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<b><i>Pucc Metadata Specification – General Sensor Devices</i></b>		

## **Pucc Metadata Specification -**

### **General Sensor Devices**


**(Version 1.0 - October 17, 2020)**

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## 1. Introduction

This document defines the Pucc metadata specification for general sensor devices.

## 2. Terminology

### 2.1. Definition

The following terms are defined in Pucc Device Discovery and Service Invocation Protocol Specification.

- Service;

- Device;

The template for devices and services are defined by "Pucc Device and Service Metadata Template".

### 2.2. Abbreviation

**Pucc** Peer-to-Peer Universal Computing Consortium

## 3. Reference

[Pucc] "Peer-to-Peer Universal Computing Consortium",

URL: <http://www.pucc.jp/>

[XML] "Extensible Markup Language (XML) 1.0 (Second Edition) ", W3C Recommendation 6 October 2000, T.

Bray et al. URL: <http://www.w3.org/TR/2000/REC-xml-20001006>

## 4. Goals and Requirements

### 4.1. Goals

The goals of this document are:

- ◆ To define the Pucc metadata for general sensor devices.

### 4.2. Requirements

#### 4.2.1. Generality

The metadata description must be independent of particular manufacture.

## 5. The position and role of General Sensor Device Metadata

Sensor Device is a device based on I<sup>2</sup>C (Inter-Integrated Circuit) or SPI (Serial Peripheral Interface). As shown in Fig 5-1., Sensor application generates PUCC General Sensor Device Metadata based on integrated sensors and convert I<sup>2</sup>C or SPI protocol into PUCC protocols. Other PUCC devices communicate with general sensor devices using PUCC protocols.

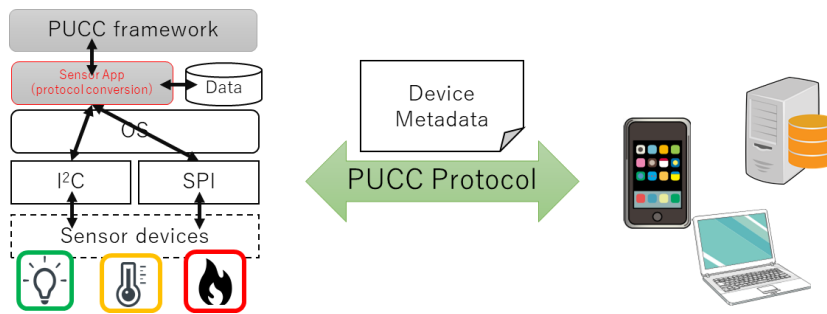


Figure 5-1. PUCC Sensor Device architecture

## 6. Model Common to Device

This chapter defines the state variables and services which are common to all devices.

The state variables common to devices are the state variables independent on sensor types. The services common to devices are used to acquire and set the value of state variables common to device.

### 6.1. State Variables Common to Device

Table 6.1-1 shows a list of state variables common to devices.

**Table 6.1-1: State variables common to device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No
7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No

#### 6.1.1. Operation Status

Table 6.1.1-1 shows the setting values for the operation status.

**Table 6.1.1-1: Setting Values for the Operation Status**

	Value	Meaning	remarks
1	ON	Power ON	
2	OFF	Power OFF	

### 6.1.2. Installation Location

This parameter is specified as user-readable location information.

### 6.1.3. Fault Status

Table 6.1.3-1 shows the setting values for the fault status.

**Table 6.1.3-1: Setting Values for the Fault Status**

	Value	Meaning	remarks
1	Fault	Indicates the presence of an abnormality	
2	Normal	Indicates the normal status	

### 6.1.4. Fault Content

This parameter is specified as the user-readable sentence of failure cause.

### 6.1.5. Present DateTime

This is set as the present time and time zone of device clock using XML schema time data type.  
(YYYY-MM-DDThh:mm:ssZ or hh:mm:ss[-/+]##:00)

### 6.1.6. Cumulated Run-Time Value

This is set as the number of seconds of cumulative runtime.

### 6.1.7. MesurementPeriod

This is set as the number of mili-seconds of measurement period.

### 6.1.8. LogRetentionPeriod

This is set as the number of seconds of data retention period.

## 6.2. Services Common to Device

Table 6.2-1 shows a list of the services common to devices.

**Table 6.1.3-1: Setting Values for the Fault Status**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status
2	SetOperationStatus	Sets the operation status
	GetInstallationLocation	Obtains the installation location
	SetInstallationLocation	Sets the installation location



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	GetFaultStatus	Obtain the fault status
	GetFaultContent	Obtain the fault content
	GetPresentDateTime	Obtains the present time
	SetPresentDateTime	Sets the energy saving setting
	GetCumulatedRunTimeValue	Obtains the cumulative run-time
	GetMesurementPeriod	Obtains the mesurement period
	GetLogRetentionPeriod	Obtains the log data retention period

**6.2.1. GetOperationStatus**

- (1) Description  
Obtains the operation status
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetOperationStatus>
- (3) Input parameter  
None
- (4) Output parameter

**Table 6.2.1-1: Output parameter of the GetOperationStatus service**

	Parameter	Related State Variable	remarks
1	CurrentOperationStatus	OperationStatus	See also 6.1.1

**6.2.2. SetOperationStatus**

- (1) Description  
Sets the operation status
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/SetOperationStatus>
- (3) Input parameter

**Table 6.2.2-1: Input parameter of the SetOperationStatus service**

	Parameter	Related State Variable	remarks
1	NewOperationStatus	OperationStatus	See also 6.1.1

- (4) Output parameter  
None

**6.2.3. GetInstallatoinLocation**

- (1) Description  
Obtains the installation location

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- (2) Service type identifier

<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetInstallationLocation>

- (3) Input parameter

None

- (4) Output parameter

**Table 6.2.3-1: Output parameter of the GetInstallationLocation service**

	Parameter	Related State Variable	remarks
1	CurrentInstallationLocation	InstallationLocation	See also 6.1.2

**6.2.4. SetInstallationLocation**

- (1) Description

Sets the installation location

- (2) Service type identifier

<https://www.pucc.jp/2020/10/Device/Sensor/Service/SetInstallationLocation>

- (3) Input parameter

**Table 6.2.4-1: Input parameter of the SetInstallationLocation service**

	Parameter	Related State Variable	remarks
1	CurrentInstallationLocation	InstallationLocation	See also 6.1.2

- (4) Output parameter

None

**6.2.5. GetFaultStatus**

- (1) Description

Obtains the fault status

- (2) Service type identifier

<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetFaultStatus>

- (3) Input parameter

None

- (4) Output parameter

**Table 6.2.5-1: Output parameter of the GetFaultStatus service**

	Parameter	Related State Variable	remarks
1	CurrentFaultStatus	FaultStatus	See also 6.1.3

### 6.2.6. GetFaultContent

- (1) Description  
Obtains the fault content
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetFaultContent>
- (3) Input parameter  
None
- (4) Output parameter

(5) **Table 6.2.6-1: Output parameter of the GetFaultContent service**

	Parameter	Related State Variable	remarks
1	CurrentFaultContent	FaultContent	See also 6.1.4

### 6.2.7. GetPresentDateTime

- (1) Description  
Obtains the present datetime
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetPresentDateTime>
- (3) Input parameter  
None
- (4) Output parameter

**Table 6.2.6-1: Output parameter of the GetPresentDateTime service**

	Parameter	Related State Variable	remarks
1	CurrentPresentDateTime	PresentDateTime	See also 6.1.5

### 6.2.8. SetPresentDateTime

- (1) Description  
Sets the present datetime
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/SetPresentDateTime>
- (3) Input parameter

**Table 6.2.4-1: Input parameter of the SetPresentDateTime service**

	Parameter	Related State Variable	remarks
1	NewPresentDateTime	PresentDateTime	See also 6.1.5

- (4) Output parameter

None

### 6.2.9. GetCumulatedRunTimeValue

- (1) Description  
Obtains the cumulative run-time
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetCumulatedRunTimeValue>
- (3) Input parameter  
None
- (4) Output parameter

**Table 6.2.6-1: Output parameter of the GetCumulatedRunTimeValue service**

	Parameter	Related State Variable	remarks
1	CurrentCumulatedRunTimeValue	CumulatedRunTimeValue	See also 6.1.6

### 6.2.10. GetMeasurementPeriod

- (1) Description  
Obtains the measurement period
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetMeasurementPeriod>
- (3) Input parameter  
None
- (4) Output parameter

**Table 6.2.6-1: Output parameter of the GetMeasurementPeriod service**

	Parameter	Related State Variable	remarks
1	CurrentMeasurementPeriod	MeasurementPeriod	See also 6.1.7

### 6.2.11. GetLogRetentionPeriod

- (1) Description  
Obtains the log data retention period
- (2) Service type identifier  
<https://www.pucc.jp/2020/10/Device/Sensor/Service/GetLogRetentionPeriod>
- (3) Input parameter  
None
- (4) Output parameter

**Table 6.2.6-1: Output parameter of the GetLogRetentionPeriod service**

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	Parameter	Related State Variable	remarks
1	CurrentLogRetentionPeriod	LogRetentionPeriod	See also 6.1.8

### 6.3. Device Metadata

The metadata template shown below is used to define the state variables common to devices.

```

<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/Sensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Url>URL to icon</Url>
    </IconList>
  </Specification>

  <StateVariableList>
    <StateVariable name="OperationStatus" datatype="string" sendEvents="yes">
      <AllowedValueList>
        <AllowedValue>ON</AllowedValue>
        <AllowedValue>OFF</AllowedValue>
      </AllowedValueList>
    </StateVariable>
    <StateVariable name="InstallationLocation" datatype="string" sendEvents="yes"/>
    <StateVariable name="FaultStatus" datatype="string" sendEvents="no">

```

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```
<AllowedValueList>
  <AllowedValue>Fault</AllowedValue>
  <AllowedValue>Normal</AllowedValue>
</AllowedValueList>
</StateVariable>
<StateVariable name="FaultContent" datatype="string" sendEvents="no"/>
<StateVariable name="PresentDateTime" datatype="datetime" sendEvents="no"/>
<StateVariable name="CumulatedRunTimeValue" datatype="hexbinary" sendEvents="no"/>
<StateVariable name="MeasurementPeriod" datatype="integer" sendEvents="no"/>
<StateVariable name="LogRetentionPeriod" datatype="integer" sendEvents="no"/>
</StateVariableList>
<ServiceList>
  <Service name="GetOperationStatus"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetOperationStatus">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentOperationStatus" datatype="string"/>
  </OutputParameterList>
</Service>
  <Service name="SetOperationStatus"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/SetOperationStatus">
  <InputParameterList>
    <Parameter name="NewOperationStatus" datatype="string"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
  <Service name="GetInstallationLocation"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetInstallationLocation">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentInstallationLocation" datatype="string"/>
  </OutputParameterList>
</Service>
  <Service name="SetInstallationLocation"
```

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```
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/SetInstallationLocation">
  <InputParameterList>
    <Parameter name="NewInstallationLocation" datatype="string"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
<Service name="GetFaultStatus" type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetFaultStatus">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentFaultStatus" datatype="string"/>
  </OutputParameterList>
</Service>
<Service name="GetFaultContent"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetFaultContent">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentFaultContent" datatype="string"/>
  </OutputParameterList>
</Service>
<Service name="GetPresentDateTime" type="http://www.pucc.jp/2020/10/Device/Sensor/GetPresentTime">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentPresentDateTime" datatype="datetime"/>
  </OutputParameterList>
</Service>
<Service name="SetPresentDateTime"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/SetPresentTime">
  <InputParameterList>
    <Parameter name="NewPresentDateTime" datatype="datetime"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
<Service name="GetCumulatedRunTimeValue"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetCumulatedRunTimeValue">
```

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```
<InputParameterList/>
<OutputParameterList>
  <Parameter name="CurrentCumulatedRunTimeValue" datatype="hexBinary"/>
</OutputParameterList>
</Service>
<Service name="GetMeasurementPeriod"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/GetMeasurementPeriod">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentMesurementPeriod" datatype="integer"/>
  </OutputParameterList>
</Service>
<Service name="GetLogRetentionPeriod"
type=" http://www.pucc.jp/2020/10/Device/Sensor/Service/ GetLogRetentionPeriod">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentLogRetentionPeriod" datatype="integer"/>
  </OutputParameterList>
</Service>
</ServiceList>
</Device>
```

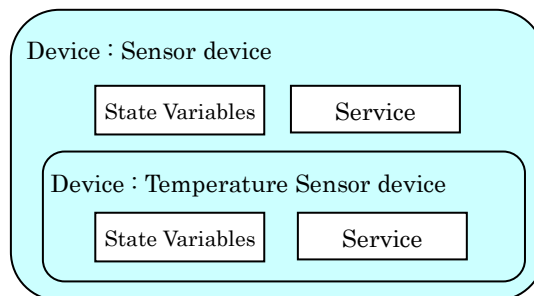


## 7. Temperature Sensor Device

This chapter defines the PUCC metadata specification for a temperature sensor device.

### 7.1. Device model

The following is the model of a temperature sensor device.



**Figure 7.1-1. Temperature Sensor Device model**

### 7.2. Device Type

The devcetype identifier of temperature sensor device is shown below.

<http://www.pucc.jp/2020/10/Device/Sensor/TemperatureSensor>

### 7.3. State Variables

The state variables for temperature sensor device are shown below.

**Table 7.3-1: State variables for temperature sensor device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault based on ECHONET	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No

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7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No
9	Temp	Indicates the current temperature	float	Yes
10	TempLog	CSV format	string	No

The details of each state variable are shown below.

\*See 6.1 for the details of state variables common to devices.

### 7.3.1. Temp

This is set to a float value.

Eg. 23.456

### 7.3.2. TempLog

This is set to a comma-separated list of the float value.

Eg. 23.456,23.466,23.477

### 7.4. Services

The service of temperature sensor device are shown below.

**Table 7.4-1: Services offered by temperature sensor device**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status (see 6.2.1)
2	SetOperationStatus	Sets the operation status (see 6.2.2)
3	GetInstallationLocation	Obtains the installation location (see 6.2.3)
4	SetInstallationLocation	Sets the installation location (see 6.2.4)
5	GetFaultStatus	Obtain the fault status (see 6.2.5)
6	GetFaultContent	Obtain the fault content (see 6.2.6)
7	GetPresentDateTime	Obtains the present time (see 6.2.7)
8	SetPresentDateTime	Sets the energy saving setting (see 6.2.8)
9	GetCumulatedRunTimeValue	Obtains the cumulative run-time (see 6.2.9)
10	GetMesurementPeriod	Obtains the mesurement period (see 6.2.10)
11	GetLogRetentionPeriod	Obtains the log data retention period (see 6.2.11)
12	GetTemp	Obtain current temperature
13	GetTempLog	Obtain the history of temperature

### 7.4.1. GetTemp

(1) Description

Obtain current temperature

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/TemperatureSensor/Service/GetTemp>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetTemp service**

	Parameter	Related State Variable	remarks
1	CurrentTemp	Temp	See also 7.3.1

### 7.4.2. GetTempLog

(1) Description

Obtain the history of temperature

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/TemperatureSensor/Service/GetTempLog>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetTemp service**

	Parameter	Related State Variable	remarks
1	CurrentTempLog	TempLog	See also 7.3.2

## 7.5. Metadata

### 7.5.1. Device Metadata

The metadata template of temperature sensor devices is shown below.

```
<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/TemperatureSensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
```

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```
<ManufactureDate>date of manufacture</ManufactureDate>
<ModelDescription>long user-friendly title</ModelDescription>
<ModelName>model name</ModelName>
<ModelNumber>model number</ModelNumber>
<ModelURL>URL to model site</ModelURL>
<SerialNumber>manufacturer's serial number</SerialNumber>
<UDN>uuid:UUID</UDN>
<UPC>Universal Product Code</UPC>
<IconList>
  <Url>URL to icon</Url>
</IconList>
</Specification>
```

```
<StateVariableList>
```

(Insert the metadata definition of the state variables common to devices shown in 6.3.1)

```
<!--temperature sensor-->
<StateVariable name="Temp" datatype="float" sendEvents="yes"/>
<StateVariable name="TempLog" datatype="string" sendEvents="no"/>
<!--temperature sensor-->
</StateVariableList>
```

```
<ServiceList>
```

(Insert the metadata definition of the services common to devices shown in 6.3.2)

```
<!--temperature sensor-->
<Service name="GetTemp" type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetPresentTime">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentTemp" datatype="float"/>
  </OutputParameterList>
</Service>
```

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```
<Service name="GetTempLog" type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetTempLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="TempLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!--temperature sensor-->
</ServiceList>

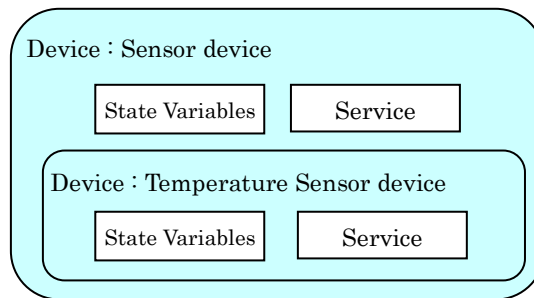
</Device>
```

## 8. Humid Sensor Device

This chapter defines the PUCC metadata specification for a humid sensor device.

### 8.1. Device model

The following is the model of a humid sensor device.



**Figure 8.1-1. Humid Sensor Device model**

### 8.2. Device Type

The devcetype identifier of humid sensor device is shown below.

<http://www.pucc.jp/2020/10/Device/Sensor/HumidSensor>

### 8.3. State Variables

The state variables for humid sensor device are shown below.

**Table 7.3-1: State variables for humid sensor device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault based on ECHONET	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No

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7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No
9	RelativeHumid	Indicates the current level of relative humidity	float	Yes
10	RelativeHumidLog	CSV format	string	No

The details of each state variable are shown below.

\*See 6.1 for the details of state variables common to devices.

### 8.3.1. RelativeHumid

This is set to a float value.

Eg. 23.456

### 8.3.2. RelativeHumidLog

This is set to a comma-separated list of the float value.

Eg. 23.456,23.466,23.477

### 8.4. Services

The services of humid sensor device are shown below.

**Table 7.4-1: Services offered by huimd sensor device**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status (see 6.2.1)
2	SetOperationStatus	Sets the operation status (see 6.2.2)
3	GetInstallationLocation	Obtains the installation location (see 6.2.3)
4	SetInstallationLocation	Sets the installation location (see 6.2.4)
5	GetFaultStatus	Obtain the fault status (see 6.2.5)
6	GetFaultContent	Obtain the fault content (see 6.2.6)
7	GetPresentDateTime	Obtains the present time (see 6.2.7)
8	SetPresentDateTime	Sets the energy saving setting (see 6.2.8)
9	GetCumulatedRunTimeValue	Obtains the cumulative run-time (see 6.2.9)
10	GetMesurementPeriod	Obtains the mesurement period (see 6.2.10)
11	GetLogRetentionPeriod	Obtains the log data retention period (see 6.2.11)
12	GetRelativeHumid	Obtain current relative humid
13	GetRelativeHumidLog	Obtain the history of relative humid

### 8.4.1. GetRelativeHumid

(1) Description

Obtain current level of relative humid

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/HumidSensor/Service/GetRelativeHumid>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetRelativeHumid service**

	Parameter	Related State Variable	remarks
1	CurrentRelativeHumid	RelativeHumid	See also 8.3.1

### 8.4.2. GetRelativeHumidLog

(1) Description

Obtain the history of relative humid

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/HumidSensor/Service/GetRelativeHumidLog>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetRelativeHumidLog service**

	Parameter	Related State Variable	remarks
1	CurrentRelativeHumidLog	RelativeHumidLog	See also 8.3.2

## 8.5. Metadata

### 8.5.1. Device Metadata

The metadata template of humid sensor devices is shown below.

```
<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/HumidSensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
```



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```
<ManufactureDate>date of manufacture</ManufactureDate>
<ModelDescription>long user-friendly title</ModelDescription>
<ModelName>model name</ModelName>
<ModelNumber>model number</ModelNumber>
<ModelURL>URL to model site</ModelURL>
<SerialNumber>manufacturer's serial number</SerialNumber>
<UDN>uuid:UUID</UDN>
<UPC>Universal Product Code</UPC>
<IconList>
  <Url>URL to icon</Url>
</IconList>
</Specification>
```

```
<StateVariableList>
```

(Insert the metadata definition of the state variables common to devices shown in 6.3.1)

```
<!--temperature sensor-->
<StateVariable name="Temp" datatype="float" sendEvents="yes"/>
<StateVariable name="TempLog" datatype="string" sendEvents="no"/>
<!--temperature sensor-->

<!--Humid sensor-->
<StateVariable name="RelativeHumid" datatype="float" sendEvents="yes"/>
<StateVariable name="RelativeHumidLog" datatype="string" sendEvents="no"/>
<!--Humid sensor-->

<!--Illuminance sensor-->
<StateVariable name="Illuminance" datatype="float" sendEvents="yes"/>
<StateVariable name="IlluminanceLog" datatype="string" sendEvents="no"/>
<!--Illuminance sensor-->

<!--Acceleration sensor-->
<StateVariable name="XAxisAcceleration" datatype="float" sendEvents="yes"/>
```

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```

<StateVariable name="YAxisAcceleration" datatype="float" sendEvents="yes"/>
<StateVariable name="ZAxisAcceleration" datatype="float" sendEvents="yes"/>
<StateVariable name="Intensity" datatype="integer" sendEvents="yes"/>
  <AllowedValueRange>
    <Minimum>0</Minimum>
    <Maximum>9</Maximum>
    <Step>1</Step>
  </AllowedValueRange>
<StateVariable>
<StateVariable name="XAxisAccelerationLog" datatype="string" sendEvents="no"/>
<StateVariable name="YAxisAccelerationLog" datatype="string" sendEvents="no"/>
<StateVariable name="ZAxisAccelerationLog" datatype="string" sendEvents="no"/>
<StateVariable name="IntensityLog" datatype="string" sendEvents="no"/>
<!--Acceleration sensor-->

```

```

<!--Detection sensor-->
<StateVariable name="DetectionStatus" datatype="string" sendEvents="yes">
  <AllowedValueList>
    <AllowedValue>ON</AllowedValue>
    <AllowedValue>OFF</AllowedValue>
  </AllowedValueList>
<StateVariable>
<StateVariable name="DetectionStatusLog" datatype="string" sendEvents="no"/>
<!--Detection sensor-->
</StateVariableList>

```

<ServiceList>

(Insert the metadata definition of the services common to devices shown in 6.3.2)

```

<!--temperature sensor-->
<Service name="GetTemp" type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetPresentTime">
  <InputParameterList/>
  <OutputParameterList>

```

**Pucc Metadata Specification – General Sensor Devices**

```
<Parameter name="CurrentTemp" datatype="float"/>
</OutputParameterList>
</Service>
<Service name="GetTempLog" type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetTempLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="TempLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!--temperature sensor-->

<!--Humid sensor-->
<Service
name="GetRelativeHumid"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetRelativeHumid">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="RelativeHumid" datatype="float"/>
  </OutputParameterList>
</Service>
<Service
name="GetRelativeHumidLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetRelativeHumidLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentRelativeHumidLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!--Humid sensor-->

<!--Illuminance sensor-->
<Service
name="GetIlluminance"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIlluminance">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentIlluminance" datatype="float"/>
```

**PUC Metadata Specification – General Sensor Devices**

```

</OutputParameterList>
</Service>
<Service name="GetIlluminanceLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIlluminanceLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="IlluminanceLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!--Illuminance sensor-->

<!--Acceleration sensor-->
<Service name="GetAxisAcceleration"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetAxisAcceleration">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentXAxisAcceleration" datatype="float"/>
    <Parameter name="CurrentYAxisAcceleration" datatype="float"/>
    <Parameter name="CurrentZAxisAcceleration" datatype="float"/>
  </OutputParameterList>
</Service>
<Service name="GetAxisAccelerationLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetAxisAccelerationLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="XAxisAccelerationLog" datatype="float"/>
    <Parameter name="YAxisAccelerationLog" datatype="float"/>
    <Parameter name="ZAxisAccelerationLog" datatype="float"/>
  </OutputParameterList>
</Service>
<Service name="GetIntensity type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIntensity">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentIntensity" datatype="integer"/>

```

**PUC Metadata Specification – General Sensor Devices**

```
</OutputParameterList>
</Service>
<Service name="GetIntensityLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIntensityLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="IntensityLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!-- Acceleration sensor -->

<!--Detection sensor-->
<Service name="GetDetectionStatus"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetDetectionStatus">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentDetectionStatus" datatype="string"/>
  </OutputParameterList>
</Service>
<Service name="GetDetectionStatusLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetDetectionStatusLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="DetectionStatusLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!-- Detection sensor -->
</ServiceList>

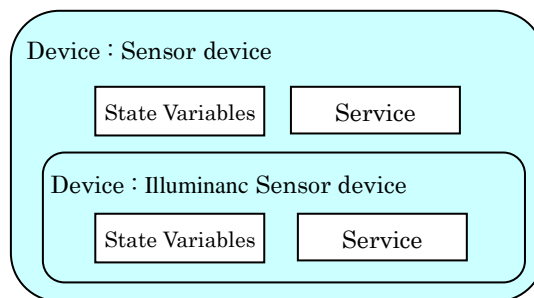
</Device>
```

## 9. Illuminance Sensor Device

This chapter defines the PUCC metadata specification for an illuminance sensor device.

### 9.1. Device model

The following is the model of an illuminance sensor device.



**Figure 9.1-1. Illuminanc Sensor Device model**

### 9.2. Device Type

The devcetype identifier of humid sensor device is shown below.

<http://www.pucc.jp/2020/10/Device/Sensor/IlluminancSensor>

### 9.3. State Variables

The state variables for illuminance sensor device are shown below.

**Table 7.3-1: State variables for illuminance sensor device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault based on ECHONET	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No

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7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No
9	Illuminance	Indicates the current illuminance	float	Yes
10	IlluminancLog	CSV format	string	No

The details of each state variable are shown below.

\*See 6.1 for the details of state variables common to devices.

### 9.3.1. Illuminance

This is set to a float value. (lux)

Eg. 23.456

### 9.3.2. IlluminanceLog

This is set to a comma-separated list of the float value. (lux)

Eg. 23.456,23.466,23.477

### 9.4. Services

The services of illuminance sensor device are shown below.

**Table 7.4-1: Services offered by illuminance sensor device**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status (see 6.2.1)
2	SetOperationStatus	Sets the operation status (see 6.2.2)
3	GetInstallationLocation	Obtains the installation location (see 6.2.3)
4	SetInstallationLocation	Sets the installation location (see 6.2.4)
5	GetFaultStatus	Obtain the fault status (see 6.2.5)
6	GetFaultContent	Obtain the fault content (see 6.2.6)
7	GetPresentDateTime	Obtains the present time (see 6.2.7)
8	SetPresentDateTime	Sets the energy saving setting (see 6.2.8)
9	GetCumulatedRunTimeValue	Obtains the cumulative run-time (see 6.2.9)
10	GetMesurementPeriod	Obtains the mesurement period (see 6.2.10)
11	GetLogRetentionPeriod	Obtains the log data retention period (see 6.2.11)
12	GetIlluminance	Obtain current illuminance
13	GetIlluminanceLog	Obtain the history of illuminance

### 9.4.1. GetIlluminance

(1) Description

Obtain current level of illuminance

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/IlluminanceSensor/Service/GetIlluminance>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetIlluminance service**

	Parameter	Related State Variable	remarks
1	CurrentIlluminance	Illuminance	See also 9.3.1

### 9.4.2. GetIlluminanceLog

(1) Description

Obtain the history of illuminance

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/IlluminanceSensor/Service/GetIlluminanceLog>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetIlluminanceLog service**

	Parameter	Related State Variable	remarks
1	CurrentIlluminanceLog	IlluminanceLog	See also 9.3.2

## 9.5. Metadata

### 9.5.1. Device Metadata

The metadata template of illuminance sensor devices is shown below.

```
<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/IlluminanceSensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
```



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```
<ManufactureDate>date of manufacture</ManufactureDate>
<ModelDescription>long user-friendly title</ModelDescription>
<ModelName>model name</ModelName>
<ModelNumber>model number</ModelNumber>
<ModelURL>URL to model site</ModelURL>
<SerialNumber>manufacturer's serial number</SerialNumber>
<UDN>uuid:UUID</UDN>
<UPC>Universal Product Code</UPC>
<IconList>
  <Url>URL to icon</Url>
</IconList>
</Specification>
```

```
<StateVariableList>
```

(Insert the metadata definition of the state variables common to devices shown in 6.3.1)

```
<!--Illuminance sensor-->
<StateVariable name="Illuminance" datatype="float" sendEvents="yes"/>
<StateVariable name="IlluminanceLog" datatype="string" sendEvents="no"/>
<!--Illuminance sensor-->
```

```
</StateVariableList>
```

```
<ServiceList>
```

(Insert the metadata definition of the services common to devices shown in 6.3.2)

```
<!--Illuminance sensor-->
<Service name="GetIlluminance"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIlluminance">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentIlluminance" datatype="float"/>
```

***Pucc Metadata Specification – General Sensor Devices***

```
</OutputParameterList>
</Service>
<Service name="GetIlluminanceLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIlluminanceLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="IlluminanceLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!--Illuminance sensor-->

</ServiceList>

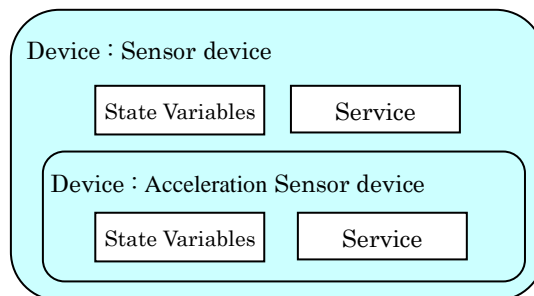
</Device>
```

## 10. Acceleration Sensor Device

This chapter defines the PUCC metadata specification for a acceleration sensor device.

### 10.1. Device model

The following is the model of a acceleration sensor device.



**Figure 10.1-1. Acceleration Sensor Device model**

### 10.2. Device Type

The devcetype identifier of acceleration sensor device is shown below.

[http://www.pucc.jp/2020/10/Device/Sensor/Acceleration Sensor](http://www.pucc.jp/2020/10/Device/Sensor/Acceleration%20Sensor)

### 10.3. State Variables

The state variables for acceleration sensor device are shown below.

**Table 7.3-1: State variables for acceleration sensor device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault based on ECHONET	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No

**PUCC Metadata Specification – General Sensor Devices**

7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No
9	XAxisAcceleration	Indicates the current level of acceleration of x axis.	float	Yes
10	YAxisAcceleration	Indicates the current level of acceleration of y axis.	float	Yes
11	ZAxisAcceleration	Indicates the current level of acceleration of z axis.	float	Yes
12	XAxisAccelerationLog	CSV format	string	No
13	YAxisAccelerationLog	CSV format	string	No
14	ZAxisAccelerationLog	CSV format	string	No
15	Intensity	Indicates the current level of japan seismic intensity	integer	Yes
16	IntensityLog	CSV format	string	No

The details of each state variable are shown below.

\*See 6.1 for the details of state variables common to devices.

#### **10.3.1. XAxisAcceleration**

This is set to a float value. (G)

Eg. 23.456

#### **10.3.2. YAxisAcceleration**

This is set to a float value. (G)

Eg. 23.456

#### **10.3.3. ZAxisAcceleration**

This is set to a float value. (G)

Eg. 23.456

#### **10.3.4. XAxisAccelerationLog**

This is set to a comma-separated list of the float value. (G)

Eg. 23.456,23.466,23.477

### 10.3.5. YAxisAccelerationLog

This is set to a comma-separated list of the float value. (G)

Eg. 23.456,23.466,23.477

### 10.3.6. ZAxisAccelerationLog

This is set to a comma-separated list of the float value. (G)

Eg. 23.456,23.466,23.477

### 10.3.7. Intensity

This is set to a integer value. (Japan seismic intensity)

Eg. 2

### 10.3.8. IntensityLog

This is set to a comma-separated list of the integer value. (Japan seismic intensity)

Eg. 1,0,0,1,2

## 10.4. Services

The services of acceleration sensor device are shown below.

**Table 7.4-1: Services offered by acceleration sensor device**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status (see 6.2.1)
2	SetOperationStatus	Sets the operation status (see 6.2.2)
3	GetInstallationLocation	Obtains the installation location (see 6.2.3)
4	SetInstallationLocation	Sets the installation location (see 6.2.4)
5	GetFaultStatus	Obtain the fault status (see 6.2.5)
6	GetFaultContent	Obtain the fault content (see 6.2.6)
7	GetPresentDateTime	Obtains the present time (see 6.2.7)
8	SetPresentDateTime	Sets the energy saving setting (see 6.2.8)
9	GetCumulatedRunTimeValue	Obtains the cumulative run-time (see 6.2.9)
10	GetMesurementPeriod	Obtains the mesurement period (see 6.2.10)
11	GetLogRetentionPeriod	Obtains the log data retention period (see 6.2.11)
12	GetAxisAcceleraation	Obtain current axis acceleration
13	GetAxisAccelerationLog	Obtain the history of axis acceleration
14	GetIntensity	Obtain current intensity
15	GetIntensityLog	Obtain the history of intensity

#### 10.4.1. GetAxisAcceleration

(1) Description

Obtain current level of axis acceleration

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/AccelerationSensor/Service/GetAxisAcceleration>

(3) Input parameter

None

(4) Output parameter

**Table 10.4.1-1: Output parameter of the GetAxisAcceleration service**

	Parameter	Related State Variable	remarks
1	CurrentXAxisAcceleration	XAxisAcceleration	See also 10.3.1
2	CurrentYAxisAcceleration	YAxisAcceleration	See also 10.3.2
3	CurrentZAxisAcceleration	ZAxisAcceleration	See also 10.3.3

#### 10.4.2. GetAxisAccelerationLog

(1) Description

Obtain the history of axis acceleration

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/AccelerationSensor/Service/GetAxisAccelerationLog>

(3) Input parameter

None

(4) Output parameter

**Table 10.4.1-1: Output parameter of the GetAxisAcceleration service**

	Parameter	Related State Variable	remarks
1	CurrentXAxisAccelerationLog	XAxisAccelerationLog	See also 10.3.4
2	CurrentYAxisAccelerationLog	YAxisAccelerationLog	See also 10.3.5
3	CurrentZAxisAccelerationLog	ZAxisAccelerationLog	See also 10.3.6

#### 10.4.3. GetIntensity

(1) Description

Obtain current level of intensity

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/AccelerationSensor/Service/GetIntensity>

(3) Input parameter

None

(4) Output parameter

**Table 10.4.1-1: Output parameter of the GetIntensity service**

	Parameter	Related State Variable	remarks
1	CurrentIntensity	Intensity	See also 10.3.7

#### 10.4.4. GetIntensityLog

(1) Description

Obtain the history of intensity

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/AccelerationSensor/Service/GetIntensityLog>

(3) Input parameter

None

(4) Output parameter

**Table 7.4.1-1: Output parameter of the GetIntensityLog service**

	Parameter	Related State Variable	remarks
1	CurrentIntensityLog	IntensityLog	See also 10.3.8

### 10.5. Metadata

#### 10.5.1. Device Metadata

The metadata template of acceleration sensor devices is shown below.

```
<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/AccelerationSensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
```

**Pucc Metadata Specification – General Sensor Devices**

<IconList>

<Url>URL to icon</Url>

</IconList>

</Specification>

<StateVariableList>

(Insert the metadata definition of the state variables common to devices shown in 6.3.1)

<!--Acceleration sensor-->

<StateVariable name="XAxisAcceleration" datatype="float" sendEvents="yes"/>

<StateVariable name="YAxisAcceleration" datatype="float" sendEvents="yes"/>

<StateVariable name="ZAxisAcceleration" datatype="float" sendEvents="yes"/>

<StateVariable name="Intensity" datatype="integer" sendEvents="yes"/>

<AllowedValueRange>

<Minimum>0</Minimum>

<Maximum>9</Maximum>

<Step>1</Step>

</AllowedValueRange>

<StateVariable>

<StateVariable name="XAxisAccelerationLog" datatype="string" sendEvents="no"/>

<StateVariable name="YAxisAccelerationLog" datatype="string" sendEvents="no"/>

<StateVariable name="ZAxisAccelerationLog" datatype="string" sendEvents="no"/>

<StateVariable name="IntensityLog" datatype="string" sendEvents="no"/>

<!--Acceleration sensor-->

</StateVariableList>

<ServiceList>

(Insert the metadata definition of the services common to devices shown in 6.3.2)

<!--Acceleration sensor-->

<Service

name="GetAxisAcceleration

type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetAxisAcceleration">



**Pucc Metadata Specification – General Sensor Devices**

```

<InputParameterList/>
<OutputParameterList>
  <Parameter name="CurrentXAxisAcceleration" datatype="float"/>
  <Parameter name="CurrentYAxisAcceleration" datatype="float"/>
  <Parameter name="CurrentZAxisAcceleration" datatype="float"/>
</OutputParameterList>
</Service>
<Service name="GetAxisAccelerationLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetAxisAccelerationLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="XAxisAccelerationLog" datatype="float"/>
    <Parameter name="YAxisAccelerationLog" datatype="float"/>
    <Parameter name="ZAxisAccelerationLog" datatype="float"/>
  </OutputParameterList>
</Service>
<Service name="GetIntensity" type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIntensity">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentIntensity" datatype="integer"/>
  </OutputParameterList>
</Service>
<Service name="GetIntensityLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetIntensityLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="IntensityLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!-- Acceleration sensor -->

</ServiceList>

</Device>

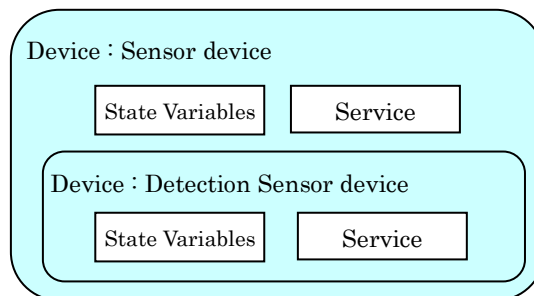
```

## 11. Detection Sensor Device

This chapter defines the PUCC metadata specification for a detection sensor device.

### 11.1. Device model

The following is the model of a detection sensor device.



**Figure 11.1-1. Detection Sensor Device model**

### 11.2. Device Type

The devcetype identifier of humid sensor device is shown below.

<http://www.pucc.jp/2020/10/Device/Sensor/DetectionSensor>

### 11.3. State Variables

The state variables for detection sensor device are shown below.

**Table 11.3-1: State variables for detection sensor device**

	State Variable Name	Description	Data Type	Event Generation (Yes/No)
1	OperationStatus	Indicates the operation status	string	Yes
2	InstallationLocation	Indicates the installation location	string	Yes
3	FaultStatus	Indicates the status of a fault	String	No
4	FaultContent	Indicates the content of a fault based on ECHONET	String	No
5	PresentDateTime	Indicates the present datetime	datetime	No
6	CumulatedRunTimeValue	Indicates the number of seconds of cumulative runtime	integer	No

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7	MeasurementPeriod	Indicates the number of mili-seconds of the measurement period.	integer	No
8	LogRetentionPeriod	Indicates the number of seconds of the data retention period.	string	No
9	DetectionStatus	Indicates the current detection status ON or OFF	string	Yes
10	DetectionStatusLog	CSV format	string	No

The details of each state variable are shown below.

\*See 6.1 for the details of state variables common to devices.

### 11.3.1. DetectionStatus

This is set to a string “ON” of “OFF”.

Eg. ON

### 11.3.2. DetectionStatusLog

This is set to a comma-separated list of the string.

Eg. ON,ON,OFF,OFF

### 11.4. Services

The services of detection sensor device are shown below.

**Table 11.4-1: Services offered by detection sensor device**

	Service Name	Description
1	GetOperationStatus	Obtains the operation status (see 6.2.1)
2	SetOperationStatus	Sets the operation status (see 6.2.2)
3	GetInstallationLocation	Obtains the installation location (see 6.2.3)
4	SetInstallationLocation	Sets the installation location (see 6.2.4)
5	GetFaultStatus	Obtain the fault status (see 6.2.5)
6	GetFaultContent	Obtain the fault content (see 6.2.6)
7	GetPresentDateTime	Obtains the present time (see 6.2.7)
8	SetPresentDateTime	Sets the energy saving setting (see 6.2.8)
9	GetCumulatedRunTimeValue	Obtains the cumulative run-time (see 6.2.9)
10	GetMesurementPeriod	Obtains the mesurement period (see 6.2.10)
11	GetLogRetentionPeriod	Obtains the log data retention period (see 6.2.11)
12	GetDetectionStatus	Obtain current detection status
13	GetDetectionStatusLog	Obtain the history of detection status

### 11.4.1. GetDetectionStatus

(1) Description

Obtain current detection status

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/DetectionSensor/Service/GetDetectionStatus>

(3) Input parameter

None

(4) Output parameter

**Table 11.4.1-1: Output parameter of the GetDetectionStatus service**

	Parameter	Related State Variable	remarks
1	CurrentDetectionStatus	DetectionStatus	See also 11.3.1

### 11.4.2. GetDetectionStatusLog

(1) Description

Obtain the history of detection status

(2) Service type identifier

<https://www.pucc.jp/2020/10/Device/DetectionSensor/Service/GetDetectionStatusLog>

(3) Input parameter

None

(4) Output parameter

**Table 11.4.1-1: Output parameter of the GetDetectionStatusLog service**

	Parameter	Related State Variable	remarks
1	CurrentDetectionStatusLog	DetectionStatusLog	See also 11.3.2

## 11.5. Metadata

### 11.5.1. Device Metadata

The metadata template of detection sensor devices is shown below.

```
<?xml version="1.0"?>
<Device type="http://www.pucc.jp/2020/10/Device/DetectionSensor"
id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
```

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```
<ManufactureDate>date of manufacture</ManufactureDate>
<ModelDescription>long user-friendly title</ModelDescription>
<ModelName>model name</ModelName>
<ModelNumber>model number</ModelNumber>
<ModelURL>URL to model site</ModelURL>
<SerialNumber>manufacturer's serial number</SerialNumber>
<UDN>uuid:UUID</UDN>
<UPC>Universal Product Code</UPC>
<IconList>
  <Url>URL to icon</Url>
</IconList>
</Specification>
```

```
<StateVariableList>
```

(Insert the metadata definition of the state variables common to devices shown in 6.3.1)

```
<!--Detection sensor-->
<StateVariable name="DetectionStatus" datatype="string" sendEvents="yes">
  <AllowedValueList>
    <AllowedValue>ON</AllowedValue>
    <AllowedValue>OFF</AllowedValue>
  </AllowedValueList>
  <StateVariable>
    <StateVariable name="DetectionStatusLog" datatype="string" sendEvents="no"/>
  </StateVariable>
</StateVariableList>
```

```
<ServiceList>
```

(Insert the metadata definition of the services common to devices shown in 6.3.2)

```
<!--Detection sensor-->
<Service name="GetDetectionStatus"
```

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```
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetDetectionStatus">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="CurrentDetectionStatus" datatype="string"/>
  </OutputParameterList>
</Service>
<Service name="GetDetectionStatusLog"
type="http://www.pucc.jp/2007/09/Device/Echonet/Service/GetDetectionStatusLog">
  <InputParameterList/>
  <OutputParameterList>
    <Parameter name="DetectionStatusLog" datatype="string"/>
  </OutputParameterList>
</Service>
<!-- Detection sensor -->
</ServiceList>
</Device>
```

## Appendix A. Version History

Document number	Date	Note
Pucc Metadata Specification – General Sensor Devices	17 Oct, 2020	Version 0.1