BACnet® Gateway for VRF System

(UTY-ABGX)
Interface Specification

FUJITSU GENERAL LIMITED

Part. 9708569017-07

Revision History

Version	Date	Revision History
Version 1.0	2010.3.5	Initial Version
Version 1.0	2010.4.19	Added notes to the objects related to the followings; a)Limitation on the frequency of operation control. b)Limitation on the timing of operation control. c)Limitation on the simultaneous operation control.
Version 2.0	2010.9.30	•Section 1 Update PICS •Section 9 Deleted following note; a)Limitation on the frequency of operation control. •Corrected several editorial mistake.
Version 2.1	2011.8.31	•Section 1 Update PICS •Section 8.4 Added “Electricity charge apportionment error”. •Section 9.3 Added error code. S/V Series Indoor V-II/J-II Series •Corrected several editorial mistake.
Version 2.2	2012.1.31	•Section 9.1 BACnet® Gateway(Device Object Type) was revised. •Section 9.9 - 9.13 Added "DEGREES-FAHRENHEIT" for temperature units.

Version	Date	Revision History
Version 2.3	2012.7.31	•Section 1 Update PICS •Section 5 Type:Gateway MI-02 MO-01 Type:Indoor Units MI-17 •Section 8.2 Deleted (4) and (5) and added (4) newly. •Section 8.5 Changed contents of item "d" of (2). •Section 9 Added description of RB Group No. to Object_Name. •Section 9.3 Added error code to V-II/J-II/VR-II Series. •Section 9.4 Number_Of_States changed from 4 to 6. Meaning of set value also changed. •Section 9.5 Number_Of_States changed from 3 to 5. Meaning of set value also changed. •Section 9.37 Fourth State_Text changed from Outer to External. •Corrected several editorial mistake.

Contents

1 Protocol Implementation Conformance

BACnet Protocol Implementation Conformance Statement

Date: 31-July-2012
Vendor Name: Fujitsu General Limited
Product Name: BACnet® Gateway for VRF System
Product Model Number: UTY-ABGX
Applications Software Version: 0.2.3.2 Firmware Revision: ___ BACnet Protocol Revision: 7.0

Product Description:

BACnet® Gateway for VRF System is a product for providing gateway function to the building management system to control and monitor VRF air conditioning system of Fujitsu General Limited.

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)

List all BACnet Interoperability Building Blocks Supported (Annex K):
DS-RP-B, DS-RPM-B, DS-WP-B, DS-COV-B, AE-N-I-B, AE-INFO-B, AE-ASUM-B, SCHED-I-B, T-VMT-I-B, DM-DDB-A, DM-DDB-B, DM-DOB-B, DM-DCC-B, DM-TS-B, DM-UTC-B, DM-LM-B

Segmentation Capability:

☑ Segmented requests supported Window Size 1
☑ Segmented responses supported Window Size 1

Standard Object Types Supported:

Analog Input, Analog Output, Analog Value, Binary Input, Binary Output, Calendar, Device, Multi-State Input, Multi-State Output, Notification Class, Schedule, Trend Log

1) Whether objects of this type are dynamically creatable using the CreateObject service.
   No object is dynamically creatable.
2) Whether objects of this type are dynamically deletable using the DeleteObject service.
   No object is dynamically deletable.
3) List of the optional properties supported.
   No optional property is supported.
4) List of all properties that are writable where not otherwise required by this standard.
   Refer to the section 9 of the Interface Specification (this document).
5) List of proprietary properties and for each its property identifier, datatype, and meaning.
   No proprietary property exists.
6) List of any property range restrictions.
   Refer to the section 9 of the Interface Specification (this document).

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: _____

Device Address Binding:

Is static device binding supported? (This is currently necessary for 2-way communication with MS/TP slaves and certain other devices.) ☐ Yes ☑ No

Networking Options:
☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
☐ Annex H, BACnet Tunneling Router over IP
☐ BACnet/IP Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

Character Sets Supported:

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

☑ ANSI X3.4	☐ IBM™/ Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS C 6226

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:
VRF air conditioning system of Fujitsu General Limited

*Microsoft® and Windows® are registered trademarks of Microsoft Corporation in the United States. ECHELON®, LONWORKS®, and the Echelon logo are trademarks of Echelon Corporation registered in the United States and other countries.

2 BIBBs

BACnet Interoperability Building Blocks Supported(BIBBs)

Data Sharing BIBBs ■ : Supported

BIBB Type		BACnet Service	Initiate	Execute	Supported
DS-RP-A	Data Sharing-ReadProperty–A	ReadProperty	X		□
DS-RP-B	Data Sharing-ReadProperty–B	ReadProperty		X	■
DS-RPM-A	Data Sharing-ReadPropertyMultiple–A	ReadPropertyMultiple	X		□
DS-RPM-B	Data Sharing-ReadPropertyMultiple–B	ReadPropertyMultiple		X	■
DS-RPC-A	Data Sharing-ReadPropertyConditional–A	ReadPropertyConditional	X		□
DS-RPC-B	Data Sharing-ReadPropertyConditional–B	ReadPropertyConditional		X	□
DS-WP-A	Data Sharing-WriteProperty–A	WriteProperty	X		□
DS-WP-B	Data Sharing-WriteProperty–B	WriteProperty		X	■
DS-WPM-A	Data Sharing-WritePropertyMultiple–A	WritePropertyMultiple	X		□
DS-WPM-B	Data Sharing-WritePropertyMultiple–B	WritePropertyMultiple		X	□
DS-COV-A	Data Sharing-COV–A	SubscribeCOV	X		□
		ConfirmedCOVNotification		X	
		UnconfirmedCOVNotification		X	
DS-COV-B	Data Sharing-COV–B	SubscribeCOV		X	■
		ConfirmedCOVNotification	X		
		UnconfirmedCOVNotification	X		
DS-COVP-A	Data Sharing-COVP–A	SubscribeCOV	X		□
		ConfirmedCOVNotification		X	
		UnconfirmedCOVNotification		X	
DS-COVP-B	Data Sharing-COVP–B	SubscribeCOV		X	□
		ConfirmedCOVNotification	X		
		UnconfirmedCOVNotification	X		
DS-COVU-A	Data Sharing-COV-Unsolicited–A	UncofirmedCOVNotification		X	□
DS-COVU-B	Data Sharing-COV-Unsolicited–B	UncofirmedCOVNotification	X		□

Alarm and Event Management BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
AE-N-A	Alarm and Event-Notification–A	ConfirmedEventNotification		X	☐
		UnconfirmedEventNotification		X	
AE-N-I-B	Alarm and Event-Notification Internal–B	ConfirmedEventNotification	X		■
		UnconfirmedEventNotification	X		
AE-N-E-B	Alarm and Event-Notification External–B	ConfirmedEventNotification	X		☐
		UnconfirmedEventNotification	X		
AE-ACK-A	Alarm and Event-ACK–A	AcknowledgeAlarm	X		☐
AE-ACK-B	Alarm and Event-ACK–B	AcknowledgeAlarm		X	☐
AE-ASUM-A	Alarm and Event-Summary–A	GetAlarmSummary	X		☐
AE-ASUM-B	Alarm and Event-Summary–B	GetAlarmSummary		X	■
AE-ESUM-A	Event-Summary–A	GetEnrollmentSummary	X		☐
AE-ESUM-B	Event-Summary–B	GetEnrollmentSummary		X	☐
AE-INFO-A	Alarm and Event-Information–A	GetEventInformation	X		☐
AE-INFO-B	Alarm and Event-Information–B	GetEventInformation		X	■
AE-LS-A	Alarm and Event-LifeSafety–A	LifeSafetyOperation	X		☐
AE-LS-B	Alarm and Event-LifeSafety–B	LifeSafetyOperation		X	☐

SCHEDuling BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
SCHED-A	Scheduling–A (must support DS-RP-A and DS-WP-A)				☐
SCHED-I-B	Scheduling-Internal-B (shall support DS-RP-B and DS-WP-B) (shall also support ether DM-TS-B or DS-UTC-B)				■
SCHED-E-B	Scheduling-External-B (shall support SCHED-I-B and DS-WP-A)				☐

Trending BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
T-VMT-A	Trending - Viewing and Modifying Trends–A	ReadRange	X		☐
T-VMT-I-B	Trending - Viewing and Modifying Trends Internal–B	ReadRange		X	■
T-VMT-E-B	Trending - Viewing and Modifying Trends External–B	ReadRange		X	☐
T-ATR-A	Trending - Automated Trend Retrieval–A	ConfirmedEventNotification	X		☐
		ReadRange		X	
T-ATR-B	Trending - Automated Trend Retrieval–B	ConfirmedEventNotification		X	☐
		ReadRange	X		

Device Management BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
DM-DDB-A	Device Management - Dynamic Device Binding–A	Who-Is	X		■
		I-Am		X	
DM-DDB-B	Device Management - Dynamic Device Binding–B	Who-Is		X	■
		I-Am	X		
DM-DOB-A	Device Management - Dynamic Object Binding–A	Who-Has	X		□
		I-Have		X	
DM-DOB-B	Device Management - Dynamic Object Binding–B	Who-Has		X	■
		I-Have	X		
DM-DCC-A	Device Management - DeviceCommunicationControl–A	DeviceCommunicationControl	X		□
DM-DCC-B	Device Management - DeviceCommunicationControl–B	DeviceCommunicationControl		X	■
DM-PT-A	Device Management - PrivateTransfer–A	ConfirmedPrivateTransfer	X		□
		UnconfirmedPrivateTransfer	X		
DM-PT-B	Device Management - PrivateTransfer–B	ConfirmedPrivateTransfer		X	□
		UnconfirmedPrivateTransfer		X	
DM-TM-A	Device Management - Text Message–A	ConfirmedTextMessage	X		□
		UnconfirmedTextMessage	X		
DM-TM-B	Device Management - Text Message–B	ConfirmedTextMessage		X	□
		UnconfirmedTextMessage		X	
DM-TS-A	Device Management - TimeSynchronization–A	TimeSynchronization	X		□
DM-TS-B	Device Management - TimeSynchronization–B	TimeSynchronization		X	■
DM-UTC-A	Device Management - UTCTimeSynchronization–A	UTCTimeSynchronization	X		□
DM-UTC-B	Device Management - UTCTimeSynchronization–B	UTCTimeSynchronization		X	■
DM-RD-A	Device Management - ReinitializeDevice–A	ReinitializeDevice	X		□
DM-RD-B	Device Management - ReinitializeDevice–B	ReinitializeDevice		X	□
DM-BR-A	Device Management - Backup and Restore–A	AtomicReadFile	X		□
		AtomicWriteFile	X		
		CreateObject	X		
		ReinitializeDevice	X		
DM-BR-B	Device Management - Backup and Restore–B	AtomicReadFile		X	□
		AtomicWriteFile		X	
		ReinitializeDevice		X	
DM-R-A	Device Management - Restart–A	UnconfimedCOVNotification		X	□
DM-R-B	Device Management - Restart–B	UnconfimedCOVNotification	X		□

Device Management BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
DM-LM-A	Device Management - List Manipulation–A	AddListElement	X		☐
		RemoveListElement	X		
DM-LM-B	Device Management - List Manipulation–B	AddListElement		X	■
		RemoveListElement		X	
DM-OCD-A	Device Management - Object Creation and Deletion–A	CreateObject	X		☐
		DeleteObject	X		
DM-OCD-B	Device Management - Object Creation and Deletion–B	CreateObject		X	☐
		DeleteObject		X	
DM-VT-A	Device Management - Virtual Terminal–A	VT-Open	X		☐
		VT-Close	X	X	
		VT-Data	X	X	
DM-VT-B	Device Management - Virtual Terminal–B	VT-Open		X	☐
		VT-Close	X	X	
		VT-Data	X	X	

Network Management BIBBs

BIBB Type		BACnet Service	Initiate	Execute	Supported
NM-CE-A	Network Management - Connection Establishment–A	Establish-Connection-To-Network	X		☐
		Disconnect-Connection-To-Network	X		
NM-CE-B	Network Management - Connection Establishment–B	Establish-Connection-To-Network		X	☐
		Disconnect-Connection-To-Network		X	
NM-RC-A	Network Management - Router Configuration–A	Who-Is-Router-To-Network	X		☐
		I-Am-Router-To-Network		X	
		I-Could-Be-Router-To-Network		X	
		Initialize-Routing-Table	X		
		Initialize-Routing-Table-Ack		X	
NM-RC-B	Network Management - Router Configuration–B	Who-Is-Router-To-Network	X	X	☐
		I-Am-Router-To-Network	X	X	
		Initialize-Routing-Table		X	
		Initialize-Routing-Table-Ack	X		

3 Service Types

Supported Service Types

Service Type	Supported	Remarks
Alarm and Event Services		
AcknowledgeAlarm	☐	
ConfirmedCOVNotification	☐	
ConfirmedEventNotification	☐	
GetAlarmSummary	■	
GetEnrollmentSummary	☐	
SubscribeCOV	■	
File Access Services		
AtomicReadFile	☐	
AtomicWriteFile	☐	
Object Access Services		
AddListElement	■	
RemoveListElement	■	
CreateObject	☐	
DeleteObject	☐	
ReadProperty	■	
ReadPropertyConditional	☐	
ReadPropertyMultiple	■	
ReadRange	■	
WriteProperty	■	
WritePropertyMultiple	☐	
Remote Device Management Services		
DeviceCommunicationControl	■	
ConfirmedPrivateTransfer	☐	
ConfirmedTextMessage	☐	
ReinitializeDevice	☐	
Virtual Terminal Services		
VtOpen	☐	
VtClose	☐	
VtData	☐	
Security Services		
Authenticate	☐	
RequestKey	☐	

Service Type	Supported	Remarks
Unconfirmed Services		
I-Am	■	Periodic transmission (transmission at 60 sec intervals) by broadcast is possible if so set at the Initial Setting screen.
		I-Am is also sent by broadcast at application startup.
I-Have	□	
UnconfirmedCOVNotification	□	
UnconfirmedEventNotification	□	
UnconfirmedPrivateTransfer	□	
UnconfirmedTextMessage	□	
TimeSynchronization	■	When received, time is also set to all VRF units if so set at the Initial Setting screen. A maximum 30 secs error is possible depending on the VRF unit configuration.
UtcTimeSynchronization	■	When received, time is also set to all VRF units if so set at the Initial Setting screen. A maximum 30 secs error is possible depending on the VRF unit configuration.
Who-Has	■	
Who-Is	■	For RecipientList of NotificationClass
LifeSafetyOperation	□	
SubscribeCOVProperty	□	
GetEventInformation	■	

4 Object Types

Supported Object Types

Object Type	Supported
Analog-Input	■
Analog-Output	■
Analog-Value	■
Binary-Input	■
Binary-Output	■
Binary-Value	□
Calender	■
Command	□
Device	■
Event-Enrollment	□
File	□
Group	□
Loop	□
Multistate-Input	■
Multistate-Output	■
Notification-Class	■
Program	□
Schedule	■
Averaging	□
Multistate-Value	□
Trend-Log	■
Life-Safety-Point	□
Life-Safety-Zone	□
Accumulator	□
Pulse-Convertor	□
Event-Log	□
Global-Group	□
Trend-Log-Multiple	□
Load-Control	□
Structured-View	□
Access-Door	□

5 Member Objects

Type:Gateway

Object Name	Code (II)	Function	Unit						Notification Class(M)	COV Broadcast Transmission	Subscribe COV
			Inactive	Active							
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6			
Device	-	Device Information							-		
BI	00	LON Network Adaptor Error Status	Normal	Abnormal					16	X	X
MI	00	LON Network Adaptor Unit Error Code	*1						56	X	X
BI	01	Gateway Error Status	Normal	Abnormal					57	X	X
MI	01	Gateway Error Code	*1						58	X	X
	02	ECA Status	Invalid	Valid (Stop)	Include-Indoor-Unit-Only	Exclude-Indoor-And-RBUnit	Include Indoor-And-RBUnit	Include-RBUnit-Only	59	X	X
MO	01	ECA Setting	Stop	Include-Indoor-Unit-Only	Exclude-Indoor-And-RBUnit	Include-Indoor-And-RBUnit	Include-RBUnit-Only		-		X
Notification	00~99	Notification Class							-		
CAL	00	Calender"Holiday1"							-		
	01	Calendar"Holiday2"							-		
	02~31	Calendar "Special Day 1"~ "Special Day 30"							-		
Schedule	00~99	Schedule Timer							-		

*1: There is no State_Text error code. Refer to Page 28 (Error content table) using the value in the Present_Value.

Type:Indoor Units

Object Name	Code (II)	Function	Unit						Notification Class(M)	COV Broadcast Transmission	Subscribe COV	VRF Series support	
			Inactive	Active									
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6				S/V	V-II/ J-II/ VR-II
AI	10	Set Temperature Status	Degree						3	X	X	X	X
	11	Space Temperature	Degree						9	X	X	X	X
	12	Auto Temp. Low Limit Status	Degree						25	X	X		X
	13	Auto Temp. High Limit Status	Degree						26	X	X		X
	14	Cool/Dry Temp. Low Limit Status	Degree						27	X	X		X
	15	Cool/Dry Temp. High Limit Status	Degree						28	X	X		X
	16	Heat Temp. Low Limit Status	Degree						29	X	X		X
	17	Heat Temp. Low Limit Status	Degree						30	X	X		X

Object Name	Code (II)	Function	Unit						Notification Class(M)	COV Broadcast Transmission	Subscribe COV	VRF Series support	
			Inactive	Active								S/V	V-II/ J-II/ VR-II
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6					
AO	10	Temperature Setting	Degree						19		X	X	X
	11	Auto Temp. Low Limit Setting	Degree						31		X		X
	12	Auto Temp. High Limit Setting	Degree						32		X		X
	13	Cool/Dry Temp. Low Limit Setting	Degree						33		X		X
	14	Cool/Dry Temp. High Limit Setting	Degree						34		X		X
	15	Heat Temp. Low Limit Setting	Degree						35		X		X
	16	Heat Temp. High Limit Setting	Degree						36		X		X
AV	10	ECA Operation Data							0		X	X	X
BI	10	Operation Status	Off	On					1	X	X	X	X
	14	Filter Sign Status	Unsigned	Signed					8	X	X	X	X
	15	Indoor Unit Error Status	Normal	Fault					10	X	X	X	X
	16	Antifreeze Operation Status	Reset	Set					37	X	X	X	X
	17	SAVE Operation Status	Normal	SAVE					38	X	X	X	X
	18	Forced Thermostat OFF Status	Reset	Set					39	X	X		X
	19	Emergency Stop Status	Normal	Stop					40	X	X	X	X
	20	Mode Mismatch Status	Normal	Mismatch					41	X	X		X
	21	Protect Antifreeze Status	Reset	Set					42	X	X		X
	22	Temp. Limit Valid Status	Invalid	Valid					43	X	X		X
BO	10	Operation Setting	Off	On					17		X	X	X
	14	Filter Sign Resetting	Reset	Not Reset					24		X	X	X
	15	Antifreeze Operation Setting	Reset	Set					44		X	X	X
	16	SAVE Operation Setting	Reset	Set					45		X	X	X
	17	Forced Thermostat OFF Setting	Reset	Set					46		X		X
	18	Emergency Stop Setting	Reset	Set					-		X	X	X
	19	Temp. Limit Valid Setting	Invalid	Valid					47		X		X
MI	10	Operation Mode Status	Cool	Heat	Fan	Dry	Auto		2	X	X	X	X
	11	Fan Speed Status	Low	High	Med	Auto			4	X	X	X	X
	12	Indoor Unit Error Code	*1						11	X	X	X	X
	13	RC Prohibition Status	*2						5	X	X	X	X
	14	Vertical Air Flow Direction Status	1	2	3	4	Swing		48	X	X	X	X
	15	Horizontal Air Flow Direction Status	1	2	3	4	5	Swing	49	X	X	X	X
	16	Special Driving Status	Normal	Defrost	Oil Recovery				50	X	X	X	X
	17	Managed Mode	None	Master	Slave	External			51	X	X		X

Object Name	Code (II)	Function	Unit						Notification Class(M)	COV Broadcast Transmission	Subscribe COV	VRF Series support	
			Inactive	Active								S/V	V-II/ J-II/ VR-II
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6					
MO	10	Operation Mode Setting	Cool						18		X	X	X
	11	Fan Speed Setting	Low						20		X	X	X
	12	RC Prohibition Setting	*2						21		X	X	X
	13	Vertical Air Flow Direction Setting	1	2	3	4	Swing		52		X	X	X
	14	Horizontal Air Flow Direction Setting	1	2	3	4	5	Swing	53		X	X	X
TL	10	ECA Operation Data Log							-			X	X

*1: There is no State_Text error code. Refer to Page 28 (Error content table) using the value in the Present_Value.
*2: Refer to “Remote controller prohibition setting table” for remote controller prohibition State_Text.

Type:Outdoor Units

Object Name	Code (II)	Function	Unit						Notification Class(M)	COV Broadcast Transmission	Subscribe COV	VRF Series support	
			Inactive	Active								S/V	V-II/ J-II/ VR-II
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6					
BI	30	Outdoor Unit Error Status	Normal	Fault					14	X	X	X	X
	31	Forced OFF Status	Reset	Set					54	X	X		X
BO	30	Forced OFF Setting	Reset	Set					55		X		X
MI	30	Outdoor Unit Priority Operation Status	Cool	Heat	Neutral	None			13	X	X	X	
	31	Outdoor Unit Error Code	*1						15	X	X	X	X
MO	30	Outdoor Low Noise Operation Setting	Stop	Level1-Quiet	Level1-Ability	Level2-Quiet	Level2-Ability		-		X		X

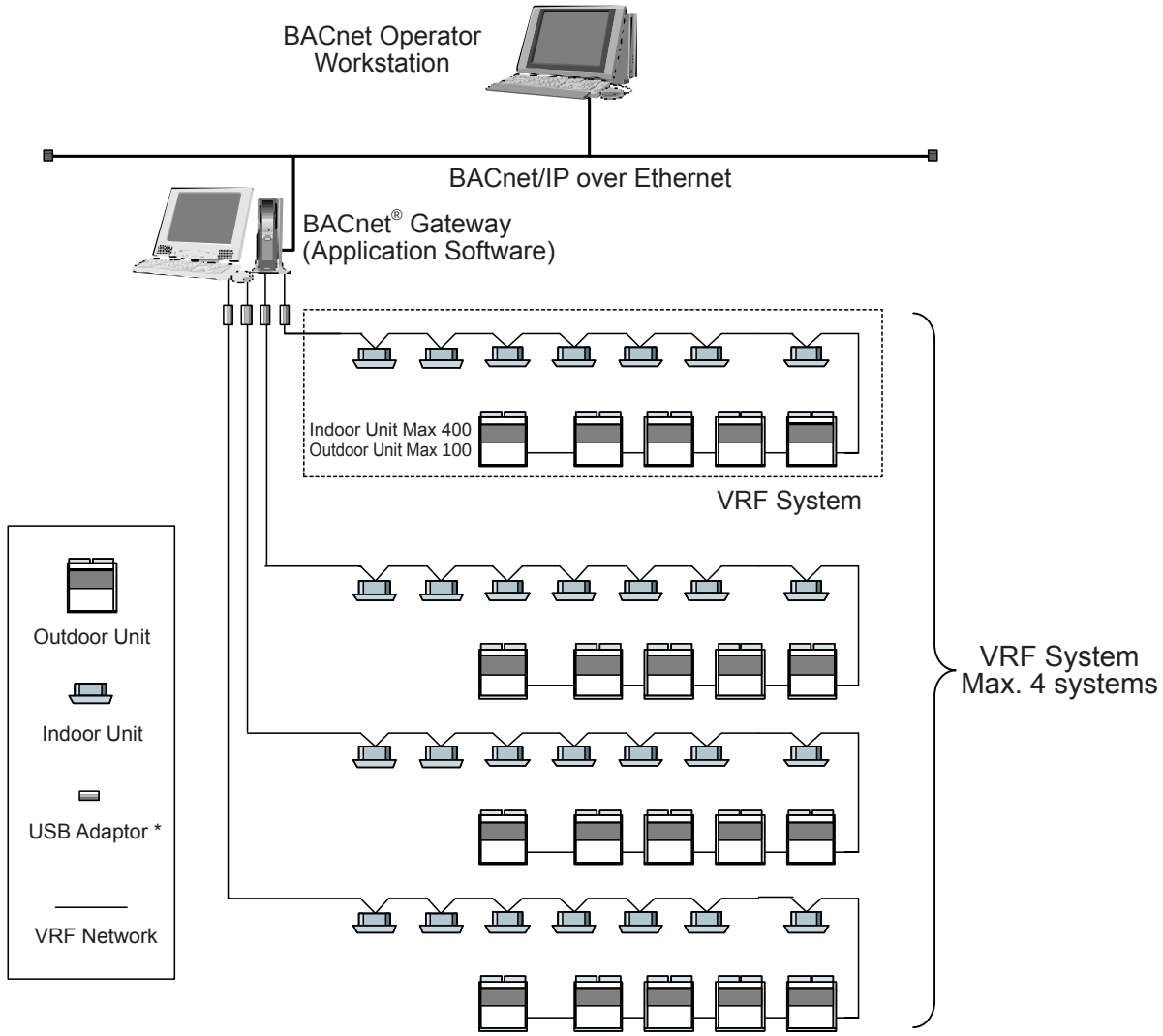
*1: There is no State_Text error code. Refer to Page 28 (Error content table) using the value in the Present_Value.

Object Instance No.

	Code	System Add. (0~3)	Ref. Add. (0~99)	Unit Add. (0~63)	Instance No. (Decimal)
Gateway	II	0	00	00	II00000
LON	II	J	00	00	IIJ0000
Indoor Unit	II	J	KK	LL	IIJKKLL
Outdoor Unit	II	J	KK	LL	IIJKKLL

*Device instance No. becomes the value set at the Initial Setting screen.
*Calendar, NotificationClass, and Schedule become [00000II].

6 Connection Diagram



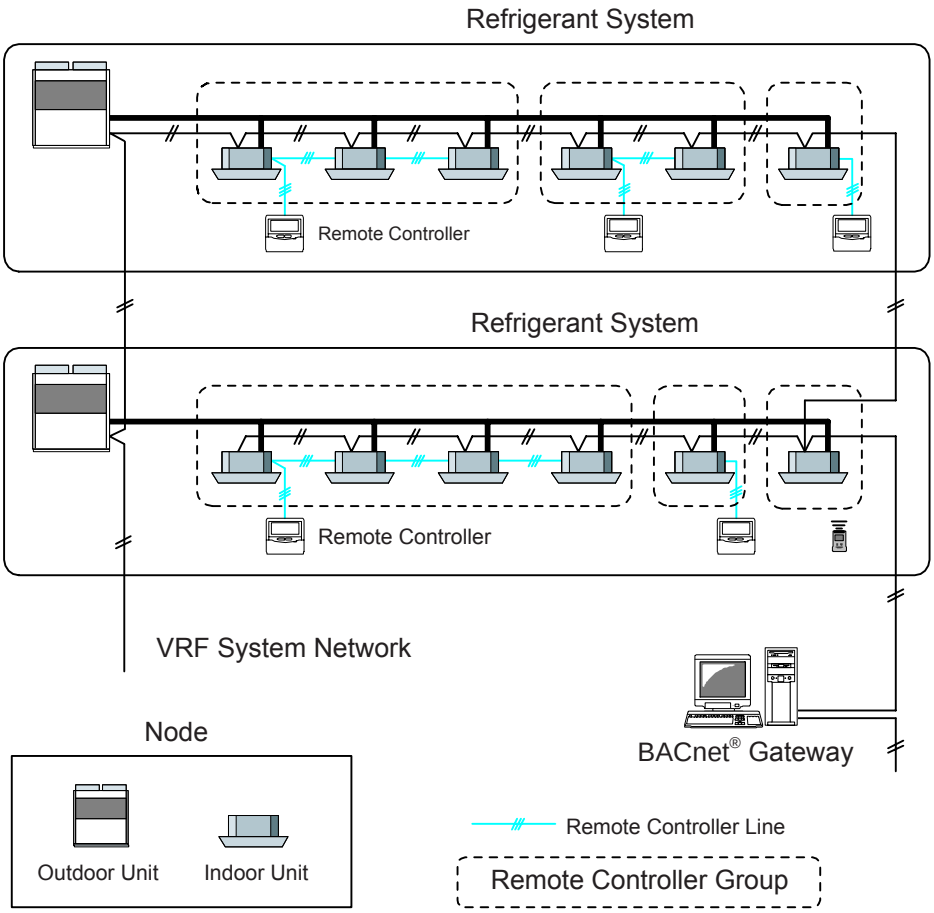
<Max. Connectable units>

VRF System	4 systems (V-II/J-II/VR-II Series)

*Up to 400 Indoor Units, 100 Outdoor Units for 1 VRF System.

7 VRF System

VRF System configuration



1 VRF System

Refrigerant System

Refrigerant System is composed of Indoor Units and Outdoor Units, which are connected with pipes with the same refrigerant.

Remote Controller Group (R.C.G)

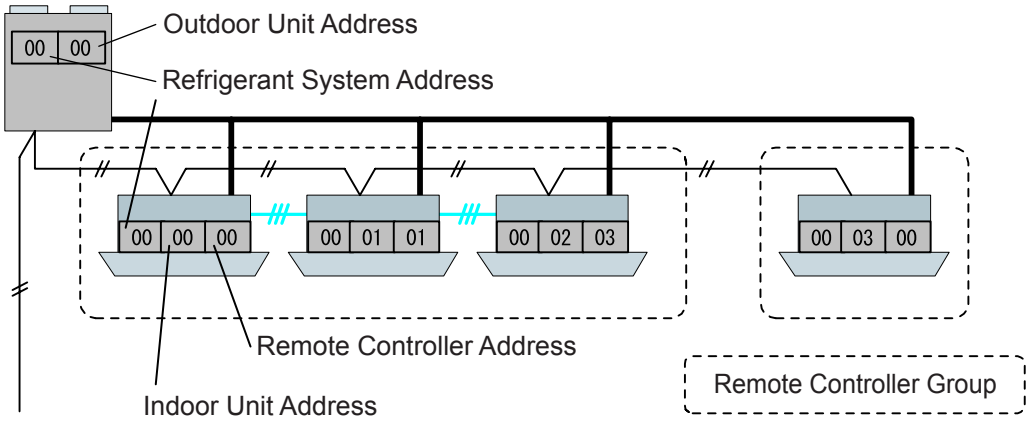
R.C.G is 1 Indoor Unit, or a group of 2 or more Indoor Units that have been connected with same remote controller line (cable). Up to 16 Indoor Units are connectable with 1 controller line.

Address Setting (in BACnet® Gateway)

VRF System Address (0 ~ 3)

This is the ID individually assigned to each VRF System in BACnet® Gateway.
This ID is enumerated in the same order as U10 USB are plugged into the PC. (PC should be running)
*USB hub can be used. Power supply specification must be met in this case. (Refer to U10 USB Specifications)
*This ID is always assigned in the same order after every PC reboot.

Address Setting (in each VRF System)



1 Refrigerant System

Refrigerant System Address (0 ~ 99)

This is the ID individually assigned to each Refrigerant System (circuit).

Indoor Unit Address (0 ~ 63)

This is the ID individually assigned to each Indoor Unit.

Outdoor Unit Address (0 ~ 3)

This is the ID individually assigned to each Outdoor Unit.
*ID 0 is the master Unit, ID 1 ~ 3 are the slave Units.

Remote Controller Address (0 ~ 15)

This is the ID individually assigned to the Indoor Units forming each Remote Controller Group.
*It is possible to use without this ID in the BACnet® Gateway.
If 1 Indoor Unit in the Group is controlled, all Indoor Units in the same Group are controlled the same.

Remote Controller Group Address

This is the ID assigned to each Remote Controller Group. This ID is equal to Refrigerant System Address & Indoor Unit Address of Indoor Unit, which Remote Controller Address is set to 0.
(This address is automatically set up in a group, it is not necessary to set it up manually.)

8 Electricity Charge Apportionment (ECA) Data

1. Purpose of electricity charge apportionment

The electricity charge apportionment function apportions air conditioner electricity charges to tenants. Generally, indoor units are used by each tenant, and calculation of the electricity charge for each tenant is easy. But since outdoor units are shared by multiple tenants, calculation of the electricity charge for each tenant is not easy.

The electricity charge apportionment function allows distribution of the electricity charges of outdoor units, which are a large part of the air conditioner power consumption, according to the air conditioner usage of each tenant.

2. Features of electricity charge apportionment of BACnet® Gateway

(1)Power meter is not used and electricity apportionment calculation is performed from the electricity charges billed from the electric power company.

(2)Apportionment calculation is performed according to indoor unit usage.

(3)In addition to electricity charge calculation of outdoor units only, electricity charge calculation including indoor units is also possible.

(4)In case of heat recovery system(VR-IIseries), power consumption of RB units may be also be included in the calculation.

3. Precautions for Using Electricity Charge Apportionment Function

(1)The electricity charge apportionment function requires correct setting and use in accordance with the descriptions in this manual and Instruction Manual.
If correct operation based on correct setting is not performed, a reasonable result may not be obtained.

(2)The electricity charge apportionment function does not calculate official electricity charges like those established by the laws and regulations of each country.

(3)Gaining an understanding of the descriptions, etc. in this manual and using the electricity charge apportionment function accordingly should be performed by the responsibility of the user.

(4)The electricity charges used in electricity charge apportionment calculation should only be that of the power consumed by the air conditioner.

(5)For the electricity charge apportionment function to function properly, BACnet® Gateway must operate continuously. If BACnet® Gateway is shut down or stopped by a power failure, etc. while the data needed by calculation is being acquired, correct electricity charge apportionment calculation may be not be possible.

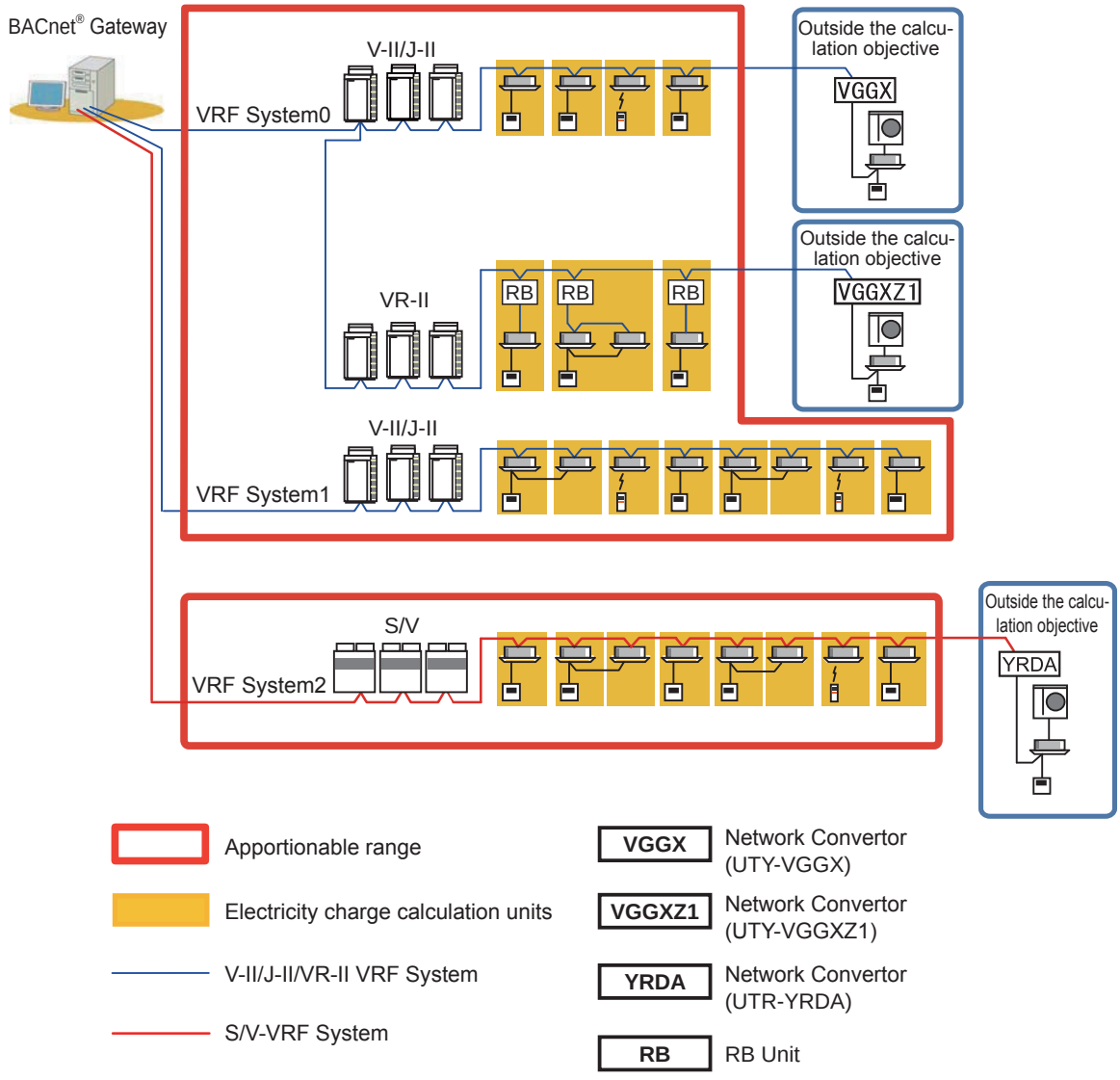
(6)Electricity charge apportionment is performed for units identified by scanning. When the unit configuration is changed, perform scanning to re-identify the target units.

(7)Constantly maintain the units which are the target of electricity charge apportionment calculation in the normal operating state.
If it is turned off for a long time, etc., data acquisition and correct calculation may not be possible.

(8)The electricity charge for units or refrigerant systems which are the target of electricity charge apportionment calculation are calculated even when it is turned off. To remove them from electricity charge apportionment calculation, turn off the power of the unit or refrigerant system which is to be removed and re-scan to remove the unit from the calculation target.

(9)Electricity charge apportionment calculation identifies units by address. When the address of a unit was changed by automatic addressing function, etc., perform scanning to re-identify the correct address.

(10)Even when an indoor unit operation time is zero, the rate (proportion) of the electricity charge apportionment is not zero because of the power consumed in the outdoor unit in standby.
(11)The apportionment calculation for the electricity charge cannot be performed for air conditioners other than VRF, such as single split type, that are connected to the VRF system via convertors.
(12)The S/V series and V-II/J-II/VR-II series adopt different refrigerant system control and the electricity charge apportionment function adopts different method reflecting the difference. So the same operation condition for units may not yield the same result for S/V and V-II/J-II/VR-II series.
(13)The electricity charge apportionment function of VRF system can only be performed from 1 controller or 1 gateway simultaneously.



4. Electricity charge apportionment error

Errors and their main causes related to electricity charge apportionment, detected by the BACnet® Gateway are described.

(1)Generation conditions

Generated when a unit that does not send the information necessary for electricity charge apportionment (non-communicating unit) is detected during the period electricity charge apportionment data collection is performed.

Judgment, performed for the outdoor unit and the indoor unit, is based on whether there is no communication for more than 30 minutes or not.

(2)Processing of errors by BACnet® Gateway

•Electricity charge apportionment error with the unit address are displayed for the non-communicating unit.

The generation time and recovery time are recorded in the error history as with the other errors.

•In the electricity charge apportionment calculation, non-communicating unit is handled the same as an indoor unit whose operation is stopped by a remote controller.

(3)Recovery conditions

When the data necessary for electricity charge apportionment can be acquired from the relevant unit, the electricity charge apportionment error is reset.

(4)Main error generation causes

Electricity charge apportionment errors are mainly generated when the power breaker of a unit is switched off. (Because apportionment data is not sent when the power breaker is switched off.)

When the power breaker of only part of the units in a refrigerant system is switched off, outdoor unit trouble may occur.

Therefore, if there is a unit whose power breaker is switched off, quickly recover the power by switching on the breaker.

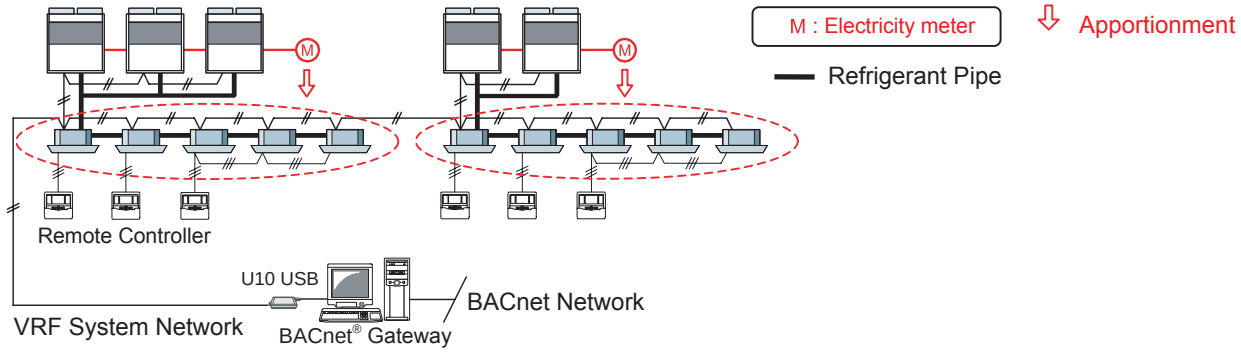
5. System Configuration & Setting BACnet® Gateway

System requirements and setup of BACnet® Gateway for performing electricity charge apportionment are explained.

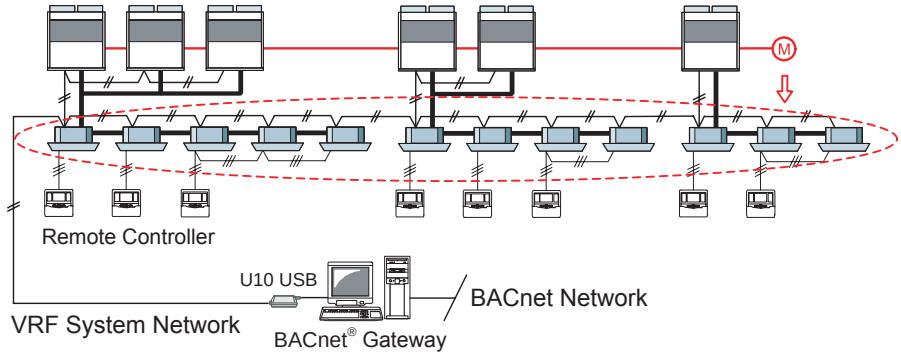
(1) System Configuration

In order to perform calculation of the electricity charge apportionment, it is necessary to have electricity meter that covers only the VRF units.

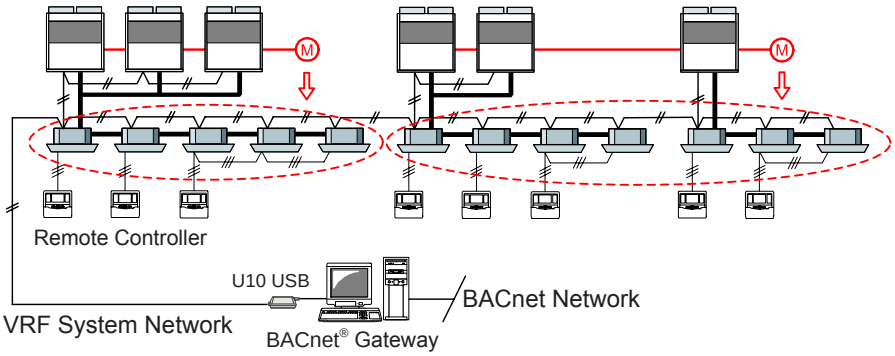
a. When there are electricity meters for every Refrigerant System



b. When there are 1 electricity meter for Refrigerant Systems



c. When there are 2 or more electricity meters for Refrigerant Systems



(2) Setting BACnet® Gateway

a. Perform scan of the VRF system.

b. For V-II/J-II/VR-II series, if the model type of the unit is not acquired or is of the type not supported by the electricity charge apportionment function, open "Model Name Setting" screen from the main screen and set valid model name for that unit. This is required for those units indicated in red in the main screen.

c. Be sure to read the Present_Value of the Multi-state Input ECA Status and check that it is "2". If the value is "1", electricity charge apportionment function will not start.

d. Select the Type of electricity charge apportionment desired from below, and write to the Present_Value of the Multi-state Output ECA Setting.

2: Calculation including indoor units only.
3: Calculation excluding indoor units and RB units.
4: Calculation including both indoor units and RB units.
5: Calculation including RB units only.

e. If the BACnet® Gateway is restarted during the data collection, the data collection will automatically continue after restart and the start/end log will be added to the Trend Log.

f. If re-scan is performed and unit without model name or unit whose model name is not supported by the electricity charge apportionment function is detected, the data collection will automatically stop. When unit configuration is changed, data collection will restart and interruption log is added.

6. Calculation of Electricity Charge

Calculation of electricity charge is performed by calculating the apportionment rate for each indoor unit and apportioning the total electricity charge to each indoor unit according to the apportionment rate. The apportionment rate for each indoor unit can be calculated based on the operation data record of each indoor unit provided by the BACnet® Gateway.

(1) Operation Data Records

The operation data to be used for the electricity charge apportionment rate calculation is of the type real, and is stored in the Trend Log object Log_Buffer property every hour (at :00 minutes) for each indoor unit.

This is used as a weight in the calculation of electricity charge apportionment rate, and the value itself has no physical meaning.

(2) Calculation Method of Apportionment Rate

a. Calculating the Operation data of a specific period for each Indoor Unit

Compute a total value Qp(n) of a specific period for each Indoor Unit respectively, using the Operation data Qt(n) for every hour in Log_Buffer property.

$$Qp(n): \text{Total value of a specific period for Indoor Unit } n = \sum_{t=2010/01/04\ (1:00)}^{2010/01/04\ (0:02)} Qt(n)$$

b. Calculating the Total value of Operation data for all Indoor Units

Compute the sum total value QSUM of the specific period for every contract, adding together Qp (n) of all the indoor units to which electricity charge is to be apportioned.

QSUM : Sum of the total value Qp for all Indoor Units = Σ Qp(n)

n = Indoor units to which electricity charge of the outdoor units are to be apportioned.

c. Calculating the electricity charge apportionment rate for each indoor unit

Compute the rate of apportionment for each indoor unit, dividing Qp(n) by QSUM.

rate(n) = Qp(n) / QSUM

Hint: When the electricity charge differs by day and night or by the day of the week, the calculation above should be performed separately for those periods.

(3) Bill from the Electric Power Company & Apportioning Charge

a. Apportioning the electricity charge to each indoor unit

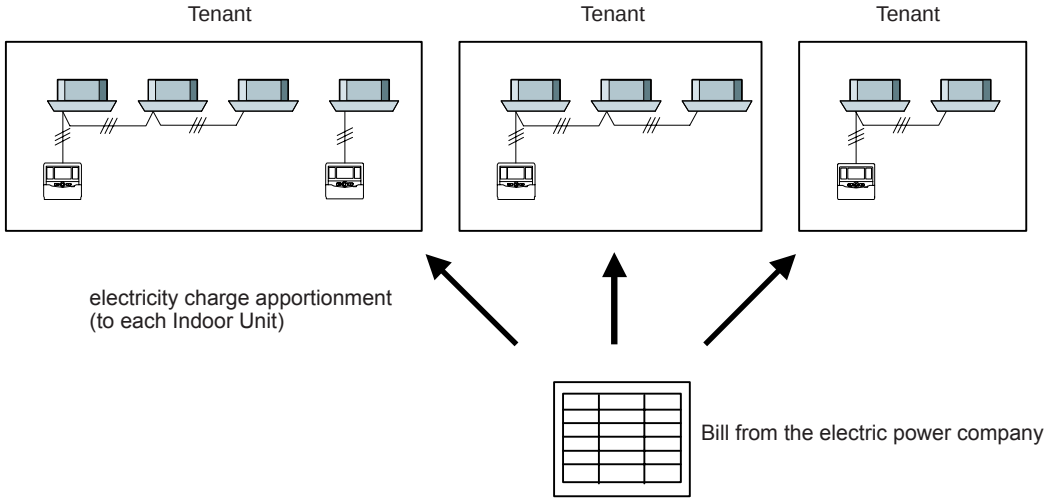
Calculation of the electricity charge apportionment to each indoor unit is performed as below using the electricity consumption charge billed from the electric power company.

$n = (The electricity consumption charge billed from electric power company) × rate(n)

Hint: Electricity charge may consist of standing charge and usage charge, additional charge, etc. Users may select various methods that best fits the administrative policy of their own. For example, in the above calculation, only the usage charge may be apportioned according to the rate(n) and the standing charge may equally be divided to the tenants, irrespective of the rate(n).

b. Creating electricity charge bill for tenants

The amount billed to a tenant can be calculated by totaling apportioned electricity charge ($n) of each indoor unit which the tenant uses.



9 Object & Properties

Precautions related to Object & Properties and their use

Properties

•Object_Name

"J-KK-LL of Object_Name" shall show the unit address.

For indoor unit with RB unit connected, "-RRRRR" is added after LL. RRRR shall show the RB group No.

Description is omitted at Object_Name from Chapter 9.1 onward.

•Description

The default shall be "IndoorUnit_J-KK-LL" for indoor unit and "OutdoorUnit_J-KK-LL" for outdoor unit.

When returning to the default, [" "(blank character)] shall be made WriteProperty. (NULL not allowed).

Change by Initial Setting screen shall be possible. (Maximum 50 characters)

•Device_Type

Shall be "device type" for indoor unit and "system type" for outdoor unit.

(*Collected by unit registration process.)

For V-II/J-II/VR-II Series units, [/Model name] is added.

•Out_Of_Service

•All becomes "FALSE" at startup.

While Out_Of_Service is "TRUE", it shall be possible to write Present_Value and Reliability, and the status of the VRF units (Present_Value/Feedback_Value) shall not be reflected. In addition, commands are not sent to the VRF unit.

•When "TRUE" is specified from the B-OWS, Reliability will immediately become "UNRELIABLE_OTHER" and when a "FALSE" command is received, the new status received from the unit will be restored.

•Present_Value

•At startup, AO,BO,MO objects Present_Value return to the default.

•Reliability

•At startup, Reliability becomes "UNRELIABLE_OTHER". When data is received from a VRF unit, it changes to "NO_FAULT_DETECTED". (Except some objects) When data is not received from a VRF unit for a fixed period, Reliability changes to "UNRELIABLE_OTHER". (The receiving interval is different for each object.)

•Notify_Type

•Since Ack-Notification is not supported, an error is returned if you try to write.

•Status_Flags

•OVERRIDDEN always becomes "FALSE".

Adaptations supported by UTY-ABGX

R: Read only.

When the value is illegal when a read command is received, the relevant error is returned from Error Class – PROPERTY.

When a write command is received, a "WRITE_ACCESS_DENIED" error is returned.

W: Both read and write is possible

When the value is illegal when a write command is received, the relevant error is returned from Error Class – PROPERTY.

- : Both read and write are not supported.

When a command is received, an "UNKNOWN_PROPERTY" error is returned.

Commands to VRF unit

•When commanded by WriteProperty from B-OWS for a nonexistent function, basically an error is returned. However, some commands are sent up to the unit as is and are judged invalid and discarded by the unit.

•When the unit is in a status in which commands are not received even if the function exists, basically an error is returned. However, depending on the timing, the command may be sent to the unit and discarded by the unit.

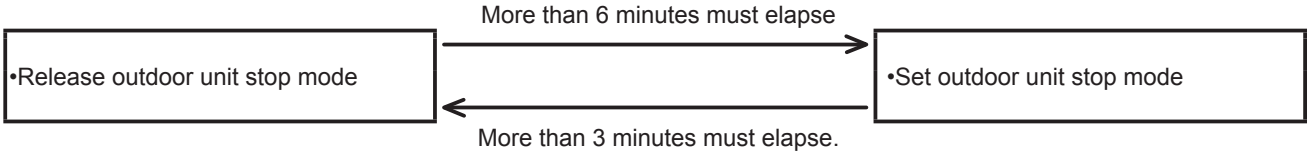
•When a command is also sent to a unit, it takes some time to return the reflected result to the Gateway.

Precautions concerning operation and control of VRF System

*To protect the compressor of the outdoor unit, please carefully read and understand the following cautions that may affect the operation of the compressor before executing the setting.

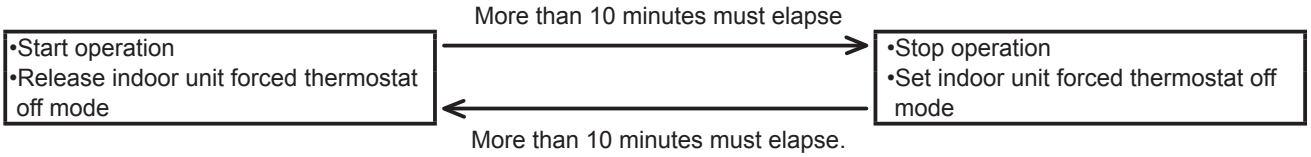
•When regularly making the following settings to the same outdoor unit by using schedule function etc., please leave the following interval.

<Corresponding function>



•When performing periodical settings like schedule settings for the following functions, perform the setting to all the indoor units in the same refrigerant system simultaneously, conforming to the timing restriction described below.

<Corresponding function>



Following objects are subject to this restriction
-Gateway : Schedule Timer
-Indoor Unit : Operation Setting, Forced Thermostat OFF Setting.
-Outdoor Unit: Forced OFF Setting.

*Forced thermostat OFF instruction and outdoor unit stop instruction

•Only 1 equipment can send these instructions for each refrigerant system.

•When these instructions are sent by multiple equipments, the system may not respond as instructed or may malfunction.

Following objects are subject to this restriction
-Gateway : Schedule Timer
-Indoor Unit : Forced Thermostat OFF Setting.
-Outdoor Unit: Forced OFF Setting.

Alarm and Event Service

The number of retries and time-out of notifications with confirmation can be set by APDU_Timeout and Number_of_APDU_Retries of the Initial Setting screen.
When an application starts up, to prevent large volume packet generation, notification is not performed even if there is a change before startup.

COV notification

COV notification is supported for objects with “X” in “SubscribeCOV” of “MemberObject”.

COV notification conditions

Object	Change	Notification property
Analog_Input Analog_Output Analog_Value	When Present_Value changes from COV_Increment or when even 1 Status_Flags change	Present_Value Status_Flags
Binary_Input Multi-state_Input Binary_Output Multi-state_Output	When Present_Value changes or when even 1 Status_Flags was change	Present_Value Status_Flags

UnconfirmedCOVNotification and ConfirmedCOVNotification functions are offered for the notification property of the objects above.

Registration by SubscribeCOV

Supports COV receive registration of these.

Broadcast transmission

Broadcast transmission is supported for objects with “X” in “COV broadcast transmission” of “MemberObject”.
When a COV event occurs, UnconfirmedCOVNotification is performed.
COV notification broadcast transmission setting is performed at the Initial Setting screen.

Intrinsic notification

Intrinsic notification is supported for objects with a value in “Notification Class” of “MemberObject”.

Intrinsic notification conditions

Object	Change	Event type
Binary_Input Multi-state_Input	When Present_Value changes to a new status for a time longer than Time_Delay and the new status is enabled by Event_Enable	CHANGE_OF_STATE
Binary_Output Multi-state_Output	When Present_Value become different from the Feedback_Value for a time longer than Time_Delay and the new status is enabled by Event_Enable	COMMAND_FAILURE
Analog_Input Analog_Output Analog_Value	When Present_Value exceeds the High_Limit and Low_Limit range for a time longer than Time_Delay and the new status is enabled by Event_Enable and Limit_Enable “or” when Present_Value returns within the High_Limit and Low_Limit range for a time longer than Time_Delay and the new status is enabled by Event_Enable and Limit_Enable	OUT_OF_RANGE

*The Feedback_Value uses the data received from the VRF unit.
*Status transition to Fault or from Fault is immediately reported. (Including Multi_State_Fault of MI)

9.1. BACnet® Gateway (Device Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Device, Instance M)	R	R
Object_Name	CharacterString	"BACnet_Gateway_for_VRF_System"	R	R
Object_Type	BACnetObjectType	DEVICE (Device Object Type)	R	R
System_Status	BACnetDeviceStatus	OPERATIONAL/ OPERATIONAL_READ_ONLY	R	R
Vendor_Name	CharacterString	"FUJITSU GENERAL LIMITED"	R	R
Vendor_Identifier	Unsigned16	144	R	R
Model_Name	CharacterString	"UTY-ABGX"	R	R
Firmware_Revision	CharacterString	""	R	R
Application_Software_ Version	CharacterString	"0.2.3.2"	R	R
Location	CharacterString	""	O	W
Description	CharacterString	"Device_" & M	O	W
Protocol_Version	Unsigned	1	R	R
Protocol_Revision	Unsigned	7	R	R
Protocol_Services_ Supported	BACnetServiceSupported	Refer to Chapter 3 [Service Types].	R	R
Protocol_Object_Types_ Supported	BACnetObjectTypes Supported	Refer to Chapter 4 [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	1024	R	R
Segmentation_Supported	BACnetSegmentation	SEGMENTED_BOTH	R	R
Max_Segments_ Accepted	Unsigned	32	O	R
VT_Classes_Supported	List of BACnetVTClass	-	O	-
Active_VT_Sessions	List of BACnetVTSession	-	O	-
Local_Date	Date	(System Time of PC's internal clock)	O	R
Local_Time	Time	(System Time of PC's internal clock)	O	R
UTC_Offset	INTEGER	(Time Zone of Microsoft® Windows® System Date/Time Properties)	O	R
Daylight_Savings_Status	BOOLEAN	(Automatically adjust clock for daylight saving changes of Time Zone of Microsoft® Windows® System Date/Time Properties)	O	R

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
APDU_Segment_Timeout	Unsigned	2,000	O	R
APDU_Timeout	Unsigned	3,000	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	-
Max_Master	Unsigned	-	O	-
Max_Info_Frames	Unsigned	-	O	-
Device_Address_Binding	List of BACnetAddressBinding	NULL (empty)	R	R
Database_Revision	Unsigned	0	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	-

*Object_Identifier and Object_Name can be set at the Initial Setting screen. (Can also be modified)
Object_Name is a maximum 50 characters (ASCII), and cannot contain any space.
*Max_APDU_Length_Accepted, APDU_Segment_Timeout, APDU_Timeout and Number_of_APDU_Retries can be changed at the Initial Setting screen.
*When the VRF network is in a special state System_Status is changed to “OPERATIONAL_READ_ONLY”.
Example: At unit scan by Secure registration, etc. (including command from other controllers)
During “OPERATIONAL_READ_ONLY” status, when a Write/AddListElement/RemoveListElement command is received, “WRITE_ACCESS_DENIED” is returned and for SubscribeCOV, “COV_SUBSCRIPTION_FAILED” is returned.
*When All Data import is performed, Database_Revision returns to the point in time at which export of data was performed.

9.2. Error Status (Binary Input Object Type)

The normal and error statuses of indoor unit, outdoor unit, LON Network Adaptor, and Gateway (application itself) can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : Indoor Unit : 15 Outdoor Unit : 30 LON : 00 (KKLL = 0000) Gateway : 01 (JKKLL = 00000)	R	R
Object_Name	CharacterString	Indoor Unit: "IndoorUnit_Error_Status_J-KK-LL" Outdoor Unit: "OutdoorUnit_Error_Status_J-KK-LL" LON: "LON_Error_Status_J0000" Gateway: "Gateway_Error_Status"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	Indoor Unit: "IndoorUnit_J-KK-LL" Outdoor Unit: "OutdoorUnit_J-KK-LL" LON: "LON_Adapter_J0000" Gateway: "Gateway"	O	W
Device_Type	CharacterString	Indoor Unit: "(Model Type)" Outdoor Unit: "(System Type)" LON: "U10 USB" Gateway: "Gateway"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	Indoor/Outdoor Unit: "Fault" LON/Gateway: "Abnormal"	O	R
Change_Of_State_Time	BACnetDatetime	(Default: First Starting Time)	O	R
Change_Of_State_Count	Unsigned	(Default: 0)	O	W
Time_Of_State_Count_Reset	BACnetDatetime	(Default: First Starting Time)	O	R
Elapsed_Active_Time	Unsigned	(Default: 0)	O	W
Time_Of_Active_Time_Reset	BACnetDatetime	(Default: First Starting Time)	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	Indoor Unit: (Default: 10) Outdoor Unit: (Default: 14) LON: (Default: 16) Gateway: (Default: 57)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	-	O	R
Profile_Name	CharacterString	-	O	-

*Change_Of_State_Count is cleared when BACnet® Gateway is initially started and is counted up each time the Present_Value changes.
However, when the maximum value is reached, the count returns to 0 and that time is set to Time_Of_State_Count_Reset.
*Elapsed_Active_Time is cleared when BACnet® Gateway is initially started and is counted up each time The Present_Value becomes Active.
However, when the maximum value is reached, the count returns to 0 and that time is set to Time_Of_Active_Time_Reset.

*For LON Network Adaptor / Gateway, Description is “Read-Only”. Reliability is fixed to “No_Fault_Detected”.

9.3. Error Code (Multi-state Input Object Type)

The error code when an indoor unit, outdoor unit, LON Network Adaptor, or Gateway (application itself) error occurs can be checked.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : Indoor Unit : 12 Outdoor Unit : 31 LON : 00 (KKLL = 0000) Gateway : 01 (JKKLL = 00000)	R	R
Object_Name	CharacterString	Indoor Unit: "IndoorUnit_Error_Status_J-KK-LL" Outdoor Unit: "OutdoorUnit_ErrorCode_Status_J-KK-LL" LON: "LON_ErrorCode_Status_J0000" Gateway: "Gateway_ErrorCode_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	S/V Series Indoor:1~18 S/V Series Outdoor:1~42 V-II/J-II/VR-II Series:1~72 LON/Gateway:1~21 (Default: 1)	R	R
Description	CharacterString	Indoor Unit: "IndoorUnit_J-KK-LL" Outdoor Unit: "OutdoorUnit_J-KK-LL" LON:"LON_Adapter_J0000" Gateway:"Gateway"	O	W
Device_Type	CharacterString	Indoor Unit: "(Model Type)" Outdoor Unit: "(System Type)" LON:"U10 USB" Gateway:"Gateway"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	Indoor Unit S/V Series:18 V-II/J-II/VR-II Series:72 Outdoor Unit S/V Series:42 V-II/J-II/VR-II Series:72 LON/Gateway:21	R	R
State_Text	BACnetArray[N] of CharacterString	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	Indoor Unit: (Default: 11) Outdoor Unit: (Default: 15) LON: (Default: 56) Gateway: (Default: 58)	O	W
Alarm_Values	List of Unsigned	Indoor Unit S/V Series:1~18 V-II/J-II/VR-II Series:1~72 Outdoor Unit S/V Series:1~42 V-II/J-II/VR-II Series:1~72 LON/Gateway:1~21 (Default: NULL)	O	W

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Fault_Values	List of Unsigned	Indoor Unit S/V Series:1~18 V-II/J-II/VR-II Series:1~72 Outdoor Unit S/V Series:1~42 V-II/J-II/VR-II Series:1~72 LON/Gateway:1~21 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*For LON Network Adaptor/Gateway, Description is “Read-Only”. Reliability also becomes No_Fault_Detected fixed.

*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.

Error content table

S/V Series Indoor

Present_Value	Error Content	Error Code
1	-	
2	Model Information Error	
3	Microcomputer Communication Error	
4	Power Supply Frequency Abnormal	
5	EEPROM Access Error	
6	EEPROM Deletion Error	
7	Room Temperature Thermistor Error	
8	Heat Exchanger Thermistor (Middle) Error	
9	Heat Exchanger Thermistor (Inlet) Error	
10	Heat Exchanger Thermistor (Outlet) Error	
11	Blower Temperature Thermistor Error	
12	Drain Abnormal	
13	Room Temperature Abnormal	
14	Indoor Unit Fan Error	
15	Standard Wired R.C. Communication Error	
16	Transmission Error	
17	Unknown	
18	Electricity Charge Apportionment Error	

S/V Series Outdoor

Present_Value	Error Content	Error Code
1	-	
2	Model Information Error	
3	Microcomputer Communication Error	
4	Power Supply Frequency Abnormal	
5	Power Supply Phase Abnormal	
6	EEPROM Access Error	
7	EEPROM Deletion Error	
8	Compressor 1 Error	
9	Compressor 2 Error	
10	Compressor 3 Error	
11	Discharge Temperature Thermistor 1 Error	
12	Discharge Temperature Thermistor 2 Error	
13	Discharge Temperature Thermistor 3 Error	
14	Outdoor Temperature Thermistor Error	
15	Heat Exchanger Inlet Thermistor 1 Error	
16	Heat Exchanger Inlet Thermistor 2 Error	
17	Heat Exchanger Inlet Thermistor 3 Error	
18	Heat Exchanger Outlet Thermistor 1 Error	
19	Heat Exchanger Outlet Thermistor 2 Error	
20	Heat Exchanger Outlet Thermistor 3 Error	
21	Suction Temperature Thermistor Error	
22	Discharge Pressure Sensor Error	
23	Liquid Line Pressure Sensor Error	
24	Suction Pressure Sensor Error	
25	Oil Sensor Error	
26	Transmission Error	
27	Discharge Temperature 1 Error	
28	Discharge Temperature 2 Error	
29	Discharge Temperature 3 Error	
30	High Pressure Error	
31	Low Pressure Error	
32	Oil Recovery Error	
33	Pump Down Error	
34	Power Supply Frequency Abnormal	
35	Power Supply Phase Abnormal	
36	PCB Error	
37	Compressor Error	
38	Thermistor Error	
39	Sensor Error (Except Thermistors)	
40	Transmission Error	
41	Operation Error (Pressure, Temperature)	
42	Unknown	

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

Present_Value	Error Content	Error Code
1	-	-
2	Remote controller communication error	12
3	Communication error between Outdoor unit	13
4	Network communication error	14
5	Scan error	15
6	Peripheral device communication error	16
7	Initial setting error	21
8	Address setting error	26
9	Master unit,slave unit set-up error	27
10	Other setting error	28
11	Indoor unit power supply abnormal	31
12	Indoor unit main PCB error	32
13	Manual auto switch error	35
14	Indoor unit transmission PCB error	37
15	Network convertor PCB error	38
16	Room temp. sensor error	41
17	Indoor unit Heat Ex. sensor error	42
18	Indoor unit fan motor1 error	51
19	Water Drain Abnormal	53
20	Indoor unit error	5U
21	Outdoor unit power supply abnormal	61
22	Outdoor unit main PCB error	62
23	Inverter PCB error	63
24	Short interruption detection protected operation	67
25	Magnetic relay error	68
26	Outdoor unit transmission PCB error	69
27	Discharge Temp Sensor Error	71
28	Compressor Temp Sensor Error	72
29	Outdoor unit Heat Ex. sensor error	73
30	Outdoor Temp Sensor Error	74
31	Suction Gas Temp Sensor Error	75
32	Heat sink temp. sensor error	77
33	Sub-cool Heat Ex. gas temp. sensor error	82
34	Liquid pipe temp. sensor error	83
35	Current sensor error	84
36	Pressure sensor error	86
37	Compressor 2 error	92
38	Compressor start up error	93
39	Trip detection	94
40	Compressor motor control error	95
41	Outdoor unit fan motor 1 error	97
42	4-way valve error	99
43	Outdoor unit error	9U
44	Discharge temperature 1 abnormal	A1
45	Discharge temperature 2 abnormal	A2
46	Compressor temperature abnormal	A3
47	Pressure abnormal 1	A4

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

LON/Gateway

Present_Value	Error Content	Error Code
1	-	-
2	Software error	F1
3	Database access error	F11
4	Database connection error	F12
5	Software restart error	F13
6	Program runtime error	F14
7	Special operation error	F15
8	Low database space	F16
9	Adaptor error	F2
10	Communication adaptor connection error	F21
11	Communication error (No data)	F22
12	External input power meter error	F23
13	Interface error	F3
14	Inter-process communication error	F31
15	Software protection key error (including WIBU Key error)	F32
16	Server/client communication error	F33
17	Environment error	F4
18	Hard disk drive capacity error	F41
19	System requirements error	F42
20	Time error	F43
21	Unknown	-

*Error codes may be added without prior notice.

9.4. Electricity Charge Apportionment Status (Multi-state Input Object Type)

The status of the electricity charge apportionment function can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 02 (JKKLL = 00000)	R	R
Object_Name	CharacterString	"Gateway_ECA_Status"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 6(Default: 1)	R	R
Description	CharacterString	"Gateway"	O	R
Device_Type	CharacterString	"Gateway"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	R
Number_Of_States	Unsigned	6	R	R
State_Text	BACnetArray[6] of CharacterString	{Invalid, Valid(Stop), IncludeIndoorUnitOnly, ExcludeIndoorAndRBUnit, IncludeIndoorAndRBUnit, IncludeRBUnitOnly}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 59)	O	W
Alarm_Values	List of Unsigned	1 ~ 6 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 6 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Reliability is ordinarily “NO_FAULT_DETECTED”.
It becomes “MULTI_STATE_FAULT” value only when the Present_Value matches Fault_Values.

*Set value

1 (Invalid): Data collection is not possible (When all model names of V-II/J-II/VR-II Series units are not set or when a unit does not exist)
*An error is returned even when a start command is received in this status.
2 (Valid(Stop)): Data collection can start (When model names are set or when S/V Series only)
3 (IncludeIndoorUnitOnly): Data is being collected using calculation including indoor units only.
4 (ExcludeIndoorAndRBUnit): Data is being collected using calculation excluding indoor units and RB units.
5 (IncludeIndoorAndRBUnit): Data is being collected using calculation including both indoor units andRB units.
6 (IncludeRBUnitOnly): Data is being collected using calculation including RB units only.

Note) When electricity charge apportionment data cannot be collected at adaptor setting and unit scan (when there are units whose model name is not set), the Present_Value returns to 0 (Invalid) and data collection stops.

9.5. Electricity Charge Apportionment Setting (Multi-state Output Object Type)

Start and end of the electricity charge apportionment function can be commanded.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 01 (JKKLL = 00000)	R	R
Object_Name	CharacterString	"Gateway_ECA_Setting"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 5(Default: 1)	W	W
Description	CharacterString	"Gateway"	O	R
Device_Type	CharacterString	"Gateway"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	R
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{Stop, IncludeIndoorUnitOnly, ExcludeIndoorAndRBUnit, IncludeIndoorAndRBUnit, IncludeRBUnitOnly}	O	R
Priority_Array	BACnetPriorityArray	{NULL, NULL, …NULL} (Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	1(Fixed)	R	R
Time_Delay	Unsigned	-	O	-
Notification_Class	Unsigned	-	O	-
Feedback_Value	Unsigned	-	O	-
Event_Enable	BACnetEventTransitionBits	-	O	-
Acked_Transitions	BACnetEventTransitionBits	-	O	-
Notify_Type	BACnetNotifyType	-	O	-
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	-	O	-
Profile_Name	CharacterString	-	O	-

*Set value

1 (Stop): Do not collect electricity charge apportionment data

2 (IncludeIndoorUnitOnly): Start data collection using calculation including indoor units only.

3 (ExcludeIndoorAndRBUnit): Start data collection using calculation excluding indoor units and RB units.

4 (IncludeIndoorAndRBUnit): Start data collection using calculation including both indoor units and RB units.

5 (IncludeRBUnitOnly): Start data collection using calculation including RB units only.

Start and end log is written to TL when each command is received.

Note) From 2 to 3 and from 3 to 2 can also be commanded, and the calculated result changes accordingly.
(The changes are not written to Log_Buffer of Trend-Log.)

9.6. Notification Class (NotificationClass Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Notification Class, Instance 0 ~ 99)	R	R
Object_Name	CharacterString	"NotificationClass_0" ~ "NotificationClass_99"	R	R
Object_Type	BACnetObjectType	NOTIFICATION_CLASS	R	R
Description	CharacterString	NotificationClass_M	O	W
Notification_Class	Unsigned	M	R	R
Priority	BACnetArray[3] of Unsigned	{N1, N2, N3} (All items are 255)	R	R
Ack_required	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	R	R
Recipient_List	List of BACnetDestination	(List of the destination)	R	W
Profile_Name	CharacterString	-	O	-

9.7. Calendar Information 0 ~ 31 (Calendar Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Calendar, Instance 0 ~ 31)	R	R
Object_Name	CharacterString	0: "Calendar_Holidays1" 1: "Calendar_Holidays2" 2 ~ 31: "Calendar_SpecialDays_01" ~ "Calendar_SpecialDays_30"	R	R
Object_Type	BACnetObjectType	CALENDAR	R	R
Description	CharacterString	0: "Holidays_1" 1: "Holidays_2" 2 ~ 31: "SpecialDays_01" ~ "SpecialDays_30"	O	W
Present_Value	BOOLEAN	FALSE/TRUE	R	R
Date_List	List of BACnetCalendarEntry	Max size : 50 For Example: ((12-JAN-2004), (11-FEB-2004), (20-MAR-2004), (29-APR-2004), ((3-MAY-2004)-(5-MAY-2004)), (20-JUL-2004), (15-SEP-2004), (20-SEP-2004), (11-OCT-2004), (3-NOV-2004), (23-NOV-2004), (23-DEC-2004), ((24-DEC-2004)-(4-JAN-2005)))	R	W
Profile_Name	CharacterString	-	O	-

9.8. Schedule Timer (Schedule Object Type)

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Schedule, Instance 0 ~ 99)	R	R
Object_Name	CharacterString	"Schedule_00" ~ "Schedule_99"	R	R
Object_Type	BACnetObjectType	SCHEDULE	R	R
Present_Value	Any	Any	R	R
Description	CharacterString	"Schedule_00" ~ "Schedule_99"	O	W
Effective_Period	BACnetDateRange	For Example: ((1-APR-2004)-(31-MAR-2005))	R	W
Weekly_Schedule	BACnetArray[7] of BACnetDailySchedule	Up to 8/day For Example: {((8:00,ACTIVE), (17:30,INACTIVE)), ((8:00,ACTIVE), (17:30,INACTIVE)), ((8:00,ACTIVE), (17:30,INACTIVE)), ((8:00,ACTIVE), (17:30,INACTIVE)), ((8:00,ACTIVE), (17:30,INACTIVE)), ((8:00,ACTIVE), (12:00,INACTIVE)), ((0:00,INACTIVE))}	O	W
Exception_Schedule	BACnetArray[32] of BACnetSpecialEvent	Max array size : 32 Up to 8/day For Example: {((11-NOV-2004), (0:00,INACTIVE), 10), (HOLIDAYS, (0:00,INACTIVE), 11), ((5-MAR-2004)-(7-MAR-2004), ((9:00, ACTIVE), (14:00,INACTIVE)), 6)}	O	W
Schedule_Default	Any	Any	R	W
List_Of_Object_Property_References	List of BACnetDeviceObject PropertyReference	Max size : 1600 *Only property in local device can be commanded. ((Device, Instance M), (Binary Output, Instance XXXXXX), Present_Value),…)	R	W
Priority_For_Writing	Unsigned(1…16)	(Default: 16)	R	W
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ CONFIGURATION_ERROR	R	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	R
Profile_Name	CharacterString	-	O	-

9.9. Set Temperature (Analog Input Object Type)

Indoor unit temperature setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_SetTemp_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT	R	R
Present_Value	REAL	S/V Series:0.0~63.0(°C)/30.0~147(°F) V-II/J-II/VR-II Series:0.0~63.5(°C)/30.0~148(°F) (Default: 0.0) CELSIUS Temperature/ FAHRENHEIT Temperature	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	DEGREES-CELSIUS/ DEGREES-FAHRENHEIT	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	(Default: S/V Series:1.0) (Default: V-II/J-II/VR-II Series:0.5)	O	W
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 3)	O	W
High_Limit	REAL	(Default: 30.0(°C)/Default: 88.0(°F))	O	W
Low_Limit	REAL	(Default: 10.0(°C)/Default: 48.0(°F))	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.10. Space Temperature (Analog Input Object Type)

Indoor unit surrounding temperature status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, Instance IIJKKLL) Code II : 11	R	R
Object_Name	CharacterString	"IndoorUnit_SpaceTemp_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT	R	R
Present_Value	REAL	S/V Series:-50.0~77.5(°C)/-58.0~176.0(°F) V-II/J-II/VR-II Series:0.0~63.5(°C)/30.0~148(°F) (Default: 0.0) CELSIUS Temperature/FAHRENHEIT Temperature	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	DEGREES-CELSIUS/DEGREES-FAHRENHEIT	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	(Default: 1.0)	O	W
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 9)	O	W
High_Limit	REAL	(Default: 30.0(°C)/Default: 88.0(°F))	O	W
Low_Limit	REAL	(Default: 10.0(°C)/Default: 48.0(°F))	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

The room temperature monitored by the air conditioner fluctuates depending on the place where the sensor is installed.
Data sent as "Room Temperature" is a data used for controlling units.
They may have values different from the actual room temperature in some cases like when the operation mode is changed.
When using this data for operation control as in setting operation mode and temperature, beware of the above and use it at the discretion of the user.
For V-II/J-II/VR-II Series, when sensor information cannot be used, Reliability becomes “UNRELIABLE_ OTHER”.

9.11. Temp. Limit Status (Analog Input Object Type)

The indoor unit temperature upper and lower limit values setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, Instance IIJKKLL) Code II : Auto Temp. Low Limit : 12 Auto Temp. High Limit : 13 Cool/Dry Temp. Low Limit :14 Cool/Dry Temp. High Limit :15 Heat Temp. Low Limit : 16 Heat Temp. High Limit : 17	R	R
Object_Name	CharacterString	12:"IndoorUnit_AutoTempLowLimit_Status_J-KK-LL" 13:"IndoorUnit_AutoTempHighLimit_Status_J-KK-LL" 14:"IndoorUnit_CoolTempLowLimit_Status_J-KK-LL" 15:"IndoorUnit_CoolTempHighLimit_Status_J-KK-LL" 16:"IndoorUnit_HeatTempLowLimit_Status_J-KK-LL" 17:"IndoorUnit_HeatTempHighLimit_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_INPUT	R	R
Present_Value	REAL	0.0~63.0(°C)/30.0~147(°F) (Default: 0.0) CELSIUS Temperature/FAHRENHEIT Temperature	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Update_Interval	Unsigned	-	O	-
Units	BACnetEngineeringUnits	DEGREES-CELSIUS/DEGREES-FAHRENHEIT	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	-	O	-
COV_Increment	REAL	(Default: 0.5)	O	W
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	12:(Default: 25) 13:(Default: 26) 14:(Default: 27) 15:(Default: 28) 16:(Default: 29) 17:(Default: 30)	O	W
High_Limit	REAL	(Default: 63.0(°C)/Default: 147.0(°F))	O	W
Low_Limit	REAL	(Default: 0.0(°C)/Default: 30.0(°F))	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All item is FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (Default: All items are FALSE)	O	R
Notify_Type	BACnetArray[3] of BACnetTimeStamp	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Depending on the unit, the Present_Value is updated only once (at AM1:00) a day.

9.12. Set Temperature Setting (Analog Output Object Type)

Set temperature can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Input, Instance IIJKKLL)	R	R
Object_Name	CharacterString	"IndoorUnit_SetTemp_Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT	R	R
Present_Value	REAL	S/V Series:0.0~63.0(°C)/30.0~147(°F) V-II/J-II/VR-II Series:0.0~63.5(°C)/30.0~148(°F) CELSIUS Temperature/ FAHRENHEIT Temperature	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Units	BACnetEngineeringUnits	DEGREES-CELSIUS/ DEGREES-FAHRENHEIT	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	S/V Series:1.0 / 2.0 V-II/J-II/VR-II Series:0.5 / 1.0	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL) CELSIUS Temperature/FAHRENHEIT Temperature	R	R
Relinquish_Default	REAL	(Default: 26.0(°C)/Default: 80.0(°F))	R	W
COV_Increment	REAL	(Default: S/V Series:1.0) (Default: V-II/J-II/VR-II Series:0.5)	O	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 19)	O	W
High_Limit	REAL	(Default: 30.0(°C)/Default: 88.0(°F))	O	W
Low_Limit	REAL	(Default: 10.0(°C)/Default: 48.0(°F))	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT/ACK-NOTIFICATION (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Setting the value exceeding the upper or lower limit of the unit returns an error.
V-II/J-II/VR-II Series : Value obtained by scanning
S/V Series : Cool, Dry, Auto: 18.0 ~ 30.0(°C)/ 64.0 ~ 88.0(°F)
Heat: S series 18.0 ~ 30.0(°C) / 64.0 ~ 88.0(°F) ,V series 10.0 ~ 30.0(°C) / 48.0 ~ 88.0(°F)
Fan: Not Used

9.13. Temp. Limit Setting (Analog Output Object Type)

Set temperature upper and lower limit values can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Output, Instance IIJKKLL) Code II : Auto Temp. Low Limit : 11 Auto Temp. High Limit : 12 Cool/Dry Temp. Low Limit :13 Cool/Dry Temp. High Limit :14 Heat Temp. Low Limit : 15 Heat Temp. High Limit : 16	R	R
Object_Name	CharacterString	11:"IndoorUnit_AutoTempLowLimit_Setting_J-KK-LL" 12:"IndoorUnit_AutoTempHighLimit_Setting_J-KK-LL" 13:"IndoorUnit_CoolTempLowLimit_Setting_J-KK-LL" 14:"IndoorUnit_CoolTempHighLimit_Setting_J-KK-LL" 15:"IndoorUnit_HeatTempLowLimit_Setting_J-KK-LL" 16:"IndoorUnit_HeatTempHighLimit_Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_OUTPUT	R	R
Present_Value	REAL	0.0~63.0(°C)/30.0~147(°F) CELSIUS Temperature/FAHRENHEIT Temperature	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE,TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Units	BACnetEngineeringUnits	DEGREES-CELSIUS/DEGREES-FAHRENHEIT	R	R
Min_Pres_Value	REAL	-	O	-
Max_Pres_Value	REAL	-	O	-
Resolution	REAL	0.5 / 1.0	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL) CELSIUS Temperature/FAHRENHEIT Temperature	R	R
Relinquish_Default	REAL	(Default: 26.0(°C)/Default: 80.0(°F))	R	W
COV_Increment	REAL	(Default: 0.5)	O	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	11:(Default: 31) 12:(Default: 32) 13:(Default: 33) 14:(Default: 34) 15:(Default: 35) 16:(Default: 36)	O	W
High_Limit	REAL	(Default: 63.0(°C)/Default: 147.0(°F))	O	W
Low_Limit	REAL	(Default: 0.0(°C)/Default: 30.0(°F))	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.14. Operation Data for the Distribution of Electricity Charge Apportionment (Analog Value Object Type)

The indoor unit electricity charge apportionment use operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Analog Value, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_ECAOperationData_J-KK-LL"	R	R
Object_Type	BACnetObjectType	ANALOG_VALUE	R	R
Present_Value	REAL	(Default: 0.0)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Units	BACnetEngineeringUnits	NO-UNITS	R	R
Priority_Array	BACnetPriorityArray	-	O	-
Relinquish_Default	REAL	-	O	-
COV_Increment	REAL	(Default: 0.0)	O	W
Time_Delay	Unsigned	(Default: 0)	O	W
Notification_Class	Unsigned	(Default: 0)	O	W
High_Limit	REAL	(Default: 0.0)	O	W
Low_Limit	REAL	(Default: 0.0)	O	W
Deadband	REAL	(Default: 0.0)	O	W
Limit_Enable	BACnetLimitEnable	{FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TURE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: ALARM)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Execute start and end commands of the data collection through MO 0100000 ECA Setting.
During data collection, Present_Value is updated every 2 minutes.
Accumulation data is written to Log_Buffer of Trend Log object at 0 minute of every hour and is accumulated every 2 minutes thereafter.
This automatically restarts when PC is restarted during the previous data collection.
This stop when configuration is changed by unit scan.

*The calculation method is different for the S/V Series and V-II/J-II/VR-II Series.

PC clock precautions

When TimeSynchrionzation/UTCTimeSynchronization service is received or when the PC time is corrected, the collected data may not be erased and may remain as is.
When the PC clock is set backward, the duplicated data will all be added.
The record that the time has changed will be recorded in the Log_Buffer of Trend Log object.

9.15. Operation Status (Binary Input Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_Operation_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	(Default: First Starting Time)	O	R
Change_Of_State_Count	Unsigned	(Default: 0)	O	W
Time_Of_State_Count_Reset	BACnetDatetime	(Default: First Starting Time)	O	R
Elapsed_Active_Time	Unsigned	(Default: 0)	O	W
Time_Of_Active_Time_Reset	BACnetDatetime	(Default: First Starting Time)	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 1)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

- Change_Of_State_Count is cleared when BACnet® Gateway is initially started and is counted up each time the Present_Value changes.
  *However, when the maximum value is reached, the count returns to 0 and that time is set to Time_Of_State_Count_Reset.
- Elapsed_Active_Time is cleared when BACnet® Gateway is initially started and is counted up each time The Present_Value becomes Active.
  *However, when the maximum value is reached, the count returns to 0 and that time is set to Time_Of_Active_Time_Reset.

9.16. Filter Sign Status (Binary Input Object Type)

Indoor unit filter sign status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 14	R	R
Object_Name	CharacterString	"IndoorUnit_FilterSign_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Unsigned"	O	R
Active_Text	CharacterString	"Signed"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 8)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Sign which shows that the filter cleaning period has arrived.
The sign period is a fixed time based on operation time.

9.17. Antifreeze Operation Status (Binary Input Object Type)

Indoor unit Antifreeze operation setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 16	R	R
Object_Name	CharacterString	"IndoorUnit_Antifreeze_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 37)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.18. SAVE Operation Status (Binary Input Object Type)

Indoor unit SAVE operation setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 17	R	R
Object_Name	CharacterString	"IndoorUnit_Save_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"SAVE"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 38)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.19. Forced Thermostat OFF Status (Binary Input Object Type)

Indoor unit forced thermostat OFF setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 18	R	R
Object_Name	CharacterString	"IndoorUnit_ThermostatOFF_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 39)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.20. Emergency Stop Status (Binary Input Object Type)

Indoor unit emergency stop operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 19	R	R
Object_Name	CharacterString	"IndoorUnit_Emergency_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (Fixed)	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Stop"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 40)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE (Fixed)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Present_Value becomes Active in case of emergency, besides being commanded from B-OWS.
*When BACnet® Gateway restarts, Present_Value returns to Inactive. (Not updated until data is received from units.)
*Reliability always takes the “NO_FAULT_DETECTED” value.

9.21. Mode Mismatch Status (Binary Input Object Type)

Indoor unit wrong mode operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 20	R	R
Object_Name	CharacterString	"IndoorUnit_ModeMismatch_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Normal"	O	R
Active_Text	CharacterString	"Mismatch"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 41)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.22. Protect Antifreeze Status (Binary Input Object Type)

Indoor unit freeze prevention operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 21	R	R
Object_Name	CharacterString	"IndoorUnit_ProtectAntifreeze_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 42)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.23. Temp. Limit Valid 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-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 22	R	R
Object_Name	CharacterString	"IndoorUnit_TempLimitValid_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Invalid"	O	R
Active_Text	CharacterString	"Valid"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 43)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*When invalid, the temperature upper and lower limit values stored in the unit are used.
*Depending on the unit, the Present_Value may be updated only once (at AM1:00) a day.

9.24. Operation Setting (Binary Output Object Type)

Operation ON/OFF can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_Operation_Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	TRUE/FALSE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Off"	O	R
Active_Text	CharacterString	"On"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 17)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.25. Filter Sign Resetting (Binary Output Object Type)

Filter sign reset can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 14	R	R
Object_Name	CharacterString	"IndoorUnit_Reset-FilterSign_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Not Reset" (No Action)	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	INACTIVE (Fixed)	R	R
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 24)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

*Only reset can be performed for the filtersign.

9.26. Antifreeze Operation Setting (Binary Output Object Type)

Antifreeze setting can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 15	R	R
Object_Name	CharacterString	"IndoorUnit_Antifreeze_Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 44)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.27. SAVE Operation Setting (Binary Output Object Type)

SAVE operation setting can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 16	R	R
Object_Name	CharacterString	"IndoorUnit_Save_Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 45)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.28. Forced Thermostat OFF Setting (Binary Output Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 17	R	R
Object_Name	CharacterString	"IndoorUnit_ThermostatOFF_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 46)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.29. Emergency Stop Setting (Binary Output Object Type)

Emergency stop operation setting can be commanded for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 18	R	R
Object_Name	CharacterString	"IndoorUnit_Emergency_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	-	O	-
Notification_Class	Unsigned	-	O	-
Feedback_Value	BACnetBinaryPV	-	O	-
Event_Enable	BACnetEventTransitionBits	-	O	-
Acked_Transitions	BACnetEventTransitionBits	-	O	-
Notify_Type	BACnetNotifyType	-	O	-
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	-	O	-
Profile_Name	CharacterString	-	O	-

*For V-II/J-II/VR-II Series, regarding unit emergency stop release, if the release signal does not arrive from all the devices that commanded stop, emergency stop will not be released.
For S/V Series, the operation OFF signal is only sent periodically and when an operation ON signal is sent from a separate controller, the unit will operate.

*Reliability always takes the “NO_FAULT_DETECTED” value.

9.30. Temp. Limit Valid 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-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 19	R	R
Object_Name	CharacterString	"IndoorUnit_TempLimitValid_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE (Default: INACTIVE)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Invalid"	O	R
Active_Text	CharacterString	"Valid"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 47)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	R
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.31. Operation Mode Status (Multi-state Input Object Type)

Indoor unit operation mode setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_OperationMode_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 5 (Default: 5)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{Cool, Heat, Fan, Dry, Auto}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 2)	O	W
Alarm_Values	List of Unsigned	1 ~ 5 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 5 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.32. Fan Speed Status (Multi-state Input Object Type)

Indoor unit air flow setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 11	R	R
Object_Name	CharacterString	"IndoorUnit_FanSpeed_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 4 (Default: 4)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	4	R	R
State_Text	BACnetArray[4] of CharacterString	{Low, High, Med, Auto}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 4)	O	W
Alarm_Values	List of Unsigned	1 ~ 4 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 4 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.33. R.C. Prohibition Status (Multi-state Input Object Type)

Indoor unit remote controller prohibition setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 13	R	R
Object_Name	CharacterString	"IndoorUnit_RC_Prohibition_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 65 (Default: 1)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	65	R	R
State_Text	BACnetArray[65] of CharacterString	Note) Refer to [Remote controller prohibition setting table].	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 5)	O	W
Alarm_Values	List of Unsigned	1 ~ 65 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 65 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

Remote controller prohibition setting table

Remote controller operation prohibition setting is possible using the value in the following correspondence table.

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

Present_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/-/-/-/-
34	-/TR/-/-/-/FL
35	-/TR/-/-/-/ON/-

Present_Value	Contents displayed in State_Text
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/-/-/-/-/-

9.34. Vertical Air Flow Direction Status (Multi-state Input Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 14	R	R
Object_Name	CharacterString	"IndoorUnit_AirFlowDirectionVT_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 5 (Default: 1)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{1, 2, 3, 4, Swing}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 48)	O	W
Alarm_Values	List of Unsigned	1 ~ 5 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 5 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.35. Horizontal Air Flow Direction Status (Multi-state Input Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 15	R	R
Object_Name	CharacterString	"IndoorUnit_AirFlowDirectionHZ_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 6 (Default: 1)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	6	R	R
State_Text	BACnetArray[6] of CharacterString	{1, 2, 3, 4, 5, Swing}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 49)	O	W
Alarm_Values	List of Unsigned	1 ~ 6 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 6 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.36. Special Driving Status (Multi-state Input Object Type)

Indoor unit special operation status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 16	R	R
Object_Name	CharacterString	"IndoorUnit_SpecialDriving_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 3 (Default: 1)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	3	R	R
State_Text	BACnetArray[3] of CharacterString	{Normal, Defrost, OilRecovery}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 50)	O	W
Alarm_Values	List of Unsigned	1 ~ 3 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 3 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.37. Managed Mode Status (Multi-state Input Object Type)

Indoor unit management status of auto mode can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 17	R	R
Object_Name	CharacterString	"IndoorUnit_ManagedMode_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 4 (Default: 1)	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	4	R	R
State_Text	BACnetArray[4] of CharacterString	{None, Master, Slave, External}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 51)	O	W
Alarm_Values	List of Unsigned	1 ~ 4 (Default: NULL)	O	W
Fault_Values	List of Unsigned	1 ~ 4 (Default: NULL)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

Master: Indicates setting to master indoor unit.
Slave: Indicates setting to managed indoor unit by master indoor unit.
External: Indicates setting to externally managed indoor unit.

9.38. Operation Mode Setting (Multi-state Output Object Type)

Operation mode can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_OperationMode_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 5 (Default: 1)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{Cool, Heat, Fan, Dry, Auto}	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 18)	O	W
Feedback_Value	Unsigned	1 ~ 5 (Default: 5)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.39. Fan Speed Setting (Multi-state Output Object Type)

Air flow can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 11	R	R
Object_Name	CharacterString	"IndoorUnit_FanSpeed_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 4 (Default: 1)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	4	R	R
State_Text	BACnetArray[4] of CharacterString	{Low, High, Med, Auto}	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 20)	O	W
Feedback_Value	Unsigned	1 ~ 4 (Default: 4)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.40. R.C. Prohibition Setting (Multi-state Output Object Type)

Remote controller prohibition can be set for indoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 12	R	R
Object_Name	CharacterString	"IndoorUnit_RC_Prohibition_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 65 (Default: 1)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	65	R	R
State_Text	BACnetArray[65] of CharacterString	Note) Refer to [Remote controller prohibition setting table].	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 21)	O	W
Feedback_Value	Unsigned	1 ~ 65 (Default: 1)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.41. Vertical Air Flow Direction Setting (Multi-state Output Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 13	R	R
Object_Name	CharacterString	"IndoorUnit_AirFlowDirectionVT_ Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 5 (Default: 1)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{1, 2, 3, 4, Swing}	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 52)	O	W
Feedback_Value	Unsigned	1 ~ 5 (Default: 1)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.42. Horizontal Air Flow Direction Setting (Multi-state Output Object Type)

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

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL) Code II : 14	R	R
Object_Name	CharacterString	"IndoorUnit_AirFlowDirectionHZ_ Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 6 (Default: 1)	W	W
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(Model Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	6	R	R
State_Text	BACnetArray[6] of CharacterString	{1, 2, 3, 4, 5, Swing}	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	(Default: 180)	O	W
Notification_Class	Unsigned	(Default: 53)	O	W
Feedback_Value	Unsigned	1 ~ 6 (Default: 1)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.43. Log of the Electricity Charge Apportionment Operation Data (Trend Log Object Type)

Electricity charge apportionment use operation status log of indoor unit can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Trend Log, Instance IIJKKLL) Code II : 10	R	R
Object_Name	CharacterString	"IndoorUnit_ECAOperationDataLog_ J-KK-LL	R	R
Object_Type	BACnetObjectType	TREND_LOG	R	R
Description	CharacterString	"IndoorUnit_J-KK-LL"	O	W
Enable	BOOLEAN	FALSE/TRUE (Default: TRUE)	W	W
Start_Time	BACnetDatetime	(Default: 01/01/1900 00:00:00(Min))	O	W
Stop_Time	BACnetDatetime	(Default: 12/31/2154 23:59:59(Max))	O	W
Log_Device_Object_Property	BACnetDeviceObject PropertyReference	((Device, Instance M), Analog Value, Instance 10JKKLL, Present_Value))	O	R
Log_Interval	Unsigned	1000 ~ 360000 *1	O	W
COV_Resubscription _Interval	Unsigned	-	O	-
Client_COV_Increment	BACnetClientCOV	-	O	-
Stop_When_Full	BOOLEAN	FALSE (Fixed)	R	R
Buffer_Size	Unsigned32	168 (Fixed)	R	R
Log_Buffer	List of BACnetLogRecord	*2	R	R
Record_Count	Unsigned32	(Default: 0)	W	W
Total_Record_Count	Unsigned32	$0 \sim 2^{32}$	R	R
Notification_Threshold	Unsigned32	-	O	-
Records_Since_Notification	Unsigned32	-	O	-
Last_Notify_Record	Unsigned32		O	-
Event_State	BACnetEventState	NORMAL (Fixed)	R	R
Notification_Class	Unsigned	-	O	-
Event_Enable	BACnetEventTransitionBits	-	O	-
Acked_Transitions	BACnetEventTransitionBits	-	O	-
Notify_Type	BACnetNotifyType	-	O	-
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	-	O	-
Profile_Name	CharacterString	-	O	-
Logging_Type	BACnetLoggintType	POLLED (Fixed)	R	R
Align_Intervals	BOOLEAN	-	O	-
Interval_Offset	Unsigned	-	O	-
Trigger	BOOLEAN	-	O	-
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ CONFIGURATION_ERROR	O	R

*1: Accepted range of values for Log_Interval is from 1000(10s) to 360000(1hour).
The default value is 360000. Data for this log is collected at 0min.
every hour, and the use of the default value at all times is strongly recommended.
Writing values below 360000 is not meaningful and may have minor influence on the operation of BACnet® Gateway in terms of performance.

*2: Log_Buffer is updated only during electricity charge apportionment data collection.

•Specify the start of collection by MO 0100000 ECA Setting.
When Enable is False or when the current time is outside the Start_Time/Stop_Time range, log collection is not performed even if being collected.

PC clock precautions

When TimeSynchrionzation/UTCTimeSynchronization service is received or when the PC time is corrected, the collected data may not be erased and may remain as is.
When the PC clock is set backward, the duplicated data will all be added.
The record that the time has changed will be recorded in the Log_Buffer of Trend Log object.

9.44. Forced OFF Status (Binary Input Object Type)

Outdoor unit forced stop setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Input, Instance IIJKKLL) Code II : 31	R	R
Object_Name	CharacterString	"OutdoorUnit_ForcedOFF_Status_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_INPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE(Default: INACTIVE)	R	R
Description	CharacterString	"OutdoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(System Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 54)	O	W
Alarm_Value	BACnetBinaryPV	ACTIVE/INACTIVE (Default: ACTIVE)	O	W
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.45. Forced OFF Setting (Binary Output Object Type)

Forced stop setting can be commanded for outdoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Binary Output, Instance IIJKKLL) Code II : 30	R	R
Object_Name	CharacterString	"OutdoorUnit_ForcedOFF_Setting_ J-KK-LL"	R	R
Object_Type	BACnetObjectType	BINARY_OUTPUT	R	R
Present_Value	BACnetBinaryPV	INACTIVE/ACTIVE(Default: INACTIVE)	W	W
Description	CharacterString	"OutdoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(System Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ UNRELIABLE_OTHER	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Polarity	BACnetPolarity	NORMAL (Fixed)	R	R
Inactive_Text	CharacterString	"Reset"	O	R
Active_Text	CharacterString	"Set"	O	R
Change_Of_State_Time	BACnetDatetime	-	O	-
Change_Of_State_Count	Unsigned	-	O	-
Time_Of_State_Count_Reset	BACnetDatetime	-	O	-
Elapsed_Active_Time	Unsigned	-	O	-
Time_Of_Active_Time_Reset	BACnetDatetime	-	O	-
Minimum_Off_Time	Unsigned32	-	O	-
Minimum_On_Time	Unsigned32	-	O	-
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	BACnetBinaryPV	(Default: INACTIVE)	R	W
Time_Delay	Unsigned	(Default: 60)	O	W
Notification_Class	Unsigned	(Default: 55)	O	W
Feedback_Value	BACnetBinaryPV	ACTIVE/INACTIVE(Default: INACTIVE)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/ TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

9.46. Priority Operation (Multi-state Input Object Type)

Outdoor unit priority operation setting status can be monitored.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Input, Instance IIJKKLL) Code II : 30	R	R
Object_Name	CharacterString	"OutdoorUnit_PriorityOperation_Status_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_INPUT	R	R
Present_Value	Unsigned	1 ~ 4(Default: 4)	R	R
Description	CharacterString	"OutdoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(System Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	NORMAL/FAULT/OFFNORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED/ MULTI_STATE_FAULT/ UNRELIABLE_OTHER	R	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	O	W
Number_Of_States	Unsigned	4	R	R
State_Text	BACnetArray[4] of CharacterString	{Cool, Heat, Neutral, None}	O	R
Time_Delay	Unsigned	(Default: 5)	O	W
Notification_Class	Unsigned	(Default: 13)	O	W
Alarm_Values	Unsigned	1 ~ 4 (Default: NULL)	O	W
Fault_Values	Unsigned	1 ~ 4 (Default: NULL)	O	R
Event_Enable	BACnetEventTransitionBits	{FALSE/TRUE, FALSE/TRUE, FALSE/TRUE} (Default: All items are FALSE)	O	W
Acked_Transitions	BACnetEventTransitionBits	{TRUE, TRUE, TRUE} (All items are always TRUE)	O	R
Notify_Type	BACnetNotifyType	ALARM/EVENT (Default: EVENT)	O	W
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	R
Profile_Name	CharacterString	-	O	-

S/V Series Only

Note:When VRF System type is "HEAT PUMP", the system can be performed only in one of operation modes (cooling / heating) in a Refrigerant System.
In the state where no Indoor Unit in a Refrigerant System is operating, once an Indoor Unit begin to operate in Heating operation mode, the Refrigerant System will become "Heat" priority operation status. This means the Refrigerant System will refuse a command for changing the operation mode of other unit. On the other hand, when an Indoor Unit in a Refrigerant System first starts in Cooling operation mode, the Refrigerant System is then in "Cool" priority operation status. The Refrigerant System will refuse to change other units to any other operation mode, except for the Drying operation mode.
When no Indoor Unit is operating, this priority operation status is "Neutral".

9.47. Outdoor Low Noise Operation Setting (Multi-state Output Object Type)

Low noise operation can be commanded for an outdoor unit.

Property Identifier	Property Datatype	Value	ASHRAE	UTY-ABGX
Object_Identifier	BACnetObjectIdentifier	(Multi-state Output, Instance IIJKKLL)	R	R
Object_Name	CharacterString	"OutdoorUnit_LowNoiseOperation_ Setting_J-KK-LL"	R	R
Object_Type	BACnetObjectType	MULTISTATE_OUTPUT	R	R
Present_Value	Unsigned	1 ~ 5(Default: 1)	W	W
Description	CharacterString	"OutdoorUnit_J-KK-LL"	O	W
Device_Type	CharacterString	"(System Type)"	O	R
Status_Flags	BACnetStatusFlags	{TRUE/FALSE, TRUE/FALSE, TRUE/FALSE, TRUE/FALSE}	R	R
Event_State	BACnetEventState	TO-OFFNORMAL/TO-FAULT/ TO-NORMAL	R	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (Fixed)	O	R
Out_Of_Service	BOOLEAN	FALSE/TRUE (Default: FALSE)	R	W
Number_Of_States	Unsigned	5	R	R
State_Text	BACnetArray[5] of CharacterString	{Stop, Level1-Quiet, Level1-Ability, Level2-Quiet, Level2-Ability}	O	R
Priority_Array	BACnetPriorityArray	(Default: Array[1] ~ [16] = NULL)	R	R
Relinquish_Default	Unsigned	(Default: 1)	R	W
Time_Delay	Unsigned	-	O	-
Notification_Class	Unsigned	-	O	-
Feedback_Value	Unsigned	-	O	-
Event_Enable	BACnetEventTransitionBits	-	O	-
Acked_Transitions	BACnetEventTransitionBits	-	O	-
Notify_Type	BACnetNotifyType	-	O	-
Event_Time_Stamps	BACnetArray[3] of BACnetTimeStamp	(Default:'FF' in each octet)	O	-
Profile_Name	CharacterString	-	O	-

*There is no counterpart of Input service for this object to monitor the current status.
*Reliability always takes the “NO_FAULT_DETECTED” value.

FUJITSU GENERAL LIMITED

1116,Suenaga,Takatsu-ku,Kawasaki 213-8502,Japan