

12.2 RC Prohibition

Remote Control Prohibit commands can be set/read using the values in the following correspondence table.

State Text	Description
FL	Filter display reset operation prohibited
ON	Start operation prohibited (S/V Series do not have this function)
OP	Start/stop operation prohibited
MD	Operation mode operation prohibited
TP	Set temperature operation prohibited
TR	Timer setting prohibited
ALL	All prohibited

Pesent_Value	Contents displayed in State_Text
1	-/-/-/-/-/-/-
2	-/-/-/-/-/-/FL
3	-/-/-/-/-/ON/-
4	-/-/-/-/-/ON/FL
5	-/-/-/-/OP/-/-
6	-/-/-/-/OP/-/FL
7	-/-/-/-/OP/ON/-
8	-/-/-/-/OP/ON/FL
9	-/-/-/MD/-/-/-
10	-/-/-/MD/-/-/FL
11	-/-/-/MD/-/ON/-
12	-/-/-/MD/-/ON/FL
13	-/-/-/MD/OP/-/-
14	-/-/-/MD/OP/-/FL
15	-/-/-/MD/OP/ON/-
16	-/-/-/MD/OP/ON/FL
17	-/-/TP/-/-/-/-
18	-/-/TP/-/-/-/FL
19	-/-/TP/-/-/ON/-
20	-/-/TP/-/-/ON/FL
21	-/-/TP/-/OP/-/-
22	-/-/TP/-/OP/-/FL
23	-/-/TP/-/OP/ON/-
24	-/-/TP/-/OP/ON/FL
25	-/-/TP/MD/-/-/-
26	-/-/TP/MD/-/-/FL
27	-/-/TP/MD/-/ON/-
28	-/-/TP/MD/-/ON/FL
29	-/-/TP/MD/OP/-/-
30	-/-/TP/MD/OP/-/FL
31	-/-/TP/MD/OP/ON/-
32	-/-/TP/MD/OP/ON/FL
33	-/TR/-/-/-/-/-

Pesent_Value	Contents displayed in State_Text
34	-/TR/-/-/-/-/FL
35	-/TR/-/-/-/ON/-
36	-/TR/-/-/-/ON/FL
37	-/TR/-/-/OP/-/-
38	-/TR/-/-/OP/-/FL
39	-/TR/-/-/OP/ON/-
40	-/TR/-/-/OP/ON/FL
41	-/TR/-/MD/-/-/-
42	-/TR/-/MD/-/-/FL
43	-/TR/-/MD/-/ON/-
44	-/TR/-/MD/-/ON/FL
45	-/TR/-/MD/OP/-/-
46	-/TR/-/MD/OP/-/FL
47	-/TR/-/MD/OP/ON/-
48	-/TR/-/MD/OP/ON/FL
49	-/TR/TP/-/-/-/-
50	-/TR/TP/-/-/-/FL
51	-/TR/TP/-/-/ON/-
52	-/TR/TP/-/-/ON/FL
53	-/TR/TP/-/OP/-/-
54	-/TR/TP/-/OP/-/FL
55	-/TR/TP/-/OP/ON/-
56	-/TR/TP/-/OP/ON/FL
57	-/TR/TP/MD/-/-/-
58	-/TR/TP/MD/-/-/FL
59	-/TR/TP/MD/-/ON/-
60	-/TR/TP/MD/-/ON/FL
61	-/TR/TP/MD/OP/-/-
62	-/TR/TP/MD/OP/-/FL
63	-/TR/TP/MD/OP/ON/-
64	-/TR/TP/MD/OP/ON/FL
65	ALL/-/-/-/-/-/-