Appendix 2

Detailed Requirements

for the ECHONET Device Control Protocol

Ver. 3.60 Release a

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Ver.3.50	・ Open to consortium members.
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The original language of The ECHONET Specification is Japanese. The English version of the Specification was translated the Japanese version. Queries in the English version should be refereed to the Japanese version.

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Chapter 1 Detailed Requirements

This Appendix 2 specifies the requirements regarding the properties (including their structures) of the objects relating to ECHONET-UPnP gateways, for which specifications are defined in "Part 9 ECHONET Gateway Specifications."

The Action name of an action to control a property is created by prefixing an Action prefix suitable for the property type to the VariableName. Each Action Argument name is created by prefixing the word "Current" or "New" to the VariableName. For details, refer to "Part 9 ECHONET Gateway Specifications," "Part 1 Specifications for ECHONET-UPnP Gateways."

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1.1 Device Object Super Class

This section specifies the requirements for the device object super class properties, for which specifications are defined in Part 2 of the ECHONET Specification. For details about the device object super class properties for which requirements are specified herein, refer to Part 2 of the ECHONET Specification.

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Installation location	Set Get	0x81	Refer to the explanation on the “Installation location” property given in Section 9.3.3 of Part 2 of the ECHONET Specification.				
		InstallationLocation		--	bin.hex	--	Others
Specification version information	Get	0x82	1st byte: Indicates the major version number (i.e. the number before the decimal point) in binary format. 2nd byte: Indicates the minor version number (i.e. the number after the decimal point) in binary format. 3rd byte: Indicates the release order using ASCII characters. 4th byte: Fixed at “0x00.” (for future reserved)				
		SpecVersionInfoCode		Indicates the version number and release order of the Specification using ASCII characters. For example, when the version number is 3.30 and the release order is A (Release A), the value is “3.30A.”	String	String	Character

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Node identification number	Get	0x83	1st byte: Lower-layer communication software ID field 0x11 to 0x1F: Power Line Communication Protocol A and D Systems 0x31 to 0x3F: Designated low-power radio 0x41 to 0x4F: Extended HBS 0x51 to 0x5F: IrDA 0x61 to 0x6F: LonTalk®-dependent 0x71 to 0x7F: Bluetooth® 0x81 to 0x8F: Ethernet 0x91 to 0x9F: IEEE802.11/11b 0xA1: Power Line Communication Protocol C System The above indicates the lower-layer communication software to depend on. 0xFF: Random number-based generation 0x00: No node identification number has been set. Second to ninth bytes: Unique number field				
		NodeIdCode	LowerNodeIdCode	Indicated using 2 bytes of ASCII characters excluding “0x.”	String	String	Character
			NodeIdCode	Indicated using 16 bytes of ASCII characters excluding “0x.”	String	String	Character

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Manufacturer-specific error code	Get	0x86	1st byte: Indicates the data size of the error code section. 2nd to 4th bytes: Manufacturer code 5th and succeeding bytes: Manufacturer-specific error code				
		ManufacturerErrorCode		Indicated using ASCII code characters	String	String	Character
Current limit setting	Set Get	0x87	0x00～0x64 （=0～100%）				
		PowerLimit		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Fault status	Get	0x88	A fault has occurred = 0x41, No fault has occurred = 0x42				
		FaultStatus		A fault has occurred＝Fault, No fault has occurred＝normal	String	AVL	Selection
Error description	Get	0x89	Refer to the ECHONET Specification, Part 2, Table 9.4				
		FaultContent			bin.hex	--	Others
Manufacturer code	Get	0x8A	Specified using 3 bytes (Defined by the ECHONET Consortium.)				
		MakerCode		Defined by the manufacturer.	String	String	Character
Factory code	Get	0x8B	Specified using a 3-byte factory code.				
		PlaceOfBuisinessCode		Defined by the manufacturer.	String	String	Character
Product code	Get	0x8C	Specified using ASCII code characters.				
		ProductCode		Defined by the manufacturer	String	String	Character
Production number	Get	0x8D	Specified using ASCII code characters.				
		SerialNumberCode		Defined by the manufacturer	String	String	Character
Date of production	Get	0x8E	Indicated using the “YYMD” format (with one byte used for each character). YY: Year (e.g. If the year is 1999, the value is “0x07CF.”) M: Month (e.g. If the month is December, the value is “0x0C.”) D: Day (e.g. If the day is twentieth, the value is “0x14.”)				

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		ManufactureDate		Described in the “YYYY-MM-DD” format (ISO 8601 format).	Date	Date	Date
Power-saving Operation setting	Set Get	0x8F	Power-saving operation = 0x41, Normal operation = 0x42				
		EnergySavingStatus		Power-saving operation =ON Normal operation =OFF	String	AVL	Switch
Time setting	Set Get	0x97	Current time HH : MM 0x00～0x17：0x00～0x3B （＝0～23）：（＝0～59）				
		PresentTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
Date setting	Set Get	0x98	0～0x270F：0～0x0C：0～0x1F (=0～9999)：(=0～12)：(=0～31)				
		PresentDate		Current date Described in the “YYYY-MM-DD” format (ISO 8601 format).	Date	Date	Date

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Cumulative operation time	Get	0x9A	1st byte: Indicates the unit. Second: 0x41, Minute: 0x42 Hour: 0x43, Day: 0x44 2nd to 5th bytes: Indicates the elapsed time in the unit indicated by the first byte. 0x00000000～0xFFFFFFFF (0～4294967295)				
		CumulatedRunTimeValue			bin.hex	--	Others

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1.2 Sensor-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Sensor-related Device Class Group (class group code X1 = 0x00). For details about the classes and properties for which requirements are specified herein, refer to Appendix.

1.2.1 Requirements for gas leak sensor class

Class group code : 0x00
Class code : 0x01
Instance code : 0x01–0x7F (0x00: All-instance specification code)
Appliance name : GasLeakSensor
Device Type: urn: echonet-gr-jp:device:ECHONET_GasLeakSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Gas leak occurrence status	Get	0xB1	A gas leak has occurred = 0x41, No gas leak has occurred = 0x42				
		GasLeakStatus		A gas leak has occurred : Found No gas leak has occurred : NotFound	String	AVL	Switch
Gas leak occurrence status resetting	Set	0xBF	Reset＝0x00				
		GasLeakSensor		--	--	--	Reset

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1.2.2 Requirements for crime prevention sensor class

Class group code : 0x00

Class code : 0x02

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CrimePreventionSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_CrimePreventionSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Intrusion occurrence status	Get	0xB1	An intrusion has occurred＝0x41, No intrusion has occurred＝0x42				
		InvasionStatus		An intrusion has occurred：Found Intrusion No intrusion has occurred：NotFound	String	AVL	Switch
Intrusion occurrence status resetting	Set	0xBF	Reset＝0x00				
		CrimePrevention Sensor		--	--	--	Reset

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1.2.3 Requirements for emergency button class

Class group code : 0x00

Class code : 0x03

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : EmergencyButton

Device Type: urn: echonet-gr-jp:device:ECHONET_EmergencyButton:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Emergency occurrence status	Get	0xB1	An emergency has occurred＝0x41, No emergency has occurred＝0x42				
		EmergencyStatus		An emergency has occurred：Found No emergency has occurred：NotFound	String	AVL	Switch
Emergency occurrence status resetting	Set	0xBF	Reset＝0x00				
		EmergencyButton		--	--	--	Reset

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1.2.4 Requirements for first-aid sensor class

Class group code : 0x00

Class code : 0x04

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : FirstAidSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_FirstAidSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
First aid situation occurrence status	Get	0xB1	A first aid situation has occurred＝0x41, No first aid situation has occurred＝0x42				
		FirstAidStatus		A first aid situation has occurred：Found No first aid situation has occurred：NotFound	String	AVL	Switch
First aid situation occurrence status resetting	Set	0xBF	Reset＝0x00				
		FirstAidSeneor		--	--	--	Reset

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1.2.5 Requirements for earthquake sensor class

Class group code : 0x00

Class code : 0x05

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : EarthquakeSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_EarthquakeSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Earthquake occurrence status	Get	0xB1	An earthquake has occurred＝0x41, No earthquake has occurred＝0x42				
		EarthquakeStatus		An earthquake has occurred：Found No earthquake has occurred：NotFound	String	AVL	Switch
Earthquake occurrence status resetting	Set	0xBF	Reset＝0x00				
		EarthquakeSensor		--	--	--	Reset

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1.2.6 Requirements for electrical leak sensor class

Class group code : 0x00

Class code : 0x06

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricLeakSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_ElectricLeakSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Electrical leak occurrence status	Get	0xB1	An electrical leak has occurred＝0x41, No electrical leak has occurred＝0x42				
		ElectricLeakStatus		An electrical leak has occurred：Found No electrical leak has occurred：NotFound	String	AVL	Switch
Electrical leak occurrence status resetting	Set	0xBF	Reset＝0x00				
		ElectricLeakSensor		--	--	--	Reset

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1.2.7 Requirements for human body detection sensor class

Class group code : 0x00

Class code : 0x07

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : HumanDetectionSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_HumanDetectionSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Human body detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		HumanDetection Status		Detected : Found Not detected : NotFound	String	AVL	Switch

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1.2.8 Requirements for visitor sensor class

Class group code : 0x00

Class code : 0x08

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : VisitorSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_VisitorSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Visitor detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		VisitorDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch
Visitor detection hold time	Set Get	0xBE	0x0000～0xFFFD(0 second to 655,330 seconds)				
		DetectionHoldSecond		Minimum: 0 Maximum: 655330 Step: 10	ui4	AVR	Numerical value

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1.2.9 Requirements for call sensor class

Class group code : 0x00

Class code : 0x09

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CallSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_CallSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Call status	Get	0xB1	Call＝0x41, No call＝0x42				
		CallStatus		Call：Found No call：NotFound	String	AVL	Switch
Call hold time	Set Get	0xBE	0x0000～0xFFFD(0 second to 655,330 seconds)				
		CallHoldSecond		Minimum: 0 Maximum: 655330 Step: 10	ui4	AVR	Numerical value

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1.2.10 Requirements for condensation sensor class

Class group code : 0x00

Class code : 0x0A

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CondensationSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_CondensationSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Condensation detection status	Get	0xB1	Condensation has occurred＝0x41, No condensation has occurred＝0x42				
		CondensationStatus		Condensation has occurred：Found No condensation has occurred：NotFound	String	AVL	Switch

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1.2.11 Requirements for air pollution sensor class

Class group code : 0x00

Class code : 0x0B

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : AirPollutionSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_AirPollutionSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Air pollution detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		AirPollutionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.12 Requirements for oxygen sensor class

Class group code : 0x00

Class code : 0x0C

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : OxygenSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_OxygenSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured oxygen concentration	Get	0xE0	0x0000～0x2710(0.00～100.00%)				
		OxygenConcentration		Minimum: 0.00 Maximum: 100.00 Step: 0.01	float	AVR	Numerical value

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1.2.13 Requirements for illuminance sensor class

Class group code : 0x00

Class code : 0x0D

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : IlluminanceSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_IlluminanceSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured illuminance	Get	0xE0	0x0000～0xFFFD(0～65533 Lux)				
		IlluminanceLux		Minimum: 0 Maximum: 65563 Step: 1	ui2	AVR	Numerical value

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1.2.14 Requirements for sound sensor class

Class group code : 0x00

Class code : 0x0E

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : SoundSensor

Device Type: urn: echonet-gr-jp:device:ECHONET_SoundSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Sound detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		SoundDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch
Sound detection hold time	Set Get	0xBE	0x0000～0xFFFD (0 second to 655,330 seconds)				
		DetectionHoldSecond		Minimum: 0 Maximum: 655330 Step: 10	ui4	AVR	Numerical value

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1.2.15 Requirements for mailing sensor class

Class group code : 0x00

Class code : 0x0F

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : MailingSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_MailingSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Posting detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		MailingDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.16 Requirements for weight sensor class

Class group code : 0x00

Class code : 0x10

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WeightSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WeightSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Weight detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		WeightDetection Status		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.17 Requirements for temperature sensor class

Class group code : 0x00

Class code : 0x11

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : TemperatureSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_TemperatureSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured temperature	Get	0xE0	0xF554～0x7FFF(－2732～32766) (－273.2～3276.6℃)				
		MeasuredTemp		Minimum: -273.2 Maximum: 3276.6 Step: 0.1	float	AVR	Numerical value

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1.2.18 Requirements for humidity sensor class

Class group code : 0x00

Class code : 0x12

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : HumiditySensor

Device Type: urn:echonet-gr-jp:device:ECHONET_HumiditySensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured relative humidity	Get	0xE0	0x00～0x64(0～100%)				
		RelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value

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1.2.19 Requirements for rain sensor class

Class group code : 0x00

Class code : 0x13

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : RainSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_RainSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Switch
Rain detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		RainDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.20 Requirements for water level sensor class

Class group code : 0x00

Class code : 0x14

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WaterLevelSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WaterLevelSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
動作状態	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Excessively high water level detection threshold level	Get	0xB0	0x00～0xFD(0～253)				
		DetectionThreshold		Minumum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value
Excessively high water level detection status	Get	0xB1	Water level has become excessively high＝0x41, Water level has not become excessively high＝0x42				
		WaterLevelOverStatus		Water level has become excessively high：Found Water level has not become excessively high：NotFound	String	AVL	Switch
Measured water level	Get	0xE0	0x00～0xFD(0～253)				
		WaterHeight		Minimum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value

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1.2.21 Requirements for bathwater level sensor class

Class group code : 0x00

Class code : 0x15

Instance code : 0x01～0x7F(0x00: All-instance specification code)

Appliance name : BathWaterLevelSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_BathWaterLevelSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Excessively high bathwater level detection threshold level	Get	0xB0	0x00～0xFD(0～253)				
		DetectThreshold		Minumum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value
Excessively high bathwater level detection status	Get	0xB1	Bathwater level has become excessively high ＝0x41, Bathwater level has not become excessively high＝0x42				
		WaterLevelOverStatus		Bathwater level has become excessively high：Found Bathwater level has not become excessively high：NotFound	String	AVL	Switch
Measured bathwater level	Get	0xE0	0x00～0xFD(0～253)				
		WaterHeight		Minimum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value

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1.2.22 Requirements for bath heating completion detection sensor class

Class group code : 0x00

Class code : 0x16

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : BathHeatingStatusSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_BathHeatingStatusSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Bath heating completion detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		BathReadyStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.23 Requirements for water leak sensor class

Class group code : 0x00

Class code : 0x17

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WaterLeakSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WaterLeakSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1,2,3,4,5,6,7,8	String	AVL	Level
Water leak detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		WaterLeakDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.24 Requirements for water overflow sensor class

Class group code : 0x00

Class code : 0x18

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WaterOverflowSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WaterOverflowSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Water overflow detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		WaterOverflowStatus		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.25 Requirements for fire sensor class

Class group code : 0x00

Class code : 0x19

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : FireSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_FireSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Fire detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		FireDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch
Fire detection status resetting	Set	0xBF	Reset＝0x00				
		FireSensor		--	String	AVL	Reset

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1.2.26 Requirements for cigarette smoke sensor class

Class group code : 0x00

Class code : 0x1A

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CigaretteSmokeSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_CigaretteSmokeSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Cigarette smoke detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		SmokeDetection Status		Detected：Found Not detected：NotFound	String	AVL	Switch

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1.2.27 Requirements for CO_2 sensor class

Class group code : 0x00

Class code : 0x1B

Instance code : 0x01～0x7F (0x00：全インスタンス指定コード)

Appliance name : CO2Sensor

Device Type: urn:echonet-gr-jp:device:ECHONET_CO2Sensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Numerical value	Numerical value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured CO_2 concentration	Get	0xE0	0x0000～0xFFFD(0～65533)				
		CO2Concentration		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.2.28 Requirements for gas sensor class

Class group code : 0x00

Class code : 0x1C

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : GasSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_GasSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Gas detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		GasDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch
Measured gas concentration	Get	0xE0	0x0000～0xFFFD(0～65533)				
		GasConcentration		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.2.29 Requirements for VOC sensor class

Class group code : 0x00

Class code : 0x1D

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : VOCSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_VOCSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
VOC detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		VOCDetectionStatus		Detected：Found Not detected：NotFound	String	AVL	Switch
Measured VOC concentration	Get	0xE0	0x0000～0xFFFD(0～65533)				
		VOCConcentration		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.2.30 Requirements for differential pressure sensor class

Class group code : 0x00

Class code : 0x1E

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : DifferentialPressureSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_DifferentialPressureSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured differential pressure	Get	0xE0	0x8001～0x7FFE(－32767～32766)				
		DifferentialPressure		Minimum: -32767 Maximum: 32766 Step: 1	i2	AVR	Numerical value

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1.2.31 Requirements for wind speed sensor class

Class group code : 0x00

Class code : 0x1F

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : AirSpeedSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_AirSpeedSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured wind speed	Get	0xE0	0x0000～0xFFFD(0～65533)				
		WindSpeed		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value

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1.2.32 Requirements for odor sensor class

Class group code : 0x00

Class code : 0x20

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : OdorSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_OdorSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Smell detection status	Get	0xB1	Detected=0x41 Not detected=0x42				
		OdorDetection Status		Detected: Found Not detected: NotFound	String	AVL	Switch
Measured smell level	Get	0xE0	0x00～0xFD(0～253)				
		MeasuredOdorValue		Minimum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value

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1.2.33 Requirements for flame sensor class

Class group code : 0x00

Class code : 0x21

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : FlameSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_FlameSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Flame detection status	Get	0xB1	Detected＝0x41 Not detected＝0x42				
		FlameDetection Status		Detected：Found Not detected：NotFound	String	AVL	Switch
Flame detection status resetting	Set	0xBF	Reset＝0x00				
		FlameSensor		--	String	AVL	Reset

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1.2.34 Requirements for electricity sensor class

Class group code : 0x00

Class code : 0x22

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WHSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WHSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Cumulative amount of electricity	Get	0xE0	0x0～0x3B9AC9FF (0～999,999,999Wh)				
		CumulatedPower		Minimum: 0 Maximum: 999,999,999 Step: 1	ui4	AVR	Numerical value
Instantaneous amount of electricity (small-capacity sensor)	Get	0xE2	0x8001～0x7FFE (－3276.7～3276.6)				
		SmallSensorInstantPower		Minimum: -3276.7 Maximum: 3276.6 Step: 0.1	float	AVR	Numerical value
Instantaneous amount of electricity (large-capacity sensor)	Get	0xE3	0x8001～0x7FFE (－3276.7～3276.6)				
		LargeSensorInstantPower		Minimum: -3276.7 Maximum: 3276.6 Step: 0.1	float	AVR	Numerical value
Historical data of measured cumulative amount of electricity	Get	0xE4	0～0x3B9AC9FF (0～999,999,999) (0～999,999,999Wh)				
		CumulatedPowerLog		--	bin.hex	--	Others
Effective voltage	Get	0xE5	0x0000～0xFFFD (0～65533V)				
		EffectiveVoltage		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59)				
		PresentTime		hh-mm-dd ISO 8601 format	Time	Date	Time

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Date setting	Set Get	0x98	0～270F:0～0x0C: 0～0x1F (=0～9999):(=0～12):(=0～31）				
		PresentDate		YYYY-MM-DD ISO 8601 format	Date	Date	Date

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1.2.35 Requirements for amperage sensor class

Class group code : 0x00

Class code : 0x23

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CurrentSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_CurrentSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured amperage	Get	0xE0	0x00000000～0xFFFFFFFD (0～4,294,967,293mA)				
		MeasuredCurrent		Minimum: 0 Maximum: 4,294,967,293 Step: 1	ui4	AVR	Numerical value
Rated voltage for measurement	Get	0xE1	0x0000～0xFFFD (0～65533V)				
		MeasuredRatedVoltage		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.2.36 Requirements for water flow rate sensor class

These requirements for the water flow rate sensor class shall apply to devices installed on water taps etc. to measure the amount of water used.

Class group code : 0x00

Class code : 0x25

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WaterFlowRateSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_WaterFlowRateSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Cumulative amount of water	Get	0xE0	0x00000000～0x3B9AC9FF (0～999,999,999)				
		CumulatedFlowRate		Minimum: 0 Maximum: 999,999,999 Step: 1	ui4	AVR	Numerical value
Flow rate	Get	0xE1	0x00000000～0x3B9AC9FF (0～999,999,999)				
		FlowRate		Minimum: 0 Maximum: 999,999,999 Step: 1	ui4	AVR	Numerical value

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1.2.37 Requirements for micromotion sensor class

Class group code : 0x00

Class code : 0x26

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : MicroMotionSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_MicroMotionSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Type classification
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Micromotion detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		MicroMotionStatus		Detected: Found Not detected: NotFound	String	AVL	Switch
Detection counter	Set Get	0xB2	0x0000～0xFFFE (0～65534)				
		DetectionCounter		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Number of times of sampling	Set Get	0xBC	0x0000～0xFFFE (0～65534)				
		SamplingCount		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Sampling interval	Set Get	0xBD	0x0000～0xFFFE (0～65534)				
		SamplingCycle		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.2.38 Requirements for passage sensor class

Class group code : 0x00

Class code : 0x27

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : PassageSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_PassageSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Passage detection hold time	Set Get	0xBE	0x0000～0xFFFD (0～65533ms)				
		PassageHoldMillisec		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Passage detection direction	Get	0xE0	0x30: No passage. 0x31～0x38: Direction of passage. 0x39: Passage detected but not located. Or, a sensor incapable of detecting passage direction is passed.				
		PassageDirectionStatus		Refer to following (1).	String	AVL	Selection

(1) Passage detection direction

Indicates the two-dimensional direction of passage. The value shall be determined according to the figure below.

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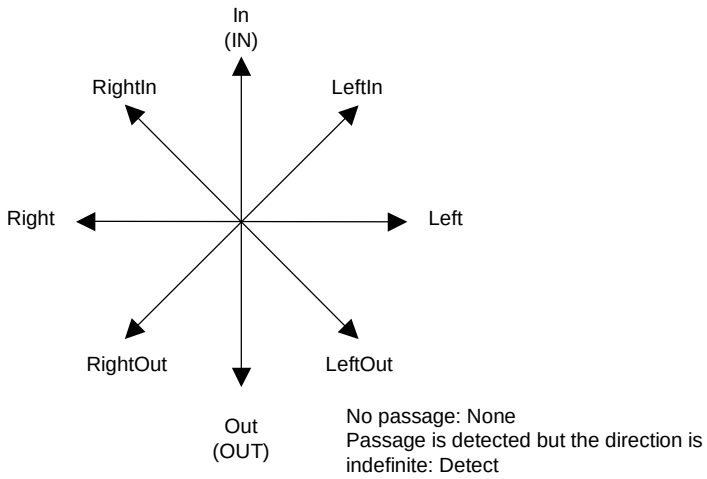

Fig.1　Passage Detection Direction

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1.2.39 Requirements for bed presence sensor class

Class group code : 0x00

Class code : 0x28

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : BedPresenceSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_BedPresenceSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Bed presence detection status	Get	0xB1	Detected＝0x41, Not detected＝0x42				
		BedPresenceStatus		Detected: Found Not detected: NotFound	String	AVL	Switch

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1.2.40 Requirements for open/close sensor class

Class group code : 0x00

Class code : 0x29

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : OpenCloseSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_OpenCloseSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Degree-of-opening detection status 1	Set Get	0xE0	Closing detected: 0x30, degree-of-opening level: 0x31 to 0x38, opening detected but degree-of-opening unknown: 0x39				
		OpenningLevel		Found 1,2,3,4,5,6,7,8 Unkown	String	AVL	Level
Degree-of-opening threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Degree-of-opening detection status 2	Get	0xB1	Opening detected＝0x41, Closing detected＝0x42				
		OpeningStatus		Opening detected: Found Closing detected: NotFound	String	AVL	Switch

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1.2.41 Requirements for “amount of activity” sensor class

Class group code : 0x00

Class code : 0x2A

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ActivityAmountSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_ActivityAmountSensor:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Type classification
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
“‘Amount of activity’ level” 1	Get M	0xE0	0x31～0x38				
		Id0ActivityAmountLevel		1,2,3,4,5,6,7,8	String	AVL	Level
		Id1ActivityAmountLevel ～ Id127ActivityAmountLevel		1,2,3,4,5,6,7,8	String	AVL	Level
Maximum number of array elements	Get	0xE1	0x0001~0x0080(=1~128)				
		MaxArrayElementCount		Minimum: 1 Maximum: 128 Step: 1	ui2	AVR	Numerical value
“‘Amount of activity’ level” 2	Get	0xE2	0x31～0x38				
		ActivityAmountLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Human body information	Get	0xE3					
		HumanExistenceInfo		--	bin.hex	--	Others

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1.2.42 Requirements for human body location sensor class

Class group code : 0x00

Class code : 0x2B

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : HumanLocationSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_HumanLocationSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Human body detection (location) 1	Get M	0xE0	1st byte: X coordinate、 2nd byte: Y coordinate, 3rd byte: Z coordinate				
		Id0Human1Location	XId0Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
			YId0Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
			ZId0Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
		Id1Human1Location ～ ID127Human1Location	XId1Human1Location ～ XID127Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
			YId1Human1Location ～ YId127Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
			ZId1Human1Location ～ ZId127Human1Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Maximum number of array elements	Get	0xE1	0x0001~0x0080(=1~128)				
		MaxArrayElementCount		Minimum: 1 Maximum: 128 Step: 1	ui2	AVR	Numerical value
Human body detection (location) 2	Get	0xE2	1st byte: X coordinate、 2nd byte: Y coordinate, 3rd byte: Z coordinate				
		Human2Location	XHuman2Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value

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			YHuman2Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
			ZHuman2Location	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Human body information	Get	0xE3					
		HumanExistenceInfo		--	bin.hex	--	Others

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1.2.43 Requirements for snow sensor class

Class group code : 0x00

Class code : 0x2C

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : SnowSensor

Device Type: urn:echonet-gr-jp:device:ECHONET_SnowSensor:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Detection threshold level	Set Get	0xB0	0x31～0x38				
		DetectionLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Snow detection status	Get	0xB1	Detected 0x41、Not detected 0x42				
		SnowDetection Status		Detected: Found Not detected: NotFound	String	AVL	Switch

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1.3 Air-conditioning-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Air-conditioning-related Device Class Group (class group code X1 = 0x01). For details about the classes and properties for which requirements are specified herein, refer to Appendix.

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1.3.1 Requirements for home air conditioner class

Class group code : 0x01

Class code : 0x30

Instance code : 0x01～(0x00: All-instance specification code)

Appliance name : HomeAirConditioner

Device Type: urn:echonet-gr-jp:device:ECHONET_HomeAirConditioner:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Operation mode setting	Set Get	0xB0	The following values shall be used: Automatic: 0x41, cooling: 0x42, heating: 0x43, dehumidification: 0x44, air circulator: 0x45, other: 0x40				
		OperationModeStatus		The following values shall be used: Automatic: Auto/ cooling: Cooling/ heating: Heating/ dehumidification: Dehumidifying / air circulator: Blast/ other: Other	String	AVL	Selection
Automatic temperature control setting	Set Get	0xB1	AUTO＝0x41, Non-AUTO＝0x42				
		TempAutoStatus		AUTO = Auto, Non-AUTO = NonAuto	String	AVL	Switch
Normal/high-speed/silent operation setting	Set Get	0xB2	Normal operation = 0x41 High-speed operation = 0x42, Silent operation = 0x43				
		QuickModeStatus		Normal operation = Normal High-speed operation = Quick Silent operation = Quiet	String	AVL	Selection
Temperature setting	Set Get	0xB3	0x00～0x32 (0～50℃)				
		DesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Relative	Set	0xB4	0x00～0x64, (0～100%)				

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humidity setting for the dehumidifying mode	Get	DehumidModeRelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Temperature setting for the cooling mode	Set	0xB5	0x00～0x32 (0～50℃)				
	Get	CoolModeDesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Temperature setting for the heating mode	Set	0xB6	0x00～0x32 (0～50℃)				
	Get	HeatModeDesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Temperature setting for the dehumidifying mode	Set	0xB7	0x00～0x32 (0～50℃)				
	Get	DehumidModeDesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Rated power consumption	Get	0xB8	0x0000～0xFFFD (0～65533W) Cooling: heating: dehumidification: air circulation				
		RatedPower	CoolRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			HeatRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			DehumidRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			BlastRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Measured current consumption	Get	0xB9	0x0000～0xFFFD (0～6553.3A)				
		MeasuredCurrent		Minimum: 0 Maximum: 6553.3 Step: 0.1	float	AVR	Numerical value
Measured relative room humidity	Get	0xBA	0x00～0x64, (0～100%)				
		RoomRelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Measured room temperature	Get	0xBB	0x81～0x7D (－127～125℃)				
		RoomMeasuredTemp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
User remote control temperature setting	Get	0xBC	0x00～0x32 (0～50℃)				
		UserRCDesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Measured cooled air temperature	Get	0xBD	0x81～0x7D (－127～125℃)				
		BlowOffMeasuredTemp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Measured	Get	0xBE	0x81～0x7D (－127～125℃)				

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outdoor air temperature		OutdoorMeasuredTemp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Relative temperature setting	Set Get	0xBF	0x81～0x7D (－12.7～12.5℃)				
		RelativeDesiredTemp		Minimum: -12.7 Maximum: 12.5 Step: 0.1	float	AVR	Numerical value
Air flow rate setting	Set Get	0xA0	Automatic air flow rate control = 0x41 Air flow rate level = 0x31～0x38				
		WindVolumeLevel		Automatic air flow rate control = Auto Air flow rate level = 1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level

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Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Type classification
“Automatic air flow direction control” setting	Set Get	0xA1	AUTO = 0x41、Non-AUTO = 0x42 AUTO(vertical) = 0x43、AUTO(horizontal) = 0x44				
		AirFlowAutoStatus		AUTO = Auto、 Non-AUTO = NonAuto AUTO(vertical) = UpDownAuto、 AUTO(horizontal) = LeftRightAuto	String	AVL	Selection
“Automatic air flow swing” setting	Set Get	0xA3	Automatic air flow swing function OFF＝0x31、 Vertical=0x41、Horizontal=0x42、 Vertical and Horizontal=0x43				
		AirFlowSwingStatus		Automatic air flow swing function OFF = OFF、 Vertical = UpDown、 Horizonta = LeftRight、 Vertical and Horizontal = UpDownLeftRight	String	AVL	Selection
“Air flow direction (vertical)” setting	Set Get	0xA4	Uppermost =0x41、Lowermost =0x42、Central =0x43、Midpoint between uppermost and central =0x44、, Midpoint between lowermost and central =0x45				
		VerticalAirFlowStatus		Uppermost = Up Lowermost = Down Central = Center Midpoint between uppermost and central = UpCenter Midpoint between lowermost and central = DownCenter	String	AVL	Selection
“Air flow direction (horizontal)” setting	Set Get	0xA5	Rightward＝0x41、Leftward＝0x42、 Central＝0x43、Rightward and Leftward＝0x44 For a full list of the predefined patterns, see the table in the section describing the requirements for this property.				
		HorizontalAirFlowMode		--	bin.hex	--	Others

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Special states	Get	0xAA	“Normal operation” state =0x40、“Defrosting” state =0x41 “Preheating” state =0x42、 “Heat removal” state =0x43				
		SpecialStatus		“Normal operation” state = Normal、 “Defrosting” state = Defrosting “Preheating” state = Preheat、 “Heat removal” state = ExhaustHeat	String	AVL	Selection
Non-priority state	Get	0xAB	“Normal operation” state =0x40 Non-priority state=0x41				
		NonPriorityStatus		“Normal operation” state = Normal Non-priority state = NonPriority	String	AVL	Switch
Ventilation function setting	Set Get	0xC0	Ventilation function ON (outlet direction) =0x41、 Ventilation function OFF =0x42、 Ventilation function ON (intake direction) =0x43				
		VentilatingStatus		Ventilation function ON (outlet direction) = ExhaustDirectionON Ventilation function OFF = OFF、 Ventilation function ON (intake direction)） = IntakeDirectionON	String	AVL	Selection

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Type classification
		Variable Name	Argument	Value			
Humidifier function setting	Set Get	0xC1	Humidifier function ON=0x41, Humidifier function OFF=0x42				
		HumidModeStatus		Humidifier function ON＝ON Humidifier function OFF＝OFF	String	AVL	Switch
Ventilation air flow rate setting	Set Get	0xC2	Automatic control of ventilation air flow rate=0x41 Ventilation air flow rate level=0x31～0x38				
		VentilatingWindLevel		Automatic control of ventilation air flow rate=Auto Ventilation air flow rate level=1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Degree of humidification setting	Set Get	0xC2	Automatic control of the degree of humidification =0x41 “Degree of humidification” level=0x31～0x38				
		HumidLevel		Automatic control of the degree of humidification=Auto “Degree of humidification” level=1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Implemented air purification method	Get	0xC6	Bit 0: Information on whether the electrical dust collection method is implemented 0 Not implemented 1 Implemented Bit 1: Information on whether the cluster ion method is implemented 0 Not implemented 1 Implemented				
		AirPurifierStatus	ElectricAirPurifierStatus	Information on whether the electrical dust collection method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch
			ClusterAirPurifierStatus	Information on whether the cluster ion method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch

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Air purifier function setting	SetM GetM	0xC7	Element 0: “Electrical dust collection method-based air purifier function” setting Element 1: “Cluster ion method-based air purifier function” setting				
		ElectricAirPurifierMode		--	bin.hex	--	Others
		ClusterAirPurifierMode		--	bin.hex	--	Others
Implemented air refresh method	Get	0xC8	Bit 0: Information on whether the minus ion method is implemented 0 Not implemented 1 Implemented Bit 1: Information on whether the cluster ion method is implemented 0 Not implemented 1 Implemented				
		RefreshStatus	MinusIonRefreshStatus	Information on whether the minus ion method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch
			ClusterRefreshStatus	Information on whether the cluster ion method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Air refresher function setting	SetM GetM	0xC9	Element 0: "Minus ion method-based air refresher function" setting Element 1: "Cluster ion method-based air refresher function" setting				
		MinusIonRefreshMode		--	bin.hex	--	Others
		ClusterIonRefreshMode		--	bin.hex	--	Others
Implemented self-cleaning method	Get	0xCA	Bit 0: Information on whether the ozone cleaning method is implemented 0 – Not implemented 1 – Implemented Bit 1: Information on whether the dry method is implemented 0 – Not implemented 1 – Implemented				
		SelfCleanStatus	OzoneSelfCleanStatus	Information on whether the ozone cleaning method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch
			DrySelfCleanStatus	Information on whether the dry method is implemented Not implemented: OFF Implemented: ON	String	AVL	Switch
Self-cleaning function setting	SetM GetM	0xCB	Element 0: "Ozone cleaning method-based self-cleaning function" setting Element 1: "Dry method-based self-cleaning function" setting Element 2 to Element 7: for future reserved				
		OzoneSelfCleanMode		--	bin.hex	--	Others
		DrySelfCleanMode			bin.hex		Others

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Special function setting	Set Get	0xCD	No setting: 0x40 Clothes dryer function: 0x41　Condensation suppressor function: 0x42 Mite and mold control function: 0x43 Active defrosting function: 0x44 0x45～ for future reserved				
		SpecialOperation Status		No setting: NotSetting Clothes dryer function: ClothDrier Condensation suppressor function: CondensationSuppression Mite and mold control function: TickFungusSuppresion Active defrosting function: ForcingDefrosting	String	AVL	Selection

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Property name	AccessRule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation statuses of components	Get	0xCD	Bit 0: Operation status of the compressor: Not operating In operation Bit 1: Operation status of the thermostat: 0: Thermostat OFF 1: Thermostat ON				
		ComponentsStatus	CompComponentsStatus	Operation status of the compressor: Not operating: OFF In operation: ON	String	AVL	Switch
			ThermoComponentsStatus	Information on whether the dry method is implemented Thermostat OFF: OFF Thermostat ON: ON	String	AVL	Switch
Thermostat setting override function	Set	0xCE	Normal setting =0x40, Thermostat setting override function ON =0x41, Thermostat setting override function OFF=0x42				
		ForcingThermoStatus		Normal setting = Normal Thermostat setting override function ON = ON Thermostat setting override function OFF = OFF	String	AVL	Selection
Measured power consumption	Get	0xDB	0x0000～0xFFFD (0～65533A)				
		ConsumpionPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
"ON timer-based reservation" setting	Set Get	0x90	Both the time- and relative time-based reservation functions are ON=0x41, Both reservation functions are OFF=0x42, Time-based reservation function is ON=0x43, Relative time-based reservation function is ON=0x44				

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		OnTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON= TimeReserveON Relative time-based reservation function is ON = RelativeTimeReserveON	String	AVL	Selection
ON timer setting (time)	Set Get	0x91	0 to 0x17: 0 to 0x3B (=0 to 23):(=0 to 59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0 to 0xFF: 0 to 0x3B (=0 to 255):(=0 to 59)				
		OnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
“OFF timer-based reservation” setting	Set Get	0x94	Both the time- and relative time-based reservation functions are ON=0x41, Both reservation functions are OFF=0x42, Time-based reservation function is ON=0x43, Relative time-based reservation function is ON=0x44				

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		OffTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON= TimeReserveON Relative time-based reservation function is ON = RelativeTimeReserveON	String	AVL	Selection
OFF timer setting (time)	Set Get	0x95	0 to 0x17: 0 to 0x3B （= 0 to 23）: (= 0 to 59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
OFF timer setting (relative time)	Set Get	0x96	0 to 0xFF: 0 to 0x3B （= 0 to 255）: (= 0 to 59)				
		OffTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	Current time HH:MM 0x00～0x17：0x00～0x3B （= 0 to 23）: (= 0 to 59）				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Current limit setting	Set Get	0x87	0x00 to 0x64 (= 0～100%)				
		PowerLimit		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Cumulative operation time	Get	0x9A	1st byte: Indicates the unit. Second: 0x41、Minute: 0x42 Hour: 0x43、Day: 0x44 2nd to 5th bytes: Indicates the elapsed time in the unit indicated by the first byte. 0x00000000～0xFFFFFFFF (0～4294967295)				

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		CumulatedRunTimeValue			bin.hex	--	Others

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1.3.2 Requirements for air conditioning ventilation fan class

Class group code : 0x01

Class code : 0x34

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : AirConditionerVentilation

Device Type: urn:echonet-gr-jp:device:ECHONET_AirConditionerVentilation:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Relative room humidity setting	Set Get	0xB4	0x00～0x64, (0～100%)				
		RoomRelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Automatic ventilation setting	Set Get	0xBF	AUTO=0x41, Non-AUTO=0x42				
		VentilatingStatus		AUTO = Auto Non-AUTO = NonAuto	String	AVL	Switch
Measured relative room humidity	Get	0xBA	0x00～0x64 (0～100%)				
		MeasuredHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Ventilation air flow rate setting	Set Get	0xA0	Automatic state of ventilation air flow rate=0x41 Ventilation air flow rate level=0x31～0x38				
		VentilatingWind Level		Automatic setting of ventilation air flow rate=Auto Ventilation air flow rate level=1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Heat exchanger operation setting	Set Get	0xE0	Heat exchanger ON=0x41, OFF=0x42				
		HeatExchangerStatus		Heat exchanger ON = ON Heat exchanger OFF = OFF	String	AVL	Switch
Measured CO_2 concentration	Set Get	0xC0	0x0000～0xFFFD(0～65533ppm)				
		CO2Concentration		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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Cigarette smoke detection status	Get	0xC1	Detected=0x41 No detected=0x42				
		SmokeDetection Status		Detected= Found No detected= NotFound	String	AVL	Switch

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1.3.3 Requirements for air purifier class

Class group code : 0x01

Class code : 0x35

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : AirCleaner

Device Type: urn:echonet-gr-jp:device:ECHONET_AirCleaner:1

Property name	AccessRule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Filter cleaning reminder sign	Get	0xE1	Yes=0x41, No=0x42				
		FilterChangeStatus		Yes = Found No = NotFound	String	AVL	Switch
Air flow rate setting	Set Get	0xA0	Automatic state of ventilation air flow rate=0x41 Ventilation air flow rate level=0x31～0x38				
		WindVolumeLevel		Automatic setting of ventilation air flow rate=Auto Ventilation air flow rate level=1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Cigarette smoke detection status	Get	0xC1	Detected=0x41 No detected=0x42				
		SmokeDetectionStatus		Detected= Found No detected= NotFound	String	AVL	Switch
Photocatalyst operation setting	Set Get	0xC2	Photocatalyst ON=0x41 Photocatalyst OFF=0x42				
		PhotocatalyticStatus		Photocatalyst ON = ON Photocatalyst OFF = OFF	String	AVL	Switch

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1.3.4 Requirements for humidifier class

Class group code : 0x01

Class code : 0x39

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : Humidifier

Device Type: urn:echonet-gr-jp:device:ECHONET_Humidifier:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Humidification setting 1	Set Get	0xC0	0x00~0x64（0~100%）, Automatic operation = 0x70、Continuous operation = 0x71、 Intermittent operation = 0x72				
		HumidSetting			bin.hex	--	Others
Humidification setting 2	Set Get	0xC1	Humidification level = 0x31~0x33, Automatic operation＝0x70、 Continuous operation = 0x71、Intermittent operation = 0x72				
		HumidStatus		Humidification level: 1~3 Automatic operation: Auto Continuous operation : Continuous Intermittent operation : Intermittent	String	AVL	Seletion
Measured relative humidity	Get	0xB4	0x00~0x64（0~100%）				
		RoomRelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
"OFF timer-based reservation" setting	Set Get	0x94	Reservation function ON = 0x41, Reservation function OFF = 0x42				
		OffTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	String	AVL	Switch
OFF timer setting	Set Get	0x96	0～0xFF: 0～0x3B (=0～255):(=0～59)				

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(relative time)		OffTimerRelative Time		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Ion discharging setting	Set Get	0xC2	Ion discharging ON = 0x41, Ion discharging OFF = 0x42				
		IonReleaseStatus		Ion discharging ON = ON Ion discharging OFF = OFF	String	AVL	Switch

Property name	AccessRule	EPC VariableName	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Implemented ion discharging method	Get	0xC3	Bit 0: Minus ion method 0: Not implemented 1: Implemented Bit 1: Cluster ion method 0: Not implemented 1: Implemented				
		IonReleaseStatus	MinusIonReleaseStatus	Minus ion method Not implemented : OFF Implemented: ON	String	AVL	Switch
			ClusterIonReleaseStatus	Cluster ion method Not implemented : OFF Implemented: ON	String	AVL	Switch
Special operation modes	Set Get	0xC4	Bit 0: Dry throat prevention mode 0: Disabled 1: Enabled Bit 1: Silent operation mode 0: Disabled 1: Enabled Bits 2 to 7: for future reserved				
		SpecialStatus	DryPreventSpecialStatus	Dry throat prevention mode Disabled: OFF Implemented: ON	String	AVL	Switch
			SilentSpecialStatus	Silent operation mode Not implemented : OFF Implemented: ON	String	AVL	Switch

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Water level status	Get	0xC5	0x40 Empty 0x41 to 0x45: Lowest to highest levels				
		WaterLevel		Empty: 0 0x41 to 0x45: Lowest to highest levels: 1～5	String	AVL	Level

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1.3.5 Requirements for electric heater class

Class group code : 0x01

Class code : 0x42

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricHeater

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricHeater:1

Property name	AccessRule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
“Automatic temperature control” setting	Set Get	0xB1	AUTO＝0x41, Non-AUTO＝0x42				
		TempAutoStatus		AUTO = Auto Non-AUTO = NonAuto	String	AVL	Switch
Temperature setting	Set Get	0xB3	0x00～0x32（0～50）				
		DesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Measured room temperature	Set Get	0xBB	0x81～0x7E (－128～127)				
		RoomMeasuredTemp		Minimum: -128 Maximum: 127 Step: 1	i1	AVR	Numerical value
User remote control temperature setting	Set Get	0xBC	0x00～0x32（0～50）				
		UserRCDesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Air flow rate setting	Set Get	0xA0	Air flow rate automatic state =0 x41 Air flow rate level = 0x31～0x38				
		WindVolumeLevel		Air flow rate automatic state = Auto Air flow rate level = 1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
“ON timer-based reservation” setting	Set Get	0x90	Reservation function ON = 0x41, Reservation function OFF = 0x42				
		OnTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	String	AVL	Switch
ON timer setting	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				

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(time)		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“OFF timer-based reservation” setting	Set Get	0x94	Reservation function ON = 0x41, Reservation function OFF = 0x42				
		OffTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	String	AVL	Selection
OFF timer setting (time)	Set Get	0x95	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Time setting	Set Get	0x97	Current time HH：MM 0x00～0x17：0x00～0x3B (=0 to 23）:(=0 to 59）				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.3.6 Requirements for fan heater class

Class group code : 0x01

Class code : 0x43

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : FanHeater

Device Type: urn:echonet-gr-jp:device:ECHONET_FanHeater:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Temperature setting	Set Get	0xB3	0x00～0x32（0～50）				
		DesiredTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Measured temperature	Set Get	0xBB	0x81～0x7E (－128～125)				
		MeasuredTemp		Minimum: -128 Maximum: 125 Step: 1	i1	AVR	Numerical value
“Automatic temperature control” setting	Set Get	0xB1	AUTO＝0x41, Non-AUTO＝0x42				
		TempAutoStatus		AUTO = Auto Non-AUTO = NonAuto	String	AVL	Switch
“ON timer-based reservation” setting	Set Get	0x90	Both the time- and relative time-based reservation functions are ON = 0x41 Both reservation functions are OFF = 0x42, Time-based reservation function is ON = 0x43, Relative time-based reservation function is ON = 0x44				
		OnTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON = TimeReserveON Relative time-based reservation function is ON = RelativeTimeReserveON	String	AVL	Selection

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ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
“OFF timer-based reservation” setting	Set Get	0x94	Both the time- and relative time-based reservation functions are ON=0x41, Both reservation functions are OFF=0x42, Time-based reservation function is ON=0x43, Relative time-based reservation function is ON=0x44				
		OffTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON= TimeReserveON Relative time-based reservation function is ON = RelativeTimeReserveON	String	AVL	Selection
OFF timer setting (time)	Set Get	0x95	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
OFF timer setting (relative time)	Set Get	0x96	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OffTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	Current time HH:MM 0x00～0x17:0x00～0x3B (= 0～23):(= 0～59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Function	Set	0xC0	Activated＝0x41, Deactivated = 0x42				

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to extend the time to the automatic extinction of the burner	Get	ExtensionStatus		Activated = ON Deactivated = OFF	String	AVL	Switch
Extension timer setting	Set Get	0xC1	0~0x17：0~0x3B (=0~23)：(=0~59)				
		ExtentionTimerTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Ion discharging setting	Set Get	0xC2	Ion discharging ON＝0x41, Ion discharging OFF =0x42				
		IonReleaseStatus		Ion discharging ON = ON、 Ion discharging OFF = OFF	String	AVL	Switch

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Implemented ion discharging method	Get	0xC3	Bit 0: Minus ion method 0: Not implemented 1: Implemented Bit 1: Cluster ion method 0: Not implemented 1: Implemented				
		IonReleaseStatus	MinusIonReleaseStatus	Minus ion method 0: Not implemented 1: Implemented	String	AVL	Switch
			ClusterIonReleaseStatus	Cluster ion method 0: Not implemented 1: Implemented	String	AVL	Switch
Fuel level status	Get	0xC4	0x40 Empty 0x41～0x45 Lowest to highest levels				
		FuelLevel		Empty: 0 Lowest to highest levels: 1～5	String	AVL	Level

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1.3.7 Requirements for package-type commercial-use air conditioner (indoor unit) class

Class group code : 0x01

Class code : 0x45

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : PackageAirConditionerIndoorUnit

Device Type: urn:echonet-gr-jp:device:ECHONET_PackageAirConditionerIndoorUnit:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Operation mode setting	Set Get	0xB0	The following values shall be used: automatic = 0x41, cooling = 0x42, heating = 0x43, dehumidification = 0x44, air circulator = 0x45				
		OperationModeStatus		The following values are assigned to cooling/heating/dehumidification/air circulation/others, respectively: Cooling/ Heating/ Dehumidifying / Blast/ Other	String	AVL	Selection
Temperature setting 1	Set Get	0xB3	0x00～0x32（0～50℃）				
		Desired1Temp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Relative humidity setting for the dehumidifying mode 1	Set Get	0xB4	0x00～0x64, (0～100%)				
		DehumidRelative1Humid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Temperature setting for the cooling mode 1	Set Get	0xB5	0x00～0x32（0～50℃）				
		CoolModeDesired1Temp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Temperature setting for the heating mode 1	Set Get	0xB6	0x00～0x32（0～50℃）				
		HeatModeDesired1Temp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Temperatu	Set	0xB7	0x00～0x32（0～50℃）				

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re setting for the dehumidifying mode 1	Get	DehumidModeDesired1Temp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Rated indoor power consumption	Get	0xB8	0x0000～0xFFFD (0～65533W) Cooling: heating: dehumidification: air circulation				
		RatedPower	CoolRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			HeatRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			DehumidRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			BlastRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Measured indoor current consumption	Get	0xB9	0x0000～0xFFFD (0～6553.3A)				
		MeasuredCurrent		Minimum: 0 Maximum: 6553.3 Step: 0.1	float	AVR	Numerical value
Measured relative room humidity 1	Get	0xBA	0x00～0x64, (0～100%)				
		RoomRelative1Humid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Measured room temperature 1	Get	0xBB	0x81～0x7D (－127～125℃)				
		RoomMeasured1Temp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Relative temperature setting	Set Get	0xBF	0x81～0x7D (－12.7～12.5℃)				
		RelativeDesiredTemp		Minimum: -12.7 Maximum: 12.5 Step: 0.1	float	AVR	Numerical value

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Air flow rate setting	Set Get	0xA0	Automatic air flow rate control=0x41 Air flow rate level=0x31～0x38				
		WindVolumeLevel		Automatic air flow rate control=Auto Air flow rate level=1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
“Air flow direction (vertical)” setting	Set Get	0xA4	Automatic =0x31, swing =0x32 Air flow direction (vertical): 0x41 to 0x49 (The values “0x41” and “0x49” shall be used for the uppermost and lowermost directions, respectively.)				
		VerticalAirFlowLevel		Automatic: Auto Swing: Swing uppermost and lowermost: 1～9	String	AVL	Level
“Air flow direction (horizontal)” setting	Set Get	0xA5	Automatic =0x31, swing =0x32 Rightward =0x41、Leftward =0x42、 Central =0x43、Rightward and leftward =0x44				
		HorizontalAirFlowStatus		Automatic: Auto Swing: Swing Rightward: Right Leftward: Left Central: Center Rightward and leftward: LeftRight	String	AVL	Selection

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Special states	Get	0xAA	"Normal operation" state = 0x41、 "Preheating" state = 0x42、"Heat removal" state = 0x43				
		SpecialStatus		"Normal operation" state = Normal、 "Preheating" state = Preheat、 "Heat removal" state = ExhaustHeat	String	AVL	Selection
Thermostat status	Get	0xAC	Thermostat on=0x41、Thermostat off=0x42				
		ThermostatStatus		Thermostat on = ON Thermostat off = OFF	String	AVL	Switch
Current function (in automatic operation mode)	Get	0xAE	The following values are assigned to cooling/heating/dehumidification/air circulation/others, respectively: 0x42/0x43/0x44/0x45/0x40				
		AutoOperationModeStatus		The following values are assigned to cooling/heating/dehumidification/air circulation/others, respectively: Cooling/ Heating/ Dehumidifying / Blast/ Other	String	AVL	Selection
Ventilation mode setting	Set Get	0xC0	Ordinary ventilation =0x41、Total heat exchanger =0 x 42、Automatic control of ventilation =0 x 43				
		VentilatingStatus		Ordinary ventilation = Normal Total heat exchanger = TotalHeatExchange、 Automatic control of ventilation = Auto	String	AVL	Selection
Linked operation of indoor unit and	Set Get	0xC1	"Linked operation of indoor unit and total heat exchanger" function =0x41、"Linked operation of indoor unit and total heat exchanger" function =0 x 42				

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total heat exchanger		TotalHeatExchangerStatus		“Linked operation of indoor unit and total heat exchanger” function = ON “Linked operation of indoor unit and total heat exchanger” function = OFF	String	AVL	Switch
Ventilation air flow rate setting	Set Get	0xC2	Automatic control of ventilation air flow rate =0x41 Ventilation air flow rate level =0x31～0x38				
		VentilatingWindLevel		Automatic control of ventilation air flow rate: Auto Ventilation air flow rate level: 1～8	String	AVL	Level
“Disabling of air conditioner” function setting	Set Get	0xCD	“Disabling of air conditioner” function activated =0x41、“Disabling of air conditioner” function cancelled =0x42				
		ForcedOutageStatus		“Disabling of air conditioner” function activated = ON “Disabling of air conditioner” function cancelled = OFF	String	AVL	Switch
Thermostat setting override function setting	Set Get	0xCE	Normal setting =0x40, Thermostat setting override function ON=0x41, Thermostat setting override function OFF=0x42				
		ForcedThermoStatus		Normal setting = Normal Thermostat setting override function ON = ON Thermostat setting override function OFF = OFF	String	AVL	Selection
Filter cleaning reminder sign setting	Set Get	0xCF	Lit =0x41、Unlit =0x42				
		FilterSignStatus		Lit = ON Unlit = OFF	String	AVL	Switch
Measured indoor power consumption	Get	0xDB	0x0000～0xFFFD (0～65533A)				
		ConsumpElectricPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Aperture of expansion valve	Get	0xDC	0～0x64(0～100)				
		ExpansionValveOpenRate		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Temperature setting 2	Set Get	0xE3	0xFE0C～0x3E8(-50.0～100.0℃)				
		Desired2Temp		Minimum: -50.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Relative humidity setting for the dehumidifying mode 2	Set Get	0xE4	0x0000～0x3E8(0.0～100.0%)				
		DehumidRelative2Humid		Minimum: 0.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Temperature setting for the cooling mode 2	Set Get	0xE5	0xFE0C～0x3E8(-50.0～100.0℃)				
		CoolModeDesired2Temp		Minimum: -50.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Temperature setting for the heating mode 2	Set Get	0xE6	0xFE0C～0x3E8(-50.0～100.0℃)				
		HeatModeDesired2Temp		Minimum: -50.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Temperature setting for the dehumidifying mode 2	Set Get	0xE7	0xFE0C～0x3E8(-50.0～100.0℃)				
		DehumidModeDesired2Temp		Minimum: -50.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Relative room humidity setting 2	Get	0xEA	0x0000～0x3E8(0.0～100.0%)				
		RoomRelative2Humid		Minimum: 0.0 Maximum: 100.0 Step: 0.1	float	AVR	Numerical value
Measured room temperature 2	Get	0xEB	0xF554～0x7FFD(-273.2～3276.5℃)				
		RoomMeasured2Temp		Minimum: -273.2 Maximum: 3276.5 Step: 0.1	float	AVR	Numerical value

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“ON timer-based reservation ” setting	Set Get	0x90	Both the time- and relative time-based reservation functions are ON=0x41, Both reservation functions are OFF=0x42, Time-based reservation function is ON=0x43, Relative time-based reservation function is ON=0x44				
		OnTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON = TimeReserveON Relative time-based reservation function is ON =RelativeTimeReserveON	String	AVL	Selection

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“OFF timer-based reservation” setting	Set Get	0x94	Both the time- and relative time-based reservation functions are ON=0x41, Both reservation functions are OFF=0x42, Time-based reservation function is ON=0x43, Relative time-based reservation function is ON=0x44				
		OffTimerStatus		Both the time- and relative time-based reservation functions are ON = BothReserveON Both reservation functions are OFF = OFF Time-based reservation function is ON = TimeReserveON Relative time-based reservation function is ON =RelativeTimeReserveON	String	AVL	Selection
OFF timer setting (time)	Set Get	0x95	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
OFF timer setting	Set Get	0x96	0～0xFF: 0～0x3B (=0～255):(=0～59)				

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(relative time)		OffTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	Current time HH：MM 0x00～0x17：0x00～0x3B （=0～23）：（=0～59）				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Cumulative operation time	Get	0x9A	1st byte: Indicates the unit. Second : 0x41, Minute : 0x42 Hour : 0x43, Day : 0x44 2nd to 5th bytes: Indicates the elapsed time in the unit indicated by the 1st byte. 0x00000000～0xFFFFFFFF (0～4294967295)				
		CumulatedRunTimeValue		--	bin.hex	--	Others
Power limit setting	Set Get	0x87	0x00～0x64 （=0～100%）				
		PowerLimit		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value

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1.3.8 Requirements for package-type commercial-use air conditioner (outdoor unit) class

Class group code : 0x01

Class code : 0x46

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : PackageAirConditionerOutdoorUnit

Device Type: urn:echonet-gr-jp:device:ECHONET_PackageAirConditionerOutdoorUnit:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Operation mode setting	Set Get	0xB0	The following values are assigned to Auto/cooling/heating/dehumidification/air circulation/others, respectively: 0x41/ 0x42/ 0x43/ 0x44/ 0x45/				
		OperationModeSetStatus		The following values are assigned to Auto/cooling/heating/dehumidification/air circulation/others, respectively: Auto/ Cooling/ Heating/ Dehumidifying / Blast	String	AVL	Selection
Rated outdoor power consumption	Get	0xB8	0x0000～0xFFFD (0～65533W) cooling: heating: dehumidification				
		RatedPower	CoolRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			HeatRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			DehumidRatedPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Measured outdoor current consumption	Get	0xB9	0x0000～0xFFFD (0～6553.3A)				
		MeasuredCurrent		Minimum: 0 Maximum: 6553.3 Step: 0.1	float	AVR	Numerical value
Measured	Get	0xBE	0x81～0x7D (－127～125℃)				

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outdoor air temperature 1		OutdoorMeasured1Temp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Special state	Get	0xAA	Normal state =0x40、Defrosting state =0x41				
		SpecialStatus		Normal state = Normal、 Defrosting state = Defrosting	String	AVL	Selection
Compressor operation status	Get	0xD0	Compressor ON=0x41、Compressor OFF=0x42				
		CompressorStatus		Compressor ON = ON Compressor OFF = OFF	String	AVL	Switch

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation mode status	Get	0xAE	The following values are assigned to cooling/heating/dehumidification/others, respectively: 0x42/0x43/0x44/0x40				
		OperationModeStatus		The following values are assigned to cooling/heating/dehumidification/others, respectively: Cooling/ Heating/ Dehumidifying / Other	String	AVL	Selection
Fan rotation speed	Get	0xD2	0x00～0x64 (0～100%)				
		FanRotation		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Measured outdoor power consumption	Get	0xDB	0x0000～0xFFFD (0～65533A)				
		MeasuredPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Measured outdoor air temperature 2	Get	0xEE	0xF554～0x7FFD(-273.2～3276.5℃)				
		OutdoorMeasured2Temp		Minimum: -273.2 Maximum: 3276.5 Step: 0.1	float	AVR	Numerical value

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Cumulative operation time	Get	0x9A	1st byte: Indicates the unit. Second : 0x41, Minute : 0x42 Hour : 0x43, Day : 0x44 2nd to 5th bytes: Indicates the elapsed time in the unit indicated by the 1st byte. 0x00000000～0xFFFFFFFF (0～4294967295)				
		CumulatedRunTimeValue		--	bin.hex	--	Others
Power limit setting	Set Get	0x87	0x00～0x64 （=0～100%）				
		PowerLimit		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value

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1.4 Housing/Facilities-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Housing/Facilities-related Device Class Group (class group code X1 = 0x02). For details about the classes and properties for which requirements are specified herein, refer to Appendix.

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1.4.1 Requirements for electrically operated shade class

Class group code : 0x02

Class code : 0x60

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricallyOperatedShede

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricallyOperatedShade:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Open/close setting	Set Get	0xE0	Open=0x41, close=0x42				
		OpenCloseStatus		Open: Open Close: Close	String	AVL	Switch
Degree-of-opening level	Set Get	0xE1	0x31～0x38				
		ShadeLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Shade angle setting	Set Get	0xE2	0x00～0xB4 (0～180degree)				
		ShadeAngle		Minimum: 0 Maximum: 180 Step: 1	ui1	AVR	Numerical value
Shade open/close speed	Set Get	0xE3	Low=0x41, Medium=0x42, High=0x43				
		ShadeSpeedStatus		Low : Low Medium : Middle High : High	String	AVL	Selection

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1.4.2 Requirements for electrically operated shutter class

Class group code : 0x02

Class code : 0x61

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricShutter

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricShutter:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Open/close setting 1	Set Get	0xE0	Open=0x41, Close=0x42、Stop=0x43				
		OpenClose1Status		Open: Open Close: Close Stop: Stop	String	AVL	Selection
Degree-of-opening level 1	Set Get	0xE1	0x31～0x38				
		OpeningLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Shade angle setting	Set Get	0xE2	0x00～0xB4 (0～180degree)				
		BlindAngle		Minimum: 0 Maximum: 180 Step: 1	ui1	AVR	Numerical value
Shutter open/close speed	Set Get	0xE3	Low=0x41, Medium=0x42, High=0x43				
		ShutterSpeed		Low: Low Medium: Middle High: High	String	AVL	Selection
Degree-of-opening level 2	Set Get	0xE4	0x00～0xFF（0～255）				
		OpeningExtent		Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Electric lock setting	Set Get	0xE5	Lock=0x41, Unlock=0x42				
		ElectricLockStatus		Lock: Lock Unlock: UnLock	String	AVL	Switch
“Permission for unlocking electric lock” status	Get	0xE6	Permitted=0x41, Prohibited=0x42				
		ElectricLockPermitStatus		Permitted: Permitted Prohibited: Prohibited	String	AVL	Switch
Open/close setting 2	Set Get	0xE7	Open=0x41, Close=0x42				
		OpenClose2Status		Open: Open Close: Close	String	AVL	Switch

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1.4.3 Requirements for electrically operated window cover class

Class group code : 0x02

Class code : 0x63

Instance code : 0x01～0x7F(0x00: All-instance specification code)

Appliance name : ElectricStormShutter

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricStormShutter:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Open/close setting 1	Set Get	0xE0	Open = 0x41，Close = 0x42、Stop = 0x43				
		OpenCloseStatus1		Open: Open Close: Close Stop: Stop	String	AVL	Selection
Degree-of-opening level 1	Set Get	0xE1	0x31～0x38				
		OpeningLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Shade angle setting	Set Get	0xE2	0x00～0xB4 (0～180degree)				
		BlindAngle		Minimum: 0 Maximum: 180 Step: 1	ui1	AVR	Numerical value
Shutter open/close speed	Set Get	0xE3	Low=0x41，Midium=0x42，High=0x43				
		ShutterSpeed		Low: Low Midium: Mid High: High	String	AVL	Selection
Degree-of-opening level 2	Set Get	0xE4	0x00～0xFF（0～255）				
		OpeningExtent		Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Electric lock setting	Set Get	0xE5	Lock=0x41，Unlock0x42				
		ElectricLockStatus		Lock: Lock Unlock: UnLock	String	AVL	Switch
“Permission for unlocking electric lock” status	Get	0xE6	Permitted=0x41，Prohibited=0x42				
		ElectricLockPermitStatus		Permitted : Permitted Prohibited=: Prohibited	String	AVL	Switch
Open/close setting 2	Set Get	0xE7	Open=0x41，Close=0x42				
		OpenCloseStatus		Open: Open Close: Close	String	AVL	Switch

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1.4.4 Requirements for garden sprinkler class

Class group code : 0x02

Class code : 0x67

Instance code : 0x01～0x7F(0x00: All-instance specification code)

Appliance name : Sprinkler

Device Type: urn:echonet-gr-jp:device:ECHONET_Sprinkler:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Sprinkler valve open/close	Set Get	0xE0	Automatic ON= 0x40, Manual ON=0x41, Manual OFF＝0x42				
		ValveOpenCloseStatus		Automatic ON：AutoOn Manual ON：ManualOn Manual OFF：ManualOff	String	AVL	Selection
Sprinkling interval	Set Get	0xE1	Off/every day/every other day/once every 3 days/once a week 0x40／0x41／0x42／0x43／0x44				
		SprinklingIntervalStatus		Off: Stop every day: Everyday every other day: EveryOtherDay once every 3 days: EveryThirdDay once a week: Everyweek	String	AVL	Selection
Sprinkling count	Set Get	0xE2	1st ON/ 2nd ON/ both ON 0x41/ 0x42/ 0x43				
		SprinklingCountStatus		1st ON: FirstOnly 2nd ON: SecondOnly both ON: Both	String	AVL	Selection
Sprinkling time 1	Set Get	0xE3	0~0x17：0~0x3B (=0~23)：(=0~59)				
		Sprinkling1Time		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Sprinkling	Set	0xE4	0~0x17：0~0x3B (=0~23)：(=0~59)				

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time 2	Get	Sprinkling2Time		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Duration of sprinkling operation	Set Get	0xE5	0～0x3B (=0~59)				
		SprinklingPeriod		Minimum: 0 Maximum: 59 Step: 1	ui1	AVR	Numerical value
Time setting	Set Get	0x97	0~0x17：0~0x3B (=0~23)：(=0~59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.4.5 Requirements for off-peak electricity-based electric water heater class

Class group code : 0x02

Class code : 0x6B

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : OffPeakElectricWaterHeater

Device Type: urn:echonet-gr-jp:device:ECHONET_OffPeakElectricWaterHeater:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
"Function to automatically heat up water" setting	Set Get	0xB0	Automatically heat up water=0x41, Manually heat up water=0x42				
		AutoWater HeatingStatus		Automatically heat up water: Auto Manually heat up water: Manual	String	AVL	Switch
Automatic control of water temperature for the heating up of water	Set Get	0xB1	AUTO＝0x41, Non-AUTO＝0x42				
		AutoWaterTempStatus		AUTO: Auto Non-AUTO: Manual	String	AVL	Switch
Heat-up status	Get	0xB2	Being heated up＝0x41, Not being heated up=0x42				
		WaterHeaterStatus		Being heated up: ON Not being heated up: OFF	String	AVL	Switch
Water temperature setting for the heating up of water	Set Get	0xB3	0x00～0x64 (0～100℃)				
		WaterHeatingTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
"Function to heat up extra volume of	Set Get	0xC0	The heating up of extra volume of water during daytime is permitted =0x41, The heating up of extra volume of water during daytime is prohibited =0x42				

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water during daytime" permission setting		DayReheatingStatus		The heating up of extra volume of water during daytime is permitted : Allowed The heating up of extra volume of water during daytime is prohibited : Prohibited	String	AVL	Switch
Measured water heater water temperature	Get	0xC1	0x00～0x64 (0～100℃)				
		MeasuredWaterTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Hot water supply temperature setting	Set Get	0xD1	0x00～0x64 (0～100℃)				
		SupplyWaterTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Bathwater temperature setting	Set Get	0xD3	0x00～0x64 (0～100℃)				
		BathWaterTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Volume of water to heat up	Set Get	0xE0	0x00～0x64 (0～100%)				
		BathWaterVolume		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Measured amount of water remaining in tank	Get	0xE1	0x0000～0xFFFD(0～65533 ﾘｯﾄﾙ)				
		MeasuredRemainingWater		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Tank capacity	Get	0xE2	0x0000～0xFFFD(0～65533 ﾘｯﾄﾙ)				
		TankCapacity		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
“Automatic bath water heating” mode setting	Set Get	0xE3	“Automatic bath water heating” mode ON = 0x41, “Automatic bath water heating” mode OFF = 0x42				
		AutoHeatingModeStatus		“Automatic bath water heating” mode ON: Auto “Automatic bath water heating” mode OFF: Manual	String	AVL	Switch
“Addition of hot water” function setting	Set Get	0xE5	“Addition of hot water” function ON =0x41, “Addition of hot water” function OFF= 0x42				
		WaterSupplyStatus		“Addition of hot water” function ON : ON “Addition of hot water” function OFF: OFF	String	AVL	Switch
“Slightly lower bath water temperature” function setting	Set Get	0xE6	“Slightly lower bath water temperature” function ON =0x41, “Slightly lower bath water temperature” function OFF= 0x42				
		TepidBathWaterStatus		“Slightly lower bath water temperature” function ON: ON “Slightly lower bath water temperature” function OFF: OFF	String	AVL	Switch
Bath water volume setting 1	Set Get	0xE7	0x00～0xFD (0～253 ﾘｯﾄﾙ)				
		BathWater1Volume		Minimum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value
Bath water volume setting 2	Set Get	0xE8	0x31～0x38				
		BathWaterVolumeLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level
Bath water	Set	0xEE	0x0000～0xFFFD(0～65533 ﾘｯﾄﾙ)				

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volume setting 3	Get	BathWater3Volume		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
“ON timer-based reservation” setting	Set Get	0x90	Reservation function ON=0x41, Reservation function OFF=0x42				
		OnTimerStatus		Reservation function ON: ON Reservation function OFF: OFF	String	AVL	Switch
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.4.6 Requirements for electronic toilet seat (bidet toilet seat, electrically-warmed toilet seat, etc.) class

Class group code : 0x02

Class code : 0x6E

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricHeatingToiletSeat

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricHeatingToiletSeat:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Toilet seat temperature setting	Set Get	0xE0	0x31～0x3A				
		SeatTempLevel		1, 2, 3, 4, 5, 6, 7, 8,9,10	String	AVL	Level
Toilet seat warmer setting	Set Get	0xE1	ON＝0x41, OFF＝0x42				
		SeatHeaterStatus		ON: ON OFF: OFF	String	AVL	Switch
“Toilet seat warmer halt function” setting	Set Get	0xE2	Continuous =0x41, Once =0x42, None =0x43				
		SeatHeaterPauseStatus		Continuous: Always Once: Once None: None	String	AVL	High
“Time to activate ‘toilet seat warmer halt function’” setting	Set Get	0xE3	0～0x17: 0～0x3B (=0～23):(=0～59)				
		SeatHeaterStartPauseTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“ ‘Toilet seat warmer halt function’ operation period” setting	Set Get	0xE4	0～0x17: 0～0x3B (=0～23):(=0～59)				
		HeaterPauseIntervalTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Room heater temperature setting	Set Get	0xE5	Low/ Medium/ High 0x31/ 0x32/ 0x33				
		RoomHeaterTempStatus		Low: Low Medium: Middle High: High	String	AVL	Switch

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Room heater setting	Set Get	0xE6	Room heater ON/ Room heater OFF/ Timer mode 0x41/ 0x42/ 0x43				
		RoomHeaterModeStatus		Room heater: ON Room heater: OFF Timer mode: TimerMode	String	AVL	Selection

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Room heater status	Set Get	0xE7	Room heater ON/ Room heater OFF 0x41/ 0x42				
		RoomHeaterStatus		Room heater: ON Room heater: OFF	String	AVL	Switch
“Time to activate room heater” setting	Set Get	0xE8	0～0x17: 0～0x3B (=0～23):(=0～59)				
		RoomHeaterStartTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“Duration of operation of room heater” setting	Set Get	0xE9	0～0x17: 0～0x3B (=0～23):(=0～59)				
		RoomHeaterOperatingTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Power-saving operation setting	Set Get	0x8F	ON＝0x41，OFF＝0x42				
		EnergySavingStatus		ON：ON OFF：OFF	String	AVL	Switch
Special function setting	Set Get	0xEA	None: 0x40 Function to prevent temperature from becoming too low: 0x41 for future reserved：0x42～				
		SpecialRunModeStatus		None: None Function to prevent temperature from becoming too low: AntiDropInTemp	String	AVL	Selection
Human body	Get	0xEB	Detected =0x41, Not detected =0x42				

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detection status		HumanDetection Status		Detected: Found Not detected: NotFound	String	AVL	Switch
Seating detection status	Get	0xEC	Detected=0x41, Not detected= 0x42				
		SeatLoadStatus		Detected: Found Not detected: NotFound	String	AVL	Switch
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59)				
		PresentTime		hh-mm-dd (ISO 8601 format)	Time	Date	Time

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1.4.7 Requirements for electric lock class

Class group code : 0x02

Class code : 0x6F

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricLock

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricLock:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Locking setting 1	Set Get	0xE0	Lock=0x41，Unlock=0x42				
		Lockup1Status		Lock: Locked Unlock: UnLocked	String	AVL	Switch
Locking setting 2	Set Get	0xE1	Lock=0x41，Unlock=0x42				
		Lockup2Status		Lock: Locked Unlock: UnLocked	String	AVL	Switch
Door guard locking status	Get	0xE2	Lock=0x41，Unlock=0x42				
		DoorGuardLockupStatus		Lock: Locked Unlock: UnLocked	String	AVL	Switch
Door open/close status	Get	0xE3	Open=0x41，Close=0x42				
		DoorOpenCloseStatus		Open: Open Close: Close	String	AVL	Switch
“Presence of people in room” status	Get	0xE4	在室＝0x41，不在＝0x42				
		PresenceStatus		在室：Presence 不在：Absence	String	AVL	Switch
Alarm status	Get	0xE5	Normal state（Non-Alarm）＝0x40 Picking= 0x41，Door left open= 0x42 Manual unlocking= 0x43，Tampering= 0x44				
		AlarmStatus		Normal state: Normal Picking: Picking Door left open: LeaveDoorOpen Manual unlocking: ManualOpen Tampering: Tamper	String	AVL	Selection
“Automatic locking function” setting	Set Get	0xE6	Automatic locking function ON= 0x41, Automatic locking function OFF= 0x42				
		AutoLockModeStatus		ON : ON OFF: OFF	String	AVL	Switch

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1.4.8 Requirements for instantaneous water heater class

Class group code : 0x02

Class code : 0x72

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : InstantaneousWaterHeater

Device Type: urn:echonet-gr-jp:device:ECHONET_InstantaneousWaterHeater:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Water heater burning status	Get	0xD0	Yes=0x41, No=0x42				
		BoilerBurningStatus		Yes: ON No: OFF	String	AVL	Switch
Hot water supply temperature setting	Set Get	0xD1	0x00～0x64 (0～100)				
		HotWaterTemp		Minimum: 0 Maximum:100 Step:1	ui1	AVR	Numerical value
"Hot water supply temperature maintenance function" setting	Set Get	0xD2	Hot water supply temperature maintenance function ON= 0x41, Hot water supply temperature maintenance function OFF =0x42				
		WarmerStatus		Hot water supply temperature maintenance function ON: ON Hot water supply temperature maintenance function OFF: OFF	String	AVL	Switch
"Duration of automatic operation" setting	Set Get	0xDA	0～0x17: 0～0x3B (=0～23):(=0～59)) Infinite: 0xFFFF				
		AutoDurationTimeSet		--	bin.hex	--	Others
Remaining automatic operation time	Get	0xDB	0～0x17: 0～0x3B (=0～23):(=0～59) Infinite: 0xFFFF				
		AutoRemainTimeSet		--	bin.hex	--	Others
Bathwater	Set	0xE1	0x00～0x64 (0～100)				

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temperature setting	Get	BathTemp		Minimum: 0 Maximum:100 Step:1	ui1	AVR	Numerical value
Bath water heater burning status	Get	0xE2	Yes=0x41, No=0x42				
		BathBoilerBurningStaus		Yes: ON No: OFF	String	AVL	Switch
"Automatic bath water heating" mode setting	Set Get	0xE3	"Automatic bath water heating" mode ON= 0x41, "Automatic bath water heating" mode OFF= 0x42				
		BathAutoModeStatus		"Automatic bath water heating" mode ON: ON "Automatic bath water heating" mode OFF: OFF	String	AVL	Switch
"Bath water reheating function" setting	Set Get	0xE4	Bath water reheating function ON =0x41, Bath water reheating function OFF= 0x42				
		BathReheatStatus		Bath water reheating function ON: ON Bath water reheating function ON: OFF	String	AVL	Switch
Addition of hot bath water" function setting	Set Get	0xE5	"Addition of hot water" function ON =0x41, "Addition of hot water" function OFF= 0x42				
		BathWaterSupplyStatus		"Addition of hot water" function ON: ON "Addition of hot water" function OFF: OFF	String	AVL	Switch

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
"Slightly lower bath water temperature" function setting	Set Get	0xE6	"Slightly lower bath water temperature" function ON=0x41, "Slightly lower bath water temperature" function OFF=0x42				
		TepidBathWaterStatus		"Slightly lower bath water temperature" function ON: ON "Slightly lower bath water temperature" function OFF: OFF	String	AVL	Switch
Bath water volume setting 1	Set Get	0xE7	0x00～0xFD (0～253 リットル)				
		BathWater1Volume		Minimum: 0 Maximum: 253 Step：1	ui1	AVR	Numerical value
Bath water volume setting 2	Set Get	0xE8	0x31～0x38				
		BathWaterLevel		1, 2, 3, 4, 5, 6, 7, 8	String	AVL	Level

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Bath water volume setting 3	Set Get	0xEE	0x0000～0xFFFD(0～65533 ﾘｯﾄﾙ)				
		BathHotWater3Volume		Minimum: 0 Maximum: 65533 Step：1	ui2	AVR	Numerical value
“Bathroom priority function” setting	Set Get	0xE9	Bathroom priority function ON= 0x41, Bathroom priority function OFF= 0x42				
		BathPriorityStatus		Bathroom priority function ON: ON Bathroom priority function OFF: OFF	String	AVL	Switch
Shower hot water supply status	Get	0xEA	Yes = 0x41, No = 0x42				
		ShowerWaterSupplyStatus		Yes: Supply No: NotSupply	String	AVL	Switch
Kitchen hot water supply status	Get	0xEB	Yes = 0x41, No = 0x42				
		KitchenWaterSupplyStatus		Yes: Supply No: NotSupply	String	AVL	Switch
“ON timer-based reservation function for hot water supply temperature maintenance function” setting	Set Get	0xEC	Reservation function ON=0x41, Reservation function OFF=0x42				
		WarmerOnTimerStatus		Reservation function ON: ON Reservation function OFF: OFF	String	AVL	Switch
ON timer setting (time) for hot water supply temperature maintenance function	Set Get	0xED	0～0x17: 0～0x3B (=0～23):(=0～59)				
		WarmerOnTimerTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“ON timer-based reservation function for automatic bath water heating mode” setting	Set Get	0x90	Reservation function ON= 0x41, Reservation function OFF =0x42				
		BathOnTimerStatus		Reservation function ON: ON Reservation function OFF: OFF	String	AVL	Switch
ON timer setting (time) for automatic bath water heating mode	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59）				
		BathOnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
ON timer setting (relative time) for automatic bath water heating mode	Set Get	0x92	0～0x17: 0～0x3B (=0～23):(=0～59）				
		BathOnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59）				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.4.9 Requirements for bathroom heater and dryer class

Class group code : 0x02

Class code : 0x73

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : BathroomAirConditioner

Device Type: urn:echonet-gr-jp:device:ECHONET_BathroomAirConditioner:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Operation setting	Set Get	0xB0	Ventilation operation: 0x10 Bathroom pre-warmer operation:0x20 Bathroom heater operation:0x30 Bathroom dryer operation:0x40 Cool air circulator operation:0x50 Stop: 0x00				
		OperationModeStatus		Ventilation operation: Ventilation Bathroom pre-warmer operation: PreHeating Bathroom heater operation: Heating Bathroom dryer operation: Drying Cool air circulator operation: CoolWind Stop: Stop	String	AVL	Selection
Ventilation operation setting	Set Get	0xB1	Automatic : 0x41 Standard : 0x42 Air flow rate level: 0x31～38				
		VentilationStatus		Automatic: Auto Standard: Normal Air flow rate level: 1,2,3,4,5,6,7,8	String	AVL	Selection
Bathroom pre-warmer operation setting	Set Get	0xB2	Automatic : 0x41 Standard : 0x42 Bathroom pre-warming strength level: 0x31～38				

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		PreHeatingStatus		Automatic: Auto Standard : Normal Bathroom heating strength level: 1,2,3,4,5,6,7,8	String	AVL	Selection
Bathroom heater operation setting	Set Get	0xB3	Automatic : 0x41 Standard : 0x42 Bathroom heating strength level: 0x31～38				
		HeatingStatus		Automatic: Auto Standard : Normal Bathroom heating strength level: 1,2,3,4,5,6,7,8	String	AVL	Selection

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Bathroom dryer operation setting	Set Get	0xB4	Automatic :0x41 Standard :0x42 Bathroom drying strength level: 0x31～38				
		DryOperationLevel		Automatic: Auto Standard: Normal Bathroom drying strength level: 1～8	String	AVL	Level
Cool air circulator operation setting	Set Get	0xB5	Automatic :0x41 Standard :0x42 Cool air circulation strength level: 0x31～38				
		CoolWindOperationLevel		Automatic: Auto Standard: Normal Cool air circulation strength level1～8	String	AVL	Level
Measured relative bathroom humidity	Set Get	0xBA	0x00～0x64 (0～100%)				
		RoomRelativeHumid		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Measured bathroom temperature	Get	0xBB	0x81～0x7D (-127～125℃)				
		RoomMeasuredTemp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Ventilation air flow	Set Get	0xC2	Automatic :0x41 Air flow rate level: 0x31～38				

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rate setting		VentilatingWind Level		Automatic: Auto Air flow rate level: 1～8	String	AVL	Level
Filter cleaning reminder sign setting	Set Get	0xCF	Lit: 0x41 Unlit: 0x42				
		FilterSignStatus		Lit: ON Unlit: OFF	String	AVL	Switch
Human body detection status	Get	0xE2	Detected: 0x41 Not detected: 0x42				
		HumanDetection Status		Detected: Found Not detected: NotFound	String	AVL	Switch
“ON timer-based reservation ” setting 1	Set Get	0x90	Reservation function ON: 0x41 Reservation function OFF: 0x42				
		OnTimer1Status		Reservation function ON= ON Reservation function OFF= OFF	String	AVL	Switch
“ON timer-based reservation ” setting 2	Set Get	0xE1	Reservation function ON for the ventilation mode: 0x10 Reservation function ON for the bathroom pre-warmer mode: 0x20 Reservation function ON for the bathroom heater mode: 0x30 Reservation function ON for the bathroom dryer mode: 0x40 Reservation function ON for the cool air circulator mode: 0x50 Reservation function OFF: 0x00				
		OnTimer2Status		Reservation function ON for the ventilation mode: VentilatingON Reservation function ON for the bathroom pre-warmer mode: PreHeatingON Reservation function ON for the bathroom heater mode: HeatingON Reservation function ON for the bathroom dryer mode: DryON Reservation function ON for the cool air circulator mode: CoolWIndON Reservation function OFF: OFF	String	AVL	Selection

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
ON timer setting (time)	Set Get	0x91	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
“OFF timer-based reservation” setting 1	Set Get	0x94	Reservation function ON: 0x41 Reservation function OFF: 0x42				
		OffTimerStatus		Reservation function ON: ON Reservation function OFF: OFF	String	AVL	Switch
OFF timer setting (time)	Set Get	0x95	0～0x17 : 0～0x3B (=0～23) : (=0～59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
OFF timer setting (relative time)	Set Get	0x96	0～0x17 : 0～0x3B (=0～23) : (=0～59)				
		OffTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Time setting	Set Get	0x97	0～0x17 : 0～0x3B (=0～23) : (=0～59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
Power-saving	Set Get	0x8F	Power-saving operation: 0x41 Normal operation : 0x42				

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operation setting		EnergySavingStatus		Power-saving operation: ON Normal operation: OFF	String	AVL	Switch

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1.4.10 Requirements for household solar power generation class

Class group code : 0x02

Class code : 0x79

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : HomeSolarPowerGenerator

Device Type: urn:echonet-gr-jp:device:ECHONET_HomeSolarPowerGenerator:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Type	Get	0xD0	System interconnection type=0x00、Independent type=0x01				
		TypeStatus		System interconnection type = Cooperation Independent type = StandAlone	String	AVL	Selection
Instantaneous amount of electricity generated	Get	0xE0	0x0000～0xFFFD（0～65533）				
		InstantGeneratedPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Cumulative amount of electricity generated	Get	0xE1	0x0～0x3B9AC9FF (0～999,999,999kWh)				
		CumulatedGeneratedPower		Minimum: 0 Maximum: 999999999 Step: 1	ui4	AVR	Numerical value
Resetting cumulative amount of electricity generated	Set	0xE2	Reset=0x00				
		GeneratedPower		--	--	--	Reset
Cumulative amount of electricity sold	Get	0xE3	0x0～0x3B9AC9FF (0～999,999,999kWh)				
		CumulatedSoldPower		Minimum: 0 Maximum: 999999999 Step: 1	ui4	AVR	Numerical value
Resetting cumulative amount of electricity sold	Set	0xE4	Reset=0x00				
		SoldPower		--	--	--	Reset

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1.4.11 Requirements for cold/hot water heat pump class

Class group code : 0x02

Class code : 0x7A

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CoolingHeatingWaterHeatSource

Device Type:

urn:echonet-gr-jp:device:ECHONET_CoolingHeatingWaterHeatSource:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Operation mode setting	Set Get	0xE0	Heating＝0x41, Cooling＝0x42				
		OperationModeStatus		Heating = Heating Cooling = Cooling	String	AVL	Selection
Water temperature setting 1	Set Get	0xE1	0x00～0x64（0～100℃）、 AUTO＝0x71				
		DesiredWater1Temp		--	bin.hex	--	Others
Water temperature setting 2	Set Get	0xE2	Cooling (cold water): 0x21～0x2F Heating (hot water): 0x31～0x3F The values on the left and right are the values for the lowest and highest levels, respectively. AUTO＝0x41				
		DesiredWater2Temp		--	bin.hex	--	Others
Measured outgoing water temperature (outlet water temperature)	Get	0xE3	0x00～0x64（0～100℃）				
		WayOutMeasuredWaterTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Measured return water temperature (inlet water temperature)	Get	0xE4	0x00～0x64（0～100℃）				
		WayInMeasuredWaterTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Special function setting	Set Get	0xE5	Normal operation＝0x41, “Lower strength” operation＝0x42、 “Higher strength” operation＝0x43				

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		SpecialOperation Status		Normal operation= Normal “Lower strength” operation = Gently “Higher strength” operation = HighPower	String	AVL	Selection
Daily timer function setting	Set Get	0xE6	Timers OFF＝0x40、Timer1＝0x41、Timer 2＝0x42				
		DailyTimerStatus		Timers OFF＝OFF Timer1＝Timer1 Timer 2＝Timer2	String	AVL	Selection
“Daily timer 1” setting	Set Get	0xE7	A total of 6 bytes is used with one bit assigned to each 30-minute period of the day (24 hours). 1: operate, 0: stop				
		DailyTimer1		--	bin.hex	--	Others

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
"Daily timer 2" setting	Set Get	0xE8	A total of 6 bytes is used with one bit assigned to each 30-minute period of the day (24 hours). 1: operate, 0: stop				
		DailyTimer2		--	bin.hex	--	Others
"ON timer-based reservation" setting	Set Get	0x90	Reservation function ON=0x41, Reservation function OFF=0x42				
		OnTimerStatus		Reservation function ON = ON Reservation function OFF=OFF	String	AVL	Switch
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the "SS" shall be fixed at"00."	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OnTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the "SS" shall be fixed at"00."	Time	Date	Time
"OFF timer-based reservation" setting	Set Get	0x94	Reservation function ON=0x41, Reservation function OFF=0x42				
		OffTimerStatus		Reservation function ON=ON Reservation function OFF=OFF	String	AVL	Switch
OFF timer setting (time)	Set Get	0x95	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OffTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the "SS" shall be fixed at"00."	Time	Date	Time
OFF timer setting (relative time)	Set Get	0x96	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OffTimerRelativeTime		Described in the HH-MM-SS format (ISO 8601 format). However, the "SS" shall be fixed at"00."	Time	Date	Time

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Time setting	Set Get	0x97	Current Time　HH：MM 0x00～0x17：0x00～0x3B (= 0～23) : (= 0～59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.4.12 Requirements for floor heating class

Class group code : 0x02

Class code : 0x7B

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : FloorHeating

Device Type: urn:echonet-gr-jp:device:ECHONET_FloorHeating:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Temperature setting1	Set Get	0xE0	0x00～0x32（0～50℃） AUTO＝0x41				
		Desired1TempSetting		--	bin.hex	--	Others
Temperature setting2	Set Get	0xE1	0x31～0x3F The values “0x31”and “0x3F” correspond to the lowest and highest levels, respectively. AUTO＝0x41				
		Desired2TempSetting		--	bin.hex	--	Others
Measured room temperature	Get	0xE2	0x81～0x7D(-127～125℃)				
		MeasuredRoomTemp		Minimum: -127 Maximum: 125 Step: 1	i1	AVR	Numerical value
Measured floor temperature	Get	0xE3	0x00～0x32（0～50℃）				
		MeasuredFloorTemp		Minimum: 0 Maximum: 50 Step: 1	ui1	AVR	Numerical value
Zone switching	Set Get	0xE4	Bit 0 to Bit 7 are assigned to Zone 0 to Zone 7, respectively. 1: control provided, 0: control not provided				
		ZoneSwitchStatus	0ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			1ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			2ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch

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			3ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			4ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			5ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			6ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch
			7ZoneSwitchStatus	Control provided: ON Control not provided: OFF	String	AVL	Switch

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Special function setting	Set Get	0xE5	Normal operation＝0x41, Power-saving operation＝0x42、“Higher strength” operation ＝0x43				
		SpecialOperationStatus		Normal operation= Normal Power-saving operation = Gently “Higher strength” operation = HighPower	String	AVL	Selection
Daily timer function setting	Set Get	0xE6	Timers OFF＝0x40、Timer 1＝0x41、Timer 12 ＝0x42				
		DailyTimerStatus		Timers OFF＝OFF Timer 1＝Timer1 Timer 2＝Timer2	String	AVL	Selection
“Daily timer 1” setting	Set Get	0xE7	A total of 6 bytes is used with one bit assigned to each 30-minute period of the day (24 hours). 1: operate, 0: stop				
		DailyTimer1		--	bin.hex	--	Others
“Daily timer 2” setting	Set Get	0xE8	A total of 6 bytes is used with one bit assigned to each 30-minute period of the day (24 hours). 1: operate, 0: stop				
		DailyTimer2		--	bin.hex	--	Others
“ON timer-based reservation” setting	Set Get	0x90	Reservation function ON＝0x41, Reservation function OFF＝0x42				
		OnTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	String	AVL	Switch
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time
ON timer setting	Set Get	0x92	0～0xFF: 0～0x3B (=0～255):(=0～59)				

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(relative time)		OnTimerRelative Time		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Tim e	Date	Time
“OFF timer-based reservation” setting	Set Get	0x94	Reservation function ON＝0x41, Reservation function OFF＝0x42				
		OffTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	Strin g	AVL	Switch
OFF timer setting (time)	Set Get	0x95	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OffTimerAbsolut eTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Tim e	Date	Time
OFF timer setting (relative time)	Set Get	0x96	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OffTimerRelative Time		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Tim e	Date	Time
Time setting	Set Get	0x97	Current time　HH：MM 0x00～0x17：0x00～0x3B (= 0～23) : (= 0～59)				
		PresentTime		Described in the HH-MM-SS format (ISO 8601 format). However, the “SS” shall be fixed at”00.”	Time	Date	Time

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1.4.13 Requirements for electricity meter class

Class group code : 0x02

Class code : 0x7C

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricEnergyMeter

Device Type: urn:echonet-gr-jp:device:ECHONET_ElectricEnergyMeter:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Cumulative amount of electricity	Get	0xE0	0x00000000～0x05F5E0FF (0～99,999,999)				
		CumulatedPower		Minimum: 0 Maximum: 99999999 Step: 1	ui4	AVR	Numerical value
Unit for cumulative amount of electricity	Get	0xE2	0x01～0x02(Down to first/second decimal place)				
		CumulatedPower UnitStatus		Down to first decimal place: 1 Down to second decimal place: 2	String	AVL	Selection
"Historical data of measured cumulative amount of electricity" 1	Get	0xE3	0x00000000～0x05F5E0FF (0～99,999,999)				
		CumulatedPower Record1			bin.hex	--	Others
"Historical data of measured cumulative amount of electricity" 2	GetM	0xE4	0x00000000～0x05F5E0FF (0～99,999,999)				
		1CumulatedPower Record2		--	bin.hex	--	Others
		2CumulatedPower Record ～ 45CumulatedPower Record2		--	bin.hex	--	Others
Time setting	Set Get	0x97	Current time HH：MM 0x00～0x17：0x00～0x3B (= 0～23) : (= 0～59)				
		PresentTime		Described in the "HH-MM-SS" format (ISO 8601 format). However, the "SS" shall be fixed at "00."	Time	Date	time

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Date setting	Set Get	0x98	0～0x270F：0～0x0C：0～0x1F (=0～9999)：(=0～12)：(=0～31)				
		PresentDate		Current date Described in the “YYYY-MM-DD” format (ISO 8601 format).	Date	Date	Date

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1.4.14 Requirements for gas meter class

Class group code : 0x02

Class code : 0x82

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : GasMeter

Device Type: urn:echonet-gr-jp:device:ECHONET_GasMeter:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Cumulative gas consumption	Get	0xE0	0x0～0x3B9AC9FF (0～999,999.999m3)				
		CumulatedConsumptionGas		Minimum: 0.000 Maximum: 999999.000 Step: 0.001	float	AVL	Numerical value
Historical data of measured cumulative consumption of gas	Get	0xE2	0x0～0x3B9AC9FF (0～999,999.999m3)				
		ConsumptionGasLog		--	bin.hex	--	Others
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59)				
		PresentTime		YYYY-MM-DD ISO 8601 format	Time	Date	Time

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1.4.15 Requirements for LP gas meter class

Class group code : 0x02

Class code : 0x83

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : LPGasMeter

Device Type: urn:echonet-gr-jp:device:ECHONET_LPGasMeter:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
動作状態	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Metered cumulative gas consumption 1	Get	0xE0	0～0x005F5E0FF(0～9,999.9999m3)				
		CumulatedConsump1Gas		Minimum: 0.0000 Maximum: 9999.9999 Step: 0.0001	float	AVR	Numerical value
Metered cumulative gas consumption 2	Get	0xE1	0～0x005F5E0FF(0～99,999.999m3)				
		CumulatedConsump2Gas		Minimum: 0.000 Maximum: 99999.999 Step: 0.001	float	AVR	Numerical value
Metering data – Abnormal condition detection	Get	0xE2	Etected 0x41、Not detected 0x42				
		MeterDataErrorStatus		Etected= Found Not detected = NotFound	String	AVL	Switch
Security data 1	Get	0xE3	0～0xFFFFFFFF				
		SecurityData1		--	bin.hex	--	Others
Security data 2	Get	0xE4	0～0xFFFFFFFF				
		SecurityData2		--	bin.hex	--	Others
Central valve shutoff status	Get	0xE5	Central valve shutoff 0x41 No central valve shutoff 0x42				
		CenterValveShutOffStatus		Central valve shutoff: ON No central valve shutoff: OFF	String	AVL	Switch
Central valve shutoff	Get	0xE6	Central valve shutoff recovery permitted 0x41 Central valve shutoff recovery not permitted 0x42				

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recovery permission status		CenterValveRecoverStatus		Central valve shutoff recovery permitted: Permitted Central valve shutoff recovery not permitted: NotParmitted	String	AVL	Switch
Emergency valve shutoff status	Get	0xE7	Emergency valve shutoff 0x41、No emergency valve shutoff 0x42				
		EmargencyValveStatus		Emergency valve shutoff: ON No emergency valve shutoff: OFF	String	AVL	Switch
Shutoff valve open/close status	Get	0xE8	Shutoff valve open 0x41、Shutoff valve close 0x42				
		ShutOffValveStatus		Shutoff valve open: Open Shutoff valve close: Close	String	AVL	Switch

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Remaining volume control warning	Get	0xE9	Remaining volume control warning level1 0x31 Remaining volume control warning level2 0x32 Remaining volume control warning level3 0x33 No remaining volume control warning 0x42				
		RemainWarningStatus		Remaining volume control warning level1: Level1 Remaining volume control warning level2: Level2 Remaining volume control warning level3: Level3 No remaining volume control warning: NoRemaining	String	AVL	Selection
Remaining volume control warning level setting 1	Set Get	0xEA	0～0xFFFFFF(0～16,777,215)				
		RemainAlartLevel1Setting		Minimum: 0 Maximum: 16777215 Step: 1	ui4	AVR	Numerical value
Remaining	Set	0xEB	0～0xFFFFFF(0～16,777,215)				

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volume control warning level setting 2	Get	RemainAlartLevel2Setting		Minimum: 0 Maximum: 16777215 Step: 1	ui4	AVR	Numerical value
Remaining volume control warning level setting 3	Set Get	0xEC	0～0xFFFFFF(0～16,777,215)				
		RemainAlartLevel3Setting		Minimum: 0 Maximum: 16777215 Step: 1	ui4	AVR	Numerical value
Slight leak timer value (gas flow continuation)	Get	0xED	0～0xFD(0～253) (0～253 日)				
		GasContinuousLeakDay		Minimum: 0 Maximum: 253 Step: 1	ui1	AVR	Numerical value
Slight leak timer value (no pressure increase)	Get	0xEE	0～0xFD(0～253) (0～253 日)				
		NoPressureLeakDay		Minimum: 0 Maximum: 253 Step: 1	ui4	AVR	Numerical value
Historical data of reasons for shutoffs	Get	0xEF	0xFF：０ｘFF：０ｘFF				
		ShutOffReasonLog			bin.hex	--	Others
Supply pressure data – maximum value	Get	0xD0	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				
		MaxSupplyPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value
Supply pressure data – minimum value	Get	0xD1	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				
		MinSupplyPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value
Supply pressure data – current value	Get	0xD2	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				
		PresentSupplyPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Block pressure	Get	0xD3	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				

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data – maximum value		MaxBlockPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value
Block pressure data – minimum value	Get	0xD4	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				
		MinBlockPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value
Block pressure data – current value	Get	0xD5	0x0000～0xFFFD(0～655.33) (0～655.33kPa)				
		PresentBlockPressure		Minimum: 0 Maximum: 655.33 Step: 0.01	float	AVR	Numerical value
Frequencies of abnormal block/supply pressures	Get	0xD6	Number of days on which an abnormal block pressure occurred: number of days on which an abnormal supply pressure occurred: number of abnormal block pressures occurred: number of abnormal supply pressures occurred				
		PressureErrorDayNumbers		--	bin.hex	--	Others
Test call operation setting	Set Get	0xD7	Test call operation 0x41 No test call operation 0x42				
		TestCallStatus		Test call operation = ON No test call operation = OFF	String	AVL	Switch

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1.4.16 Requirements for general lighting class

Class group code : 0x02

Class code : 0x90

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : GeneralLighting

Device Type: urn:echonet-gr-jp:device:ECHONET_GeneralLighting:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Illuminance level	Set Get	0xB0	0x00～0x64(0～100%)				
		IlluminancePercentage		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value

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1.4.17 Requirements for buzzer class

Class group code : 0x02

Class code : 0xA0

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : Buzzer

Device Type: urn:echonet-gr-jp:device:ECHONET_Buzzer:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Buzzer sound setting	Set Get	0xB1	Buzzer sound =0x41, No buzzer sound =0x42				
		SoundGeneration Status		Buzzer sound: Enabled No buzzer sound: Disabled	String	AVL	Switch
Buzzer sound type	Set Get	0xE0	0x31～0x38				
		BuzzerSound		Binary value	bin.hex	--	Others

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1.5 Cooking/Household-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Cooking/Household-related Device Class Group (class group code X1 = 0x03). For details about the classes and properties for which requirements are specified herein, refer to Appendix.

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1.5.1 Requirements for electric pot class

Class group code : 0x03

Class code : 0xB2

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : ElectricPot

Device Type: urn:echonet-gr-jp:device:ECHONET_ ElectricPot:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Lid open/close status	Get	0xB0	Lid open＝0x41, Lid close＝0x42				
		CoverOpenCloseStatus		Lid open: Open Lid close: Close	String	AVL	Switch
“Out of hot water” warning status	Get	0xB1	Yes＝0x41 No＝0x40				
		WaterShortageStatus		Yes: Empty No: NotEmpty	String	AVL	Switch
Boiling setting	Set Get	0xB2	Start boiling＝0x41 Stop boiling/maintain temperature＝0x42				
		BoilUpStatus		Start boiling: Start Stop boiling: Stop	String	AVL	Switch
“Boiling mode/temperature maintenance mode” setting	Set Get	0xE0	Citric acid-based cleaning＝0x41, normal maintenance of temperature＝0x42, power-saving mode＝0x43				
		BoilUpOrWarmerModeStatus		Citric acid-based cleaning: CitricAcidCleaning normal maintenance of temperature: NormalWarming power-saving mode: PowerSavedWarming	String	AVL	Selection
“Temperature maintenance mode” temperature setting	Set Get	0xE1	0x00～0x64(0～100)				
		WarmerTemp		Minimum: 0 Maximum: 100 Step: 1	ui1	AVR	Numerical value
Hot water serving status	Get	0xE2	Hot water serving＝0x41, No hot water serving＝0x42				
		HotWaterDischargeStatus		Hot water serving: Discharged No hot water serving:NotDischarged	String	AVL	Switch

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Lock status	Get	0xE3	Lock＝0x41, No lock＝0x42				
		LockStatus		Lock: Locked No lock: Unlocked	String	AVL	Switch

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1.5.2 Requirements for “freezer and refrigerator” class

Class group code : 0x03

Class code : 0xB7

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : Refrigerator

Device Type: urn:echonet-gr-jp:device:ECHONET_Refrigerator:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Door open/close status	Get	0xB0	Open＝0x41、Closed: 0x42				
		DoorStatus		Open = Open、 Closed = Close	String	AVL	Switch
“Door open” warning	Get	0xB1	“Door open” warning provided = 0x41 “Door open” warning not provided = 0x42				
		DoorWarningStatus		“Door open” warning provided＝Found “Door open” warning not provided＝NotFound	String	AVL	Switch
Refrigerator compartment door open/close status	Get	0xB2	Refrigerator compartment door open＝0x41、 Refrigerator compartment door closed: 0x42				
		FrigCompDoorStatus		Refrigerator compartment door open = Open Refrigerator compartment door closed = Close	String	AVL	Switch
Freezer compartment door open/close status	Get	0xB3	Freezer compartment door open＝0x41、 Freezer compartment door closed: 0x42				
		FreezerCompDoorStatus		Freezer compartment door open = Open Freezer compartment door closed = Close	String	AVL	Switch
Chilled compartment door open/close status	Get	0xB4	Chilled compartment door open＝0x41、 Chilled compartment door closed: 0x42				
		MeatFishCompDoorStatus		Chilled compartment door open = Open Chilled compartment door closed = Close	String	AVL	Switch
Vegetable compartm	Get	0xB5	Vegetable compartment door open＝0x41、 Vegetable compartment door closed: 0x42				

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ent door open/close status		VegetableCompDoorStatus		Vegetable compartment door open = Open Vegetable compartment door closed = Close	String	AVL	Switch
Multi-refrigerating mode compartment door open/close status	Get	0xB6	Multi-refrigerating mode compartment door open＝0x41、Multi-refrigerating mode compartment door closed: 0x42				
		MultiModeCompDoorStatus		Multi-refrigerating mode compartment door open = Open Multi-refrigerating mode compartment door closed = Close	String	AVL	Switch
Maximum allowable temperature level setting value	Get	0xE0	Acquires the maximum allowable temperature level setting values for the compartments of the refrigerator: 1st byte: refrigerator compartment 2nd byte: freezer compartment 3rd byte: chilled compartment 4th byte: vegetable compartment 5th byte: multi-refrigerating mode compartment 6th to eighth bytes: reserved Level: 0x01 to 0xFF (255 steps) 0x00 = The refrigerator has no compartment				
		AllowedTempLevelMax		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Refrigerator compartment temperature setting	Set Get	0xE2	0x81～0x7E (－127～126℃)				
		FrigCompTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Freezer compartment temperature setting	Set Get	0xE3	0x81～0x7E (－127～126℃)				
		FreezerCompTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Chilled compartment temperature setting	Set Get	0xE4	0x81～0x7E (－127～126℃)				
		MeatFishCompTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Vegetable	Set	0xE5	0x81～0x7E (－127～126℃)				

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compartment temperature setting	Get	VegetableCompTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Multi-refrigerating mode compartment temperature setting	Set Get	0xE6	0x81～0x7E (－127～126℃)				
		MultiModeCompTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Refrigerator compartment temperature level setting	Set Get	0xE9	0x01～“maximum allowable temperature level setting value” （(Weak - strong)）				
		FrigCompTempSetting		Minimum: 1 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Freezer compartment temperature level setting	Set Get	0xEA	0x01～“maximum allowable temperature level setting value” （(Weak - strong)）				
		FreezerCompTempSetting		Minimum: 1 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Chilled compartment temperature level setting	Set Get	0xEB	0x01～“maximum allowable temperature level setting value” （(Weak - strong)）				
		MeatFishCompTempSetting		Minimum: 1 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Vegetable compartment temperature level setting	Set Get	0xEC	0x01～“maximum allowable temperature level setting value” （(Weak - strong)）				
		VegetableCompTempSetting		Minimum: 1 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Multi-refrigerating mode compartment temperature level setting	Set Get	0xED	0x01～“maximum allowable temperature level setting value” （(Weak - strong)）				
		MultiModeCompTempSetting		Minimum: 1 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Measured refrigerator compartment temperature	Get	0xD1	0x81～0x7E (－127～126℃)				
		FrigCompMeasuredTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Measured freezer compartment temperature	Get	0xD2	0x81～0x7E (－127～126℃)				
		FreezerCompMeasuredTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Measured chilled compartment temperature	Get	0xD3	0x81～0x7E (－127～126℃)				
		MeatFishCompMeasuredTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Measured vegetable compartment temperature	Get	0xD4	0x81～0x7E (－127～126℃)				
		VegetCompMeasuredTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Measured multi-refrigerating mode compartment temperature	Get	0xD5	0x81～0x7E (－127～126℃)				
		MultiWayCompMeasuredTemp		Minimum: -127 Maximum: 126 Step: 1	i1	AVR	Numerical value
Compressor rotation speed level	Get	0xD8	Acquires the rotation speed of the compressor, which is expressed in terms of level. 1st byte: Maximum rotation speed level 2nd byte: Rotation speed level				
		CompressorRotateSpeed	MaxCompressorRotateSpeed	Minimum: 1 Maximum: 255 Step: 1	ui1	AVL	Numerical value
			CompressorRotateSpeed	Minimum: 0 Maximum: 255 Step: 1	ui1	AVR	Numerical value
Measured current consumption	Get	0xDA	0x0000 to 0xFFFD (0 to 6553.3A)				
		MeasuredElectricCurrent		Minimum: 0 Maximum: 6553.3 Step: 0.1	float	AVR	Numerical value
Measured power consumption	Get	0xDB	0x0000 to 0xFFFD (0 to 65533W)				
		MeasuredPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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Rated power consum	Get	0xDC	0x0000 to 0xFFFD (0 to 65533W)				
		RatedPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Quick freezing operation setting	Set Get	0xA0	Normal freezing=0x41 Quick freezing=0x42 Standing by for quick freezing=0x43				
		FastFreezeFuncStatus		Normal freezing= Normal Quick freezing= QuickFreeze Standing by for quick freezing= StandbyQuickFreeze	String	AVL	Selection

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Quick refrigeration operation setting	Set Get	0xA1	Normal refrigeration＝0x41 Quick refrigeration＝0x42 Standing by for quick refrigeration＝0x43				
		QuickFrigFuncStatus		Normal refrigeration＝Normal Quick refrigeration＝QuickRefrigeration Standing by for quick refrigeration＝StandbyQuickFrig	String	AVL	Selection
Ice-making permission setting	Set Get	0xA4	Ice-making permitted＝0x41 Ice-making prohibited＝0x42 Ice-making temporarily prohibited＝0x43				
		IcemakerSetStatus		Ice-making permitted＝Enable Ice-making prohibited＝Disable Ice-making temporarily prohibited＝TemporarilyDisable	String	AVL	Selection
Ice-making	Get	0xA5	In progress＝0x41 Stopped＝0x42				

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operation status		IcemakerStatus		In progress＝Progress Stopped＝Stopped	String	AVL	Switch
Status of water supply tank for ice-making	Get	0xA6	There is water in the tank＝0x41 There is no water in the tank or there is no tank =0x41				
		IcemakerTankStatus		There is water in the tank＝ContainsWater There is no water in the tank or there is no tank =NoWaterOrNoTank	String	AVL	Switch
Refrigerator compartment humidification operation setting	Set Get	0xA8	Humidification ON＝0x41 Humidification OFF＝0x42				
		FrigCompHumidStatus		Humidification ON＝ON Humidification OFF＝OFF	String	AVL	Switch
Vegetable compartment humidification operation setting	Set Get	0xA9	Humidification ON＝0x41 Humidification OFF＝0x42				
		VegetableCompHumidStatus		Humidification ON＝ON Humidification OFF＝OFF	String	AVL	Switch
Deodorization operation setting	Set Get	0xAD	Deodorization ON＝0x41 Deodorization OFF＝0x42				
		DeodorantStatus		Deodorization ON＝ON Deodorization OFF＝OFF	String	AVL	Switch
Time setting	Set Get	0x97	Current time HH：MM 0x00～0x17：0x00～0x3B （=0～23）：（=0～59）				
		PresentTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
Date setting	Set Get	0x98	0～0x270F：0～0x0C：0～0x1F (=0～9999)：(=0～12)：(=0～31)				
		PresentDate		Current date Described in the “YYYY-MM-DD” format (ISO 8601 format).	Date	Date	Date

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1.5.3 Requirements for combination microwave oven class

Class group code : 0x03

Class code : 0xB8

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : MicrowaveOven

Device Type: urn:echonet-gr-jp:device:ECHONET_MicrowaveOven:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Door open/close status	Get	0xB0	Open＝0x41、Closed: 0x42				
		DoorStatus		Open = Open、 Closed = Close	String	AVL	Switch
Heating status	Get	0xB1	Initial state = 0x40 Heating = 0x41 Heating temporarily stopped = 0x42 Notification of completion of heating cycle = 0x43 Setting = 0x44 Preheating = 0x45 Preheating completed and temperature being maintained = 0x46 Heating temporarily stopped during heating cycle with prompt message for user provided = 0x47				

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		HeatingStatus		Initial state =InitialState Heating = Heating Heating temporarily stopped = Suspended Notification of completion of heating cycle =HeatingComplete Setting = Setting Preheating = PreHeating Preheating completed and temperature being maintained =PreHeatingComplete Heating temporarily stopped during heating cycle with prompt message for user provided = UserPaused	String	AVL	Selection
Heating setting	Set Get	0xB2	Start/restart heating =0x41 Temporarily stop heating =0x42 Stop heating =0x43				
		HeatingOperation Status		Start/restart heating = Start Temporarily stop heating =Suspended Stop heating = Stop	String	AVL	Selection

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Heating mode setting	Set Get	0xE0	Microwave heating =0x41 Thawing =0x42 Oven =0x43 Grill =0x44 Toaster =0x45 Fermenting =0x46 Stewing =0x47 Steaming =0x48 Two-stage microwave heating =0x51 No mode specified =0xFF				

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		HeatingModeStatus		Microwave heating =MicrowaveHeating Thawing = Defrosting Oven =OvenHeating Grill = GrillHeating Toaster = Toaster Fermenting = Fermenting Stewing = Stewing Steaming = Steaming Two-stage microwave heating =TwoStageMicrowave Heating No mode specified = NotSpecified	String	AVL	Selection
Automatic heating setting	Set Get	0xE1	Automatic =0x41 Manual =0x42 Not specified =0xFF				
		AutoHeatingStatus		Automatic = Auto Manual = Manual Not specified = NotSpecified	String	AVL	Selection
Automatic heating level setting	Set Get	0xE2	0x31~0x35(weak － strong) Not specified =0xFF				
		AutoHeatingLevel		Not specified = NotSpecified Level＝1, 2, 3, 4, 5	String	AVL	Level
Automatic heating menu setting	Set Get	0xD0	0x00~0xFE: Automatic heating cycle code value (See the automatic heating cycle code table in the subsection entitled “Automatic heating menu setting.”)				
		AutoHeatingMenu		--	bin.hex	--	Others
Oven mode setting	Set Get	0xD1	0x40: Automatic selection mode 0x41: Convection oven mode 0x42: Hot air circulation oven mode 0x43: Hybrid oven mode 0xFF: No mode specified				

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		OvenModeStatus		Automatic selection mode =AutoSelection Convection oven mode =ConvectionOven Hot air circulation oven mode =CirculationOven Hybrid oven mode = HybridOven No mode specified = NotSpecified	String	AVL	Selection

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Oven mode setting	Set Get	0xD1	0x40: Automatic selection mode 0x41: Convection oven mode 0x42: Hot air circulation oven mode 0x43: Hybrid oven mode 0xFF: No mode specified				
		OvenModeStatus		Automatic selection mode=AutoSelection Convection oven mode=ConvectionOven Hot air circulation oven mode= CirculationOven Hybrid oven mode= HybridOven No mode specified = NotSpecified	String	AVL	Selection
Oven preheating setting	Set Get	0xD5	Preheating =0x41 No preheating =0x42 Not specified =0xFF				
		OvenPreHeating Status		Preheating = WithPreHeating No preheating = WithoutPreHeating Not specified = NotSpecified	String	AVL	Selection

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Fermenting mode setting	Set Get	0xD6	0x40: Automatic selection mode 0x41: Convection fermentation mode 0x42: Hot air circulation fermentation mode 0x43: Hybrid fermentation mode 0x51: Microwave fermentation mode 0xFF: No mode specified				
		FermentingStatus		Automatic selection mode = AutomaticSelection Convection fermentation mode = ConvectionFermentation Hot air circulation fermentation mode = CirculationFermentation Hybrid fermentation mode = HybridFermentation Microwave fermentation mode = MicrowaveFermentation No mode specified = NotSpecified	String	AVL	Selection
Chamber temperature setting	Set Get	0xE3	0xF554~0x7FFF(-2732~32766) (-273.2~3276.6℃) 0x8001: Automatic setting 0x8002: Not specified				
		ChamberTemp		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
"Temperature of food upon completion" setting	Set Get	0xE4	0xF554~0x7FFF(-2732~32766) (-273.2~3276.6℃) 0x8002: Not specified				
		FoodTemp		--	bin.hex	--	Others

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Heating time setting	Set Get	0xE5	HH:MM:SS 0~0x17:0~0x3B:0~0x3B (0~23):(0~59)(0~59)				
		HeatingTime		The value shall be indicated in the “HH:MM:SS” format (ISO 8601 format).	Time	Date	Time
Remaining heating time setting	Set Get	0xE6	HH:MM:SS 0~0x17:0~0x3B:0~0x3B (0~23):(0~59)(0~59)				
		RemainingHeatingTime		The value shall be indicated in the “HH:MM:SS” format (ISO 8601 format).	Time	Date	Time
Microwave heating power setting	Set Get	0xE7	0x0000~0xFFFD(0~65533) (0~65533W)				
		MicrowaveHeatingPower		Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
Prompt message setting	Set Get	0xE8	1st byte: Prompt message code (See the prompt message code table in the subsection entitled “Prompt message setting.”) 2nd byte: Timing value 0～0x64(=0～100)				
		PromptMessage		--	bin.hex	--	Others
“Accessories to combination microwave oven” setting	Set Get	0xE9	Indicates, by means of a 2-byte bit map, what accessory or accessories to the combination microwave oven to use. The bit value shall be “1” if the accessory represented by that bit is used. See the bitmap composition table in the subsection entitled “’Accessories to combination microwave oven’ setting.”				
		CombinedAccessories		--	bin.hex	--	Others
Display character string setting	Set	0xEA	ShiftJIS code×20				
		DisplayedCharactersCode		ShiftJIS code	String	String	Character
Two-stage microwave heating setting (duration)	Set Get	0xEB	Duration of the first microwave heating cycle(1～3Byte): 0～0x17: 0～0x3B : 0～0x3B (=0～23): (=0～59): (=0～59) Duration of the second microwave heating cycle(4～6Byte): 0～0x17: 0～0x3B : 0～0x3B (=0～23): (=0～59): (=0～59)				

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		StageHeatingTime	1stStageHeatingTime	Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
			2ndStageHeatingTime	Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Two-stage microwave heating setting (heating power)	Set Get	0xEC	Heating power for the first microwave heating cycle(1～2Byte）: 0x0000～0xFFFD（0～65533） （0～65533W） Heating power for the second microwave heating cycle(3～4Byte）: 0x0000～0xFFFD（0～65533） （0～65533W）				
		StageHeatingPower	1stStageHeatingPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value
			2ndStageHeatingPower	Minimum: 0 Maximum: 65533 Step: 1	ui2	AVR	Numerical value

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1.5.4 Requirements for cooking heater class

Class group code : 0x03

Class code : 0xB9

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : CookingHeater

Device Type: urn:echonet-gr-jp:device:ECHONET_CookingHeater:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Heating status	Get	0xB1	Standing by: 0x40, Operating: 0x41, Temporarily stopped: 0x42 Heating prohibited: 0x50, Unknown: 0xFF				
		HeatingStatus	LeftHeatingStatus	Standing by: Waiting Operating: Heating Temporarily stopped: Suspending Heating prohibited: Forbidden Unknown: Unknown	String	AVL	Switch
			RightHeatingStatus	Standing by: Waiting Operating: Heating Temporarily stopped: Suspending Heating prohibited: Forbidden Unknown: Unknown	String	AVL	Switch
			BackHeatingStatus	Standing by: Waiting Operating: Heating Temporarily stopped: Suspending Heating prohibited: Forbidden Unknown: Unknown	String	AVL	Switch
			RoasterHeatingStatus	Standing by: Waiting Operating: Heating Temporarily stopped: Suspending Heating prohibited: Forbidden Unknown: Unknown	String	AVL	Switch

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Heating setting	Set Get	0xB1	Stop heating: 0x40, Start/Resume heating: 0x41 Temporarily stop heating: 0x42, No setting: 0xFF				
		HeatingModeStatus	LeftHeatingModeStatus	Stop heating: Stop Start/Resume heating: Heat Temporarily stop heating: Suspend No setting: None	String	AVL	Switch
			RightHeatingModeStatus	Stop heating: Stop Start/Resume heating: Heat Temporarily stop heating: Suspend No setting: None	String	AVL	Switch
			BackHeatingModeStatus	Stop heating: Stop Start/Resume heating: Heat Temporarily stop heating: Suspend No setting: None	String	AVL	Switch
			RoasterHeatingModeStatus	Stop heating: Stop Start/Resume heating: Heat Temporarily stop heating: Suspend No setting: None	String	AVL	Switch
“All stop” setting	Set	0xB3					
		AllBurnerOff		--	String	—	Reset

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Heating power setting	Set Get	0xE7	Heating power of the left stove: heating power of the right stove: heating power of the far-side stove: heating power of the roaster - When the heating powers are specified in terms of output wattage(0～10000W） : 0x0000～0x2710 -When the heating powers are specified in terms of level (17 levels) : 0x3000～0x3010 -When the heating powers are specified in terms of the state of flame: Very low flame: 0x4002 Low flame: 0x4004 Medium flame: 0x4006 High flame: 0x4008 High power: 0x400a - Not specified: 0xFFFF				
		HeatingPower		--	bin.hex	--	Others
Heating temperature setting	Set Get	0xE3	Left stove temperature setting: right stove temperature setting: far-side stove temperature setting Temperature setting(50～250℃） : 0x32～0xFA No setting: 0xFF				
		HeatingTemp		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
“Heating modes of stoves” setting	Set Get	0xE0	Heating power control mode: 0x41 Deep-frying mode (tempura, etc.): 0x42, Water heating mode: 0x43 Rice boiling mode: 0x44, Stir-frying mode: 0x45, No setting: 0xFF				

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		BurnerHeatingStatus	LeftBurnerHeatingStatus	Heating power control mode: PowerControlMode Deep-frying mode (tempura, etc.): Fry Water heating mode: Boiling Rice boiling mode: RiceCook Stir-frying mode: FryUp No setting: None	String	AVL	Selection
			RightBurnerHeatingStatus	Heating power control mode: PowerControlMode Deep-frying mode (tempura, etc.): Fry Water heating mode: Boiling Rice boiling mode: RiceCook Stir-frying mode: FryUp No setting: None	String	AVL	Selection
			BackBurnerHeatingStatus	Heating power control mode: PowerControlMode Deep-frying mode (tempura, etc.): Fry Water heating mode: Boiling Rice boiling mode: RiceCook Stir-frying mode: FryUp No setting: None	String	AVL	Selection
Time settings of OFF timers	Set Get	0x96	Time setting of the left stove OFF timer: time setting of the right stove OFF timer: Time setting of the far-side stove OFF timer: time setting of the roaster OFF timer Used to set the time settings of the OFF timers (in the HH:MM:SS format), activate the relevant timers and acquire the updated current relative time settings of the OFF timers. 0～0x17: 0～0x3B : 0～0x3B x 4 (=0～23):(=0～59) :(=0～59) No setting: 0xFFFFFF				

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		OffTimerSetting		--	bin.hex	--	Others
Child lock setting	Set Get	0xA1	Child lock OFF: 0x40 Child lock ON : 0x41				
		ChildLockStatus		Child lock OFF: OFF Child lock ON : ON	String	AVL	Switch
Radiant heater lock setting	Set Get	0xA2	Radiant heater lock OFF: 0x40 Radiant heater lock ON: 0x41				
		RadiantHeaterLockStatus		Radiant heater lock OFF: OFF Radiant heater lock ON: ON	String	AVL	Switch

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1.5.5 Requirements for rice cooker class

Class group code : 0x03

Class code : 0xBB

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : RiceCooker

Device Type: urn:echonet-gr-jp:device:ECHONET_RiceCooker:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Lid open/close status	Get	0xB0	Lid open＝0x41, Lid close ＝0x42				
		CoverOpenCloseStatus		Lid open: Open Lid close: Close	String	AVL	Switch
Rice cooking status	Get	0xB1	Stop＝0x41、Preheating＝0x42、Rice cooking＝0x43、Steaming＝0x44、Rice cooking completion＝0x45				
		RiceCookingStatus		Stop: Stop Preheating: Preheating Rice cooking: Cooking Steaming: Steaming Rice cooking completion: Complete	String	AVL	Selection
Rice cooking control setting	Set Get	0xB2	Start/Restart rice cooking＝0x41, Temporarily stop rice cooking＝0x42				
		CookingControlStatus		Start/Restart rice cooking: Start Temporarily stop rice cooking: Stop	String	AVL	Switch
Warmer setting	Set Get	0xE1	Warmer enabled＝0x41, Warmer disabled＝0x42				
		WarmerStatus		Warmer enabled: Enable Warmer disabled: Disable	String	AVL	Switch
Inner pot removal status	Get	0xE5	Removed＝0x41, Not removed＝0x42				
		InnerpotRemovalStatus		Removed: Removed Not removed: NotRemoved	String	AVL	Switch
Cover	Get	0xE6	Removed＝0x41, Not removed＝0x42				

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removal status		CoverRemovalStatus		Removed: Removed Not removed: NotRemoved	String	AVL	Switch
Rice cooking reservation function setting	Set Get	0x90	Reservation ON＝0x41，Reservation OFF＝0x42				
		CookingReserveStatus		Reservation ON: ON Reservation OFF: OFF	String	AVL	Switch
Time setting of rice cooking reservation timer	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		AbsoluteReserveTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Relative time setting of rice cooking reservation timer	Set Get	0x92	0～0x17: 0～0x3B (=0～23):(=0～59)				
		RelativeReserveTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
Time setting	Set Get	0x97	0～0x17: 0～0x3B (=0～23):(=0～59)				
		PresentTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time

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1.5.6 Requirements for washing machine class

Class group code : 0x03

Class code : 0xC5

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WashingMachine

Device Type: urn:echonet-gr-jp:device:ECHONET_WashingMachine:1

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Door/cover open/close status	Get	0xB0	Door/Cover open＝0x41, Door/Cover closed＝0x42				
		DoorCoverOpenCloseStatus		Door/Cover open: Open Door/Cover closed: Close	String	AVL	Switch
Washing operation setting	Set Get	0xB2	Start/Restart the washing cycle＝0x41, Temporarily stop the washing cycle＝0x42, Stop the washing cycle＝0x43				
		WashingStatus		Start/Restart the washing cycle: Start Temporarily stop the washing cycle: Pause Stop the washing cycle: Stop	String	AVL	Selection
Current stage of washing cycle	Get	0xE1	Washing＝0x41, Rinsing＝0x42, Spin drying＝0x43, Temporarily stopped＝0x44, Washing cycle completed/Stopped＝0x45				
		WashingCycleStatus		Washing: Washing Rinsing: Rinsing Spin drying: Dehydration Temporarily stopped: Pause Washing cycle completed/Stopped: Finish	String	AVL	Selection
Time remaining	Set Get	0xE6	0～0x17: 0～0x3B : 0～0x3B (=0～23):(=0～59):(=0～59)				

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to complete washing cycle		RemainingTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
“ON timer-based reservation” setting	Set Get	0x90	Reservation function ON＝0x41、Reservation function OFF＝0x42				
		OnTimerStatus		Reservation function ON = ON Reservation function OFF = OFF	String	AVL	Switch
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B : 0～0x3B (=0～23):(=0～59):(=0～59)				
		OnTimerAbsoluteTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0x17: 0～0x3B : 0～0x3B (=0～23):(=0～59):(=0～59)				
		OnTimerRelativeTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Time setting	Set Get	0x97	0～0x17: 0～0x3B : 0～0x3B (=0～23):(=0～59):(=0～59)				
		PresentTime		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.”	Time	Date	Time

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1.5.7 Requirements for washer and dryer class

Class group code : 0x03

Class code : 0xD3

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WasherAndDryer

Device Type: urn:echonet-gr-jp:device:ECHONET_WasherAndDryer:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Door/cover open/close status	Get	0xB0	Door/Cover open＝0x41, Door/Cover closed＝0x42				
		DoorStatus		Door/Cover open= Open Door/Cover closed= Close	String	AVL	Switch
Washer and dryer cycle status	Get	0xB2	Started/Restarted or in progress＝0x41, Temporarily stopped＝0x42, Stopped＝0x43				
		WashAndDryStatus		Started/Restarted or in progress = StartRestartOrInProgress Temporarily stopped = Suspend Stopped = Stop	String	AVL	Selection

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Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			

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Washer and dryer cycle setting1	Set Get	0xD0	<Washing and drying course > Standard =0x21, Silent =0x22 Heavily soiled clothes =0x23, Hard-to-remove stains =0x24、 Presoaking =0x25, Blankets =0x26, Soft =0x27, Dry =0x28, Clean rinsing =0x29、 Ironing/Business shirts =0x2A, Hang drying =0x2B, Thick clothes =0x2C, Disinfection =0x2D、Oil stains =0x2E、 Memory =0x2F, Detergent saving =0x30、 Lightly soiled clothes =0x31, Quick wash of small amount of laundry =0x32 Washing and drying course / Manufacturer-specific cycles＝0x40～0x4F <Washing course > Standard =0x61, Silent =0x62 Heavily soiled clothes =0x63, Hard-to-remove stains =0x64 Presoaking =0x65, Blankets =0x66, Soft =0x67, Dry =0x68, Clean rinsing =0x69, Disinfection =0x6A, Oil stains =0x6B, Memory =0x6C, Detergent saving =0x6D, Lightly soiled clothes =0x6E, Quick wash of small amount of laundry =0x6F, tank cleaning =0x7F Washing course / Manufacturer-specific cycles = 0x80 to 0x8F <Drying course > Standard =0xA1, Blankets =0xA2, Soft =0xA3, Dry=0xA4, Ironing/Business shirts =0xA5, Hang drying =0xA6, Thick clothes =0xA7, Disinfection =0xA8, Shrinkage minimization =0xA9, Finishing =0xAA, Stationary drying =0xAB, User definition of drying time =0xAC, Garment warming =0xAD, Tank drying =0xBF Drying course / Manufacturer-specific cycles = 0xC0 to 0xCF				
		Cycle1Course		--	bin.hex	--	Others

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Washer and dryer cycle setting2	Set Get	0xD1	No washing =0x20、 Standard=0x21, Silent =0x22, Heavily soiled clothes =0x23, Hard-to-remove stains =0x24, Presoaking =0x25, Blankets =0x26, Soft =0x27, Dry =0x28, Clean rinsing =0x29, Disinfection =0x2D, Oil stains =0x2E, Memory =0x2F, Detergent saving =0x30, Lightly soiled clothes =0x31, Quick wash of small amount of laundry =0x32, Tank cleaning =0x3F Manufacturer-specific cycles ＝0xE0 to 0xEF				
		Cycle2Course		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Drying cycle setting	Set Get	0xD2	No drying =0xA0, standard =0xA1, Blankets=0xA2, Soft =0xA3, Dry =0xA4, Ironing/Business shirts =0xA5, Hang drying =0xA6, Thick clothes =0xA7, Disinfection =0xA8, Shrinkage minimization =0xA9, Finishing =0xAA, Stationary drying =0xAB, User definition of drying time =0xAC, Garment warming =0xAD, Heater current limit =0xAE, Tank drying =0xBF, Manufacturer-specific drying cycles = 0xE0 to 0xEF				
		DryCycleSystem		--	bin.hex	--	Others
Washer and dryer cycle option list 1	Get	0xD3	The bit value “1” indicates that the corresponding option can be specified, and the bit value “0” indicates that the corresponding option cannot be specified. For the requirement as to which bit must be used for which option, see the option list table in the subsection entitled “Washer and dryer cycle option list 1.”				
		OptionList1		--	bin.hex	--	Others

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Washer and dryer cycle option list 2	Get	0xD4	The bit value “1” indicates that the corresponding option can be specified, and the bit value “0” indicates that the corresponding option cannot be specified. For the requirement as to which bit must be used for which option, see the option list table in the subsection entitled “Washer and dryer cycle option list 1.”				
		OptionList2		--	bin.hex	--	Others
Washer and dryer cycle option list 3	Get	0xD5	The bit value “1” indicates that the corresponding option can be specified, and the bit value “0” indicates that the corresponding option cannot be specified. For the requirement as to which bit must be used for which option, see the option list table in the subsection entitled “Washer and dryer cycle option list 1.”				
		OptionList3		--	bin.hex	--	Others
Water flow rate setting	Set Get	0xD6	<Absolute setting> - 0x31～0x40(16 levels) * The values “0x31” and “0x40” shall be assigned to the lowest and highest flow rates, respectively. <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA0～0xA7: Level1～ Level8 - Relative setting in the negative direction 0xC0～0xC7: Level1～ Level8				
		WaterFlow		--	bin.hex	--	Others
“Rotation speed for spin drying” setting	Set Get	0xD7	<Absolute setting> - 0x0000～0x0FFF (0～4095 r/min) <Relative setting with respect to the automatic setting> - Automatic setting 0xFFFF - Relative setting in the positive direction 0xA000～0xA7FF (1～2048r/min) 0xC000～0xC7FF (1～2048r/min)				
		RotateSpeed		--	bin.hex	--	Others

Property name	Access Rule	EPC	Value range (decimal notation))		Data Type	Type classification	Property type
		Variable Name	Argument	Value			

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“Degree of drying” setting	Set Get	0xD8	<Absolute setting> - 0x31～0x40(16 level) * The values “0x31” and “0x40” shall be assigned to the lowest and highest degrees of drying, respectively. <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA0～0xA7: Level1～Level8 - Relative setting in the negative direction 0xC0～0xC7: Level1～Level8				
		DryingDegree		--	bin.hex	--	Others
Elapsed time on the ON timer	Get	0xDF	0～0xFF: 0～0x3B (=0～255): (=0～59)				
		OnTimerElapsed Time		Described in the “HH-MM-SS” format (ISO 8601 format). However, the “SS” shall be fixed at “00.	Time	Date	Tine
Presoaking time setting	Set Get	0xE1	<Absolute setting> - 0x00～0x17:0x00～0x3B (0～23 hours : 0～59 minutes) <Relative setting with respect to the automatic setting> - Automatic setting 0xFF:0xFF - Relative setting in the positive direction 0xA000～0xA03B: 1 to 60 minutes - Relative setting in the negative direction 0xC000～0xC03B: 1 to 60 minutes				
		PresoakTimeSetting		--	bin.hex	--	Others

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Current stage of washer and dryer cycle	Get	0xE2	Washing =0x41, Rinsing =0x42, spin drying =0x43 Temporarily stopped =0x44, Washing cycle completed =0x45, Washing/Drying (without wrinkling minimization) completed =0x51, Drying = 0x52, wrinkling minimization =0x53, Drying (with wrinkling minimization) completed =0x54, Standing by to start＝0x61, 1st rinsing = 0x71, 2nd rinsing =0x72, 3rd rinsing = 0x73, 4th rinsing =0x74, 5th rinsing = 0x75, 6th rinsing =0x76 7th rinsing = 0x77, 8th rinsing =0x78 1st spin drying = 0x81, 2nd spin drying =0x82 3rd spin drying = 0x83, 4th spin drying =0x84 5th spin drying = 0x85, 6th spin drying =0x86 7th spin drying = 0x87, 8th spin drying =0x88 Preheat spin drying =0x91 Manufacturer-specific code = 0xE0 to 0xEF				
		PresentStage		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Water volume setting 1	Set Get	0xE3	<Absolute setting> - 0x00～0x7F(0～127 liters) <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA0～0xBF: 1～32 liters - Relative setting in the negative direction 0xC0～0xDF: 1～32 liters				
		WaterVolume1		--	bin.hex	--	Others

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Water volume setting2	Set Get	0xE4	<Absolute setting> - 0x31～0x40(16 level) * The values “0x31” and “0x40” shall be assigned to the lowest and highest flow rates, respectively. <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA0～0xA7: Level1～Level8 - Relative setting in the negative direction 0xC0～0xC7: Level1～Level8				
		WaterVolume2		--	bin.hex	--	Others
Washing operation duration setting	Set Get	0xE5	<Absolute setting> ・0x00～0x17:0x00～0x3B (0～23 hours : 0～59 minutes) <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA000～0xA03B: 1～60 minutes - Relative setting in the negative direction 0xC000～0xC03B: 1～60 minutes				
		WashingTimeSetting		--	bin.hex	--	Others
“Number of times of rinsing” setting	Set Get	0xE6	0～8 times（0x00～0x08） Automatic =0xFF				
		RinsingNumber		--	bin.hex	--	Others
Rinsing process setting	Set Get	0xE7	0000: Automatic mode 0001: Rinsing without additional feeding of water from the tap 0010: Rinsing with additional feeding of water from the tap 0011: Shower rinsing				
		RinsingProcessSetting		--	bin.hex	--	Others

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Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
Spin drying time setting	Set Get	0xE8	<Absolute setting> - 0x00～0x3B(0～59 minutes) <Relative setting with respect to the automatic setting> - Automatic setting 0xFF - Relative setting in the positive direction 0xA0～0xBF: 1～32 minutes - Relative setting in the negative direction 0xC0～0xDF: 1～32 minutes				
		SpinDryTimeSetting		--	bin.hex	--	Others
Drying time setting	Set Get	0xE9	<Absolute setting> - 0x00～0x17:0x00～0x3B (0～23 hours 0～59 minutes) <Relative setting with respect to the automatic setting> - Automatic setting 0xFF: 0xFF - Relative setting in the positive direction 0xA000～0xA03B: 1～60 minutes - Relative setting in the negative direction 0xC000～0xC03B: 1～60 minutes				
		DryTimeSetting		--	bin.hex	--	Others
Warm water setting	Set Get	0xEA	0～100℃（0x00～0x64） Not to use warm water =0xFE Automatic water temperature setting =0xFF				
		WarmWater		--	bin.hex	--	Others
Bathtub water recycling setting	Set Get	0xEB	Not to use bathtub water as supply water: 0x40 Washing only : 0x41 Rinsing only (excluding the final rinsing): 0x42 All rinsing processes : 0x43 Washing + rinsing (excluding the final rinsing): 0x44 Washing + all rinsing processes : 0x45				

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		BathtubWaterStatus		Not to use bathtub water as supply water= BathtubWaterNotUsed Washing only (excluding the final rinsing)= WashingOnly Rinsing only =RinsingOnly All rinsing processes = AllRinsingRrocesses Washing + rinsing (excluding the final rinsing) = Washing AndRinsing Washing + all rinsing processes = WashingAndAllRinsing	String	AVL	Selection

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Wrinkling minimization setting	Set Get	0xEC	Wrinkling minimization function ON : 0x41 Wrinkling minimization function OFF : 0x42				
		WrinkleMinStatus		Wrinkling minimization function ON = WrinkleMinFuncON Wrinkling minimization function OFF = WrinkleMinFuncOFF	String	AVL	Switch
Time remaining to complete washer and dryer cycle	Get	0xED	0～0xFE：0～0x3B (=0～254) hours : (=0～59) minutes Remaining time unknown =0xFF:0xFF				
		RemainingTimer		--	bin.hex	--	Others
Door/cover locking during operation" setting	Set Get	0xEE	Locked : 0x41 Unlocked : 0x42				
		DoorLockStatus		Locked = Locked Unlocked = Unlocked	String	AVL	Switch

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Washer and dryer cycle	Get	0xEF	1st and 2nd Byte: Indicates the available items in a bitmap format 3rd Byte: Presoaking With presoaking: 0x41 Without presoaking: 0x42 4th and 5th Byte: Duration of washing operation Refer to the explanation on the “washing operation duration setting” property. 6th Byte: Number of times of rinsing Refer to the explanation on the “‘number of times of rinsing’ setting” property. 7th and 10th Byte: Rinsing process Refer to the explanation on the “rinsing process setting” property. 11th Byte: Spin drying time Refer to the explanation on the “spin drying time setting” property. 12th and 13th Byte: Drying time Refer to the explanation on the “drying time setting” property. 14th Byte: Warm water setting Refer to the explanation on the “warm water setting” property. 15th Byte: Water volume setting 1 Refer to the explanation on the “water volume setting 1” property. 16th Byte: Water volume setting 2 Refer to the explanation on the “water volume setting 2” property. 17th Byte: Bathtub water recycling setting Refer to the explanation on the “bathtub water recycling setting” property. 18th Byte: Water flow rate setting Refer to the explanation on the “water flow rate setting” property. 19th and 20th Byte: “Rotation speed for spin drying” setting Refer to the explanation on the “‘rotation speed for spin drying’ setting” property. 21st Byte: “Degree of drying” setting Refer to the explanation on the “‘degree of drying’ setting” property. 22nd and 23th Byte: Presoaking time setting Refer to the explanation on the “presoaking time setting” property. 24th Byte: Wrinkling minimization setting Refer to the explanation on the “wrinkling minimization setting” property.		

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		WasherCycle		--	bin.hex	--	Others

Property name	Access Rule	EPC Variable Name	Value range (decimal notation) Argument	Value	Data Type	Type classification	Property type
"ON timer-based reservation" setting	Set Get	0x90	Reservation function ON＝0x41, Reservation function OFF＝0x42				
		OnTimerStatus		Reservation function ON =RsvON , Reservation function OFF=RsvOFF	String	AVL	Selection
ON timer setting (time)	Set Get	0x91	0～0x17: 0～0x3B (=0～23):(=0～59)				
		OnTimerAbsoluteTime		Described in the "HH-MM-SS" format (ISO 8601 format). However, the "SS" shall be fixed at "00."	Time	Date	Time
ON timer setting (relative time)	Set Get	0x92	0～0xFF: 0～0x3B (=0～255):(=0～59)				
		OnTimerRelativeTime		Described in the "HH-MM-SS" format (ISO 8601 format). However, the "SS" shall be fixed at "00."	Time	Date	Time
Time setting	Set Get	0x97	Current time HH：MM 0x00～0x17：0x00～0x3B （=0～23）：（=0～59）				
		PresentTime		Described in the "HH-MM-SS" format (ISO 8601 format). However, the "SS" shall be fixed at "00."	Time	Date	Time

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1.6 Health-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Health-related Device Class Group (class group code X1 = 0x04). For details about the classes and properties for which requirements are specified herein, refer to Appendix.

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1.6.1 Requirements for weighing machine class

Class group code : 0x04

Class code : 0x01

Instance code : 0x01～0x7F (0x00: All-instance specification code)

Appliance name : WeighingMachine

Device Type: urn:echonet-gr-jp:device:ECHONET_WeighingMachine:1

Property name	Access Rule	EPC	Value range (decimal notation)		Data Type	Type classification	Property type
		Variable Name	Argument	Value			
Operation status	Set Get	0x80	ON = 0x30, OFF = 0x31				
		OperationStatus		ON = ON, OFF = OFF	String	AVL	Switch
Measured body weight	Get	0xE0	0x0000～0xFFFD (0～6553.3kg)				
		MeasuredWeight		Minimum: 0 Maximum: 6553.3 Step: 0.1	float	AVR	Numerical value
Measured body fat	Get	0xE1	0x0000～0x03E8 (0～100.0%)				
		MeasuredBodyFatRate		Minimum: 0 Maximum: 100 Step: 0.1	float	AVR	Numerical value

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1.7 Management/Operation-related Device Class Group

This section specifies the requirements, including the code value and property requirements, for each of the device objects which are ECHONET objects and belong to the Management/Operation-related Device Class Group (class group code X1 = 0x05).

For details about the classes and properties for which requirements are specified herein, refer to Appendix.

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Chapter 2 Naming Guidelines

2.1 Introduction

This chapter provides the naming guidelines for VariableNames, Value names, Argument names and Action names of ECHONET objects. When a new ECHONET object is defined, the VariableName, Value name and Argument name of that object shall in principle be determined according to the rules defined in this chapter.

2.2 Naming Rules for VariableNames

VariableNames shall be created according to the following rules:

- Each VariableName shall consist of 24 characters or less.
- Each VariableName shall be created by decomposing the property name (specified in Appendix to the ECHONET Specification) into words, selecting the words necessary to construct a VariableName from which the meaning can be inferred in English, combining the words in the order they appear in the original property name and then suffixing the “object” selected from Table 2-1 according to the property type.
- The last word of the VariableName of a property whose property type is “others,” “reset type” or “numerical value type” shall not be the same as the “object” of the VariableName of another property.
- There shall be no space between the selected and combined words. The first letter of each of the words shall be an uppercase letter, and the succeeding letters shall be lowercase letters. However, in the case of a word which usually takes the form of an “all-uppercase” word (e.g. CO2, VOC), all of the letters shall be uppercase letters.
- VariableNames shall not contain a hyphen (-) or sharp symbol (#).
- In the case where a “setting” property and a corresponding “measured value” property exist (e.g. the “temperature setting” property and “measured room temperature” property), the word “Desired” shall precede the “object” of the VariableName of the “setting” property and the word “Measured” shall precede the “object” of the VariableName of the “measured value” property.
- Any word used in the property name which coincides with the “object” shall be excluded when selecting the words for the VariableName.
- If a word to be used for a VariableName is long, an abbreviation may be used instead of the full word, provided that the use of such an abbreviation does not make it difficult to infer the meaning in English. The abbreviations for the words listed in Table 2-2 shall without exception be as indicated in the table. All words used in the property name which are considered redundant shall be excluded when selecting the words for the VariableName.

Table 2-1 Naming Rules for VariableName and Action

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Property type	Object	Action prefix
Numerical value type	Type of numerical value	Write / Read
Date type	Date	Set / Get
Time type	Time	Set / Get
Level type	Level	Set / Get
Character type	Code	Set / Get
Reset type	--	Reset
Switch type	Status	Set / Get
Selection type	Status	Set / Get
“Others” type	--	Set / Get

2.3 Naming Rules for Value Names

Value names shall be created according to the following rules:

- Each Value name shall consist of 32 alphabet letters or less.
- Each Value name shall be created by decomposing the “Content of property” description (in Appendix to the ECHONET Specification) into words, selecting the words necessary to construct a Value name from which the meaning can be inferred in English and combining the words in the order they appear in the original “Content of property” description.
- There shall be no space between the selected and combined words. The first letter of each of the words shall be an uppercase letter, and the succeeding letters shall be lowercase letters. However, in the case of a word which usually takes the form of an “all-uppercase” word (e.g. CO2, VOC) and the words “ON” and “OFF,” all of the letters shall be uppercase letters.
- Value names shall not contain a hyphen (-) or sharp symbol (#).
- Any word coinciding with a word used in the property name which is considered redundant shall be excluded when selecting the words for the Value name.
- If a word to be used for a Value name is long, an abbreviation may be used instead of the full word, provided that the use of such an abbreviation does not make it difficult to infer the meaning in English. The abbreviations for the words listed in Table 2-2 shall without exception be as indicated in the table.
- All words used in the “Content of property” description which are considered redundant shall be excluded when selecting the words for the Value name.

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2.4 List of Abbreviations for Words

If a word to be used for a VariableName or Value name is long, an abbreviation shall be used instead of the full word. The abbreviations for the words listed in the table below shall be as indicated in the table.

Table 2-2 List of Abbreviations for Words

Japanese	English	Abbreviation
温度	Temperature	Temp
湿度	Humidity	Humid
リモコン	Remote Controller	RC
室	Compartment	Comp
自動	Automatic	Auto
冷蔵庫	Refrigerator	Frig
情報	Information	Info
最大値	Maximum	Max
最小値	Minimum	Min
規格	Specification	Spec
識別	Identification	Id
ミリ秒	Millisecond	Millisec

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