Environment Sensor
2JCLE Series
Series Catalog

For greater Simplicity in Connectivity and Sensing in IoT
Integrating various sensing capabilities into one single IoT sensor

Combines Bluetooth® low energy technology with different sensing capabilities. Immediately available for your use.

Multiple sensing capabilities in one package. Users can choose different locations to sense the surrounding environment.

All sensing data is stored in the internal memory of the device. Users can access it at all times without having to worry about loss of data.

Sensor functions:
- Temperature
- Humidity
- Light
- UV Index
- Barometric Pressure
- Noise
- Acceleration
- VOC
Omron’s environment sensor is a multi-function sensing component capable of tracking eight different environmental factors which include: temperature, humidity, light, UV index, barometric pressure, noise, acceleration and VOC (Volatile Organic Compounds) with wireless communication functionality in an ultra-small footprint.

**Applications**

**HOME**
- Monitoring living spaces
- Family safety
- Heatstroke prevention
- For a good night’s sleep

**OUTSIDE**
- Heatstroke and UV intensity alert
- Detection of changes in weather conditions

**OFFICE**
- Monitoring office environment
- Maintaining comfortable workplace environment

**FACTORY**
- Maintaining the quality of factory environment
Make it Simple to Connect and Measure in IoT

Choose from three types of sensors based on your needs.

- **USB type**
  - 2Jcie-BU01
  - Powered from a USB port, allowing the sensor to run continuously

- **Bag-shaped type**
  - 2Jcie-BL01
  - Portable battery-operated type that can be used in your choice of location

- **PCB type**
  - 2Jcie-BL01-P1
  - Embedded type for design optimization

Sensor functions:

- **USB type**
  - 60,000 times
  - Data logging
  - (Ex. Approx. 7 months of data storage with 5 minutes logging interval)
  - Sensor functions: Temperature, Humidity, Light, Barometric Pressure, Noise, Acceleration, VOC

- **Bag-shaped type**
  - 26,624 times
  - Data logging
  - (Ex. Approx. 3 months of data storage with 5 minutes logging interval)
  - Sensor functions: Temperature, Humidity, Light, UV Index, Barometric Pressure, Noise

- **PCB type**
  - 26,624 times
  - Data logging
  - (Ex. Approx. 3 months of data storage with 5 minutes logging interval)
  - Sensor functions: Temperature, Humidity, Light, Barometric Pressure, Noise
Sensor beacon mode allows sending of data to IoT gateway devices

- Beacon transmits environmental data (broadcasting).
- Users can configure their own applications.

Cloud collaboration accessible on smartphones

- The amount of data captured on smartphones can be stored in the cloud.
- Environmental data can be checked from smartphones in remote locations.

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**Measure in IoT**
Omron’s Environment Sensor assists a comfortable living environment

**Heatstroke Risk Levels**

Heatstroke risk level is determined by air temperature and humidity. Users can estimate the risk of heat while performing day-to-day activities.

**Discomfort Index**

The discomfort index is calculated from the air temperature and humidity to help users realize the importance of maintaining a comfortable environment.

**[Guideline for action limits]**

<table>
<thead>
<tr>
<th>Reference temperature</th>
<th>Heat stress precautions</th>
<th>Awareness guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger 35°C or above</td>
<td>Dangerous heat for all activities.</td>
<td>Especially dangerous to senior citizens, even if they are just resting. Avoid going outside and stay indoors in cooler places.</td>
</tr>
<tr>
<td>Severe warning 28°C – 31°C</td>
<td>Dangerous heat for activities that involve moderate to strenuous physical exercises.</td>
<td>Take adequate rest periods during physical training and strenuous work.</td>
</tr>
<tr>
<td>Warning 25°C – 28°C</td>
<td>Dangerous heat for activities that involve vigorous physical exercises.</td>
<td>Risk is low but still exists on the basis of vigorous exercises and hard labor.</td>
</tr>
<tr>
<td>Caution Below 25°C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*WBGT: The Wet Bulb Globe Temperature is a measure of the heat stress in direct sunlight that can be used to monitor environmental and working conditions and is the basis for an international standard (e.g. ISO).

**DI=0.81T+0.01H(0.99T-14.3)+46.3**

<table>
<thead>
<tr>
<th>Discomfort index</th>
<th>Thermal comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 – 70</td>
<td>Comfortable</td>
</tr>
<tr>
<td>70 – 75</td>
<td>Neutral</td>
</tr>
<tr>
<td>75 – 80</td>
<td>Warm</td>
</tr>
<tr>
<td>80 – 85</td>
<td>Uncomfortably hot (sweating)</td>
</tr>
<tr>
<td>85 –</td>
<td>Severe heat</td>
</tr>
</tbody>
</table>

**Temperature (°C)**

- **Relative humidity (%)**
  - 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

**Humidity (%)**

- 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

**DI=0.81T+0.01H(0.99T-14.3)+46.3**

- **Discomfort Index**
- **T: Temperature (°C)**
- **H: Humidity (%)**

**Excerpt from the Ministry of the Environment website Heat Illness Prevention Information about the “heat stress index (WBGT)”**

- Avoid going outside and stay indoors in cooler places.
- Take adequate rest periods during physical training and strenuous work.
- Risk is low but still exists on the basis of vigorous exercises and hard labor.
Omron’s Environment Sensor assists you in maintaining a comfortable living environment.

**Seismic Detection**

The sensor uses Omron’s unique spectral intensity (SI) value calculation algorithm to distinguish between seismic activity and other movements. The sensor data can be used to map damage conditions by area.

**VOC*¹ Detection**

The sensor allows eTVOC*² reading which refers to the total concentration of volatile organic compounds to help users realize the importance of maintaining a comfortable environment.

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**[Operating principle]**

- Oxygen is adsorbed onto the surface of metal oxide.
- When VOCs are emitted into the atmosphere, the gases react with the absorbed oxygen, changing its absorbed amount on the surface.
- The change in the amount of absorbed oxygen eventually increases or decreases the surface conductivity. This mechanism allows the sensor to detect VOC gases.

*¹ VOCs (Volatile Organic Compounds) include such as alcohol consumption, cigarette smoking, and formaldehyde.

*² eTVOC (equivalent Total Volatile Organic Compounds) refers to the total concentration of volatile organic compounds in a room environment.

Note: VOC sensor does not identify gas types. Only outputs the total concentration of VOCs.
Sense a variety of environmental information

- Includes six sensors, wireless functionality, and built-in battery
- Adopts Bluetooth® low energy beacon technology for simple construction of a 1:n sensor network
- Embedded memory for data loss prevention
- Lineup including PCB models

RoHS compliant

Refer to Safety Precautions on page 11.

Model Number Structure

2JCIE-□-□

(1) Communication interface  (2) Appearance
BL: BLE  None : BAG model
P1 : PCB model

Ordering Information

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Model</th>
<th>Communication interface</th>
<th>Output data</th>
<th>Minimum packing unit (Unit: pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2JCIE-BL01</td>
<td>Bluetooth® low energy*1</td>
<td>Temperature, Humidity, Light, UV index *2, Barometric pressure, Sound noise, Discomfort index *3, Heat stroke warning level *3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2JCIE-BL01-P1</td>
<td>Bluetooth® low energy*1</td>
<td>Temperature, Humidity, Light, UV index *2, Barometric pressure, Sound noise, Discomfort index *3, Heat stroke warning level *3</td>
<td>1</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>2JCIE-BL01</th>
<th>2JCIE-BL01-P1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>3 VDC (Lithium battery CR2032 x 1)</td>
<td>3 VDC</td>
</tr>
<tr>
<td>Sensors</td>
<td>Temperature, Humidity, Light, UV index *2, Barometric pressure, Sound noise</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>Bluetooth® low energy*1: GAP advertisement/Custom GATT profile</td>
<td></td>
</tr>
<tr>
<td>Communication Range</td>
<td>Approx. 10 m *4</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>−10 to 60°C</td>
<td></td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>30 to 85%RH</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Approx. 46.0 × 39.0 × 15.0 mm</td>
<td>Approx. 27.2 × 24.0 × 1.0 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 16 g (incl. battery)</td>
<td>Approx. 2.5 g</td>
</tr>
<tr>
<td>Absolute maximum ratings</td>
<td>Power supply: −0.3 to 3.6 V</td>
<td></td>
</tr>
<tr>
<td>Absolute maximum ratings</td>
<td>Output current: ±20 mA</td>
<td></td>
</tr>
<tr>
<td>Absolute maximum ratings</td>
<td>Temperature: −20 to 70°C</td>
<td></td>
</tr>
<tr>
<td>Recommended operating condition</td>
<td>Power supply: 2.7 to 3.3 V</td>
<td></td>
</tr>
<tr>
<td>Battery Life</td>
<td>Approx. 6 months *4 (5 min. measurement interval/one time per day connection)</td>
<td></td>
</tr>
</tbody>
</table>

*1 Bluetooth® low energy: GAP advertisement/Custom GATT profile

*2 UV index: UVI

*3 Discomfort index

*4 Approx. 10 m: Approx. 10 m (max.)

*5 Power supply: 2.7 to 3.3 V

*6 Approx. 10 m: Approx. 10 m (max.)
Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Measurable range</th>
<th>Accuracy (Vcc = 3.0 V, Ta = 15 to 35°C if not specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-10 to 60°C</td>
<td>±2°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>30 to 85%RH</td>
<td>±5%RH</td>
</tr>
<tr>
<td>Light</td>
<td>10 to 2,000 lx</td>
<td>±100 lx</td>
</tr>
<tr>
<td>UV Index</td>
<td>0 to 11</td>
<td>For reference *2 *6</td>
</tr>
<tr>
<td>Barometric pressure</td>
<td>700 to 1,100 hPa</td>
<td>±4 hPa</td>
</tr>
<tr>
<td>Sound noise</td>
<td>37 to 89 dB</td>
<td>For reference *6</td>
</tr>
</tbody>
</table>

*1. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by OMRON Corporation is under license.

*2. Information on UV Index is just for reference. And it may not be the same as that issued by public institutions.

*3. Information for heat stroke and discomfort index are only guidelines to be used for air conditioning and physical condition management. An individual difference and physical condition will greatly affect an individual feeling. Sensor output is not to be used for determining the presence of symptoms. Use only as a guideline. Warning levels for heat stroke may not be the same as those issued by public institutions.

*4. Communication distance and battery life may vary according to obstacles between the communication equipment, radio wave conditions.

*5. These values are specified under standard test condition, and do not guarantee the performance under the complex conditions.

*6. These types of output are provided for referential use only, and these values do not guarantee the normal operation within that range.

Dimensions (Unit: mm)

2JCIE-BL01

2JCIE-BL01-P1

CAD Data
Embed the product so as to ensure adequate external ventilation based on the arrangement of the sensors.

Use the fixing holes in the four corners of the PCB.

**Accessories**

For 2JCIE-BL01
- Lithium battery (CR2032 × 1)

For 2JCIE-BL01-P1
- Battery terminal (+)
- Battery terminal (-)

**Notes on Soldering**

Unless otherwise specified, perform soldering under the following conditions.

Soldering temperature: 350°C or less (Reference: 30 W soldering tool, tip temperature: approx. 320°C)

Soldering time: 3 seconds or less

Soldering location: 1.5 mm or more from the element base

Note that the tip temperature can be affected by the soldering tool shape. Be sure to check the temperature using a thermometer before use.
Safety Precautions

To assure the correct use of the product basic safety measures should always be followed including the warnings and cautions listed in this document.

⚠️ Warning

Warning: Improper use may result in death or serious injury.

<2JCIE-BL01>

• Keep the battery out of the reach of young children.
  If young children swallow the battery, immediately consult a doctor.
• Do not throw the battery into fire.
  The battery may explode.

<Common>

• In places where radio communications are prohibited, remove the battery to turn off the Bluetooth®.
• Do not place the unit closer than 22 cm (9 inches) from implantable medical devices such as pacemakers.
• Keep the unit out of the reach of young children.
  If young children swallow any small piece, immediately consult a doctor.
• Please stop using the unit immediately, if there is strange smell or smoke from the unit.
• Do not subject the unit to extreme temperatures, humidity, moisture, or direct sunlight. Internal condensation due to severe change in temperature may cause malfunction.
• In high temperature or low temperature environment, battery life may be extremely short due to the characteristics of the battery used.
• Please do not leave in the car.
  Prolonged exposure to the high temperature causes explosion, fire or malfunction of the internal battery.

⚠️ Caution

Caution: Improper use may result in minor or moderate injury to the user or damage to the equipment.

* Property damage refers to damage related to houses and household belongings, as well as domestic animals and pets.

<2JCIE-BL01>

• Do not insert the battery with the polarities in the wrong direction.
• Always use the type of battery indicated.
• Remove the battery from this unit when you are not going to use it for a long period of time (approximately 3 months or more).
• Please read the instruction manual of your smartphone or tablet for the wireless communication.
• Do not replace the battery during the wireless communication.
• Do not swing the unit by the strap.
  Swinging the unit while holding the strap may cause an injury.

<Common>

• Do not use the unit in the field of strong electromagnetic waves and static electricity.
• This unit is not a measurement instrument.
  The measured values must be treated as a reference, and do not use it for the purpose of verification or diagnosis.

Precautions for Correct Use

<2JCIE-BL01>

• Do not use this product with its vent holes (both sides) and window covered. This will prevent accurate measured values from being obtained.
• Batteries are not a part of your regular household waste.
  You must return batteries to your municipality’s public collection or wherever batteries of the respective type are being sold.
• Dispose of the unit, battery, and components according to applicable local regulations.
  Unlawful disposal may cause environmental pollution.

<Common>

• Do not disassemble or modify the unit.
• Do not subject the unit to strong shocks or vibrations, drop it, step on it.
• Do not apply a strong force, twist, deflection and mechanical stress on the ring portion.
• Do not immerse the unit or any of the components in water.
  The unit is not waterproof. Do not wash it or touch it with wet hands. Be careful that water does not get into the unit.
• Depending on the surrounding environment and the mounting position, the measured characteristic may vary. The measured values must be treated as a reference.
  1. Do not subject the unit to extreme temperatures, humidity, moisture, or direct sunlight.
  2. Do not subject the unit to water, oil or chemical materials.
  3. Do not use the unit where it will be exposed to dew condensation.
  4. Do not use the unit where it will be exposed to flammable gas or corrosive vapors.
  5. Do not use the unit where it will be exposed to dust, saline matter or iron powder.
• This Product operates in the unlicensed ISM band at 2.4 GHz.
  In case this Product is used around the other wireless devices including microwave and wireless LAN, which operate same frequency band of this Product, there is a possibility that interference occurs between this Product and such other devices.
• If such interference occurs, please stop the operation of other devices or relocate this Product before using this Product or do not use this Product around the other wireless devices.
• Due to the use of radio waves, third parties may intercept transmissions either deliberately or accidentally. Do not use this Product for matters related to vital secrets or human lives.
• Application examples provided in this document are just for reference. In actual applications, confirm its functions, limitations and safety before using this Product.
• This product is designed and manufactured as a general-purpose item for general industrial products. Usage for the following applications is not intended and OMRON shall not provide any warranty for this product if customers in fact use this product for such applications.

(a) Applications requiring high levels of safety (Ex. Nuclear control equipment, combustion equipment, aviation/space equipment, railroad equipment, lift equipment, amusement park machinery, medical instruments, safety devices, and other applications that may cause the loss of life or injury)

(b) Applications requiring high reliability (Ex. Gas/water/electricity supply systems, systems that operate continuously for 24 hours, applications regarding rights and assets such as payment systems, etc.)

(c) Applications in severe conditions or environments (Ex. Equipment installed outdoors, equipment subjected to chemical contamination, equipment subjected to electromagnetic interference, equipment subjected to vibration and shock, equipment operated continuously for long period of time, etc.)

(d) Applications in conditions or environments not listed in these specifications

• In addition to the contents of (a) through (d) above, this product is also not designed for use with automobiles (including two-wheel vehicles, the same applies hereinafter). Do not use for applications where mounted on automobiles. Ask your OMRON representative for details regarding products for mounting on automobiles.

• Firmware updates may be provided to improve product functions or to fix bugs. Visit the following URL and search the product name. Check the "Software" page for the appropriate product.
  https://www.components.omron.com/

Acknowledgement
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Program: "Innovative Cybernic System for a ZERO Intensive Nursing-care Society" (Program Manager: Yoshiyuki Sankai)
Sense a variety of environmental information

- Connects to a network via USB or Bluetooth® to enable the sending of measurement data
- Using OMRON’s unique and innovative algorithm, enables highly accurate determination of earthquakes based on vibrational acceleration
- Enables continuous monitoring of room air quality using a VOC sensor

RoHS compliant

Refer to Safety Precautions on page 15.

Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Communication Interface</th>
<th>Output data</th>
<th>Minimum packing unit (Unit: pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2JCIE-BU01</td>
<td>Bluetooth® low energy</td>
<td>Temperature, Humidity, Light, Barometric pressure, Sound noise, 3-axis acceleration *1, eTVOC *2, 3-axis acceleration vibration information *1 (No. of earthquakes, No. of vibrations, SI value *4)</td>
<td>1</td>
</tr>
</tbody>
</table>

Specifications

**Ratings**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>5 V (USB power supply)</td>
</tr>
<tr>
<td>Sensors</td>
<td>Temperature, Humidity, Light, Barometric pressure, Sound noise, 3-axis acceleration *1, eTVOC *2</td>
</tr>
<tr>
<td>Interface</td>
<td>Bluetooth® low energy (Bluetooth® v5.0)*5, USB communication (USB2.0)</td>
</tr>
<tr>
<td>Communication range</td>
<td>Approx. 10 m *6</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>• 10 to 60°C</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>30 to 85%RH</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Approx. 29.1 × 14.9 × 7.0 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 2.9 g</td>
</tr>
<tr>
<td>Absolute maximum ratings Power supply</td>
<td>• 0.3 to 5.5 V</td>
</tr>
<tr>
<td>Absolute maximum ratings Output current</td>
<td>Max. 100 mA</td>
</tr>
<tr>
<td>Absolute maximum ratings Temperature</td>
<td>• 20 to 70°C</td>
</tr>
<tr>
<td>Recommended operating condition Power supply</td>
<td>4.75 to 5.25 V</td>
</tr>
</tbody>
</table>

**Characteristics**

<table>
<thead>
<tr>
<th>Item</th>
<th>Measurable range</th>
<th>Accuracy (Vcc = 5.0 V, Ta = 15 to 35°C if not specified) *7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>• 10 to 60°C</td>
<td>±2°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>30 to 85%RH</td>
<td>±5%RH</td>
</tr>
<tr>
<td>Light</td>
<td>10 to 2000 lx</td>
<td>±100 lx</td>
</tr>
<tr>
<td>Barometric pressure</td>
<td>700 to 1100 hPa</td>
<td>±4 hPa</td>
</tr>
<tr>
<td>Sound noise</td>
<td>40 to 94 dB</td>
<td>For reference *6</td>
</tr>
<tr>
<td>3-axis acceleration</td>
<td>• 2000 to 2000 gal</td>
<td>For reference *1, *8</td>
</tr>
<tr>
<td>eTVOC</td>
<td>0 to 32767 ppb</td>
<td>For reference *2, *8</td>
</tr>
</tbody>
</table>

*1. 3-axis acceleration values can only be obtained in the specified operation mode. For details, refer to the User’s Manual.

*2. eTVOC (equivalent Total Volatile Organic Compounds) refers to the total concentration of volatile organic compounds in a room environment. Output TVOC values will be higher or lower depending on the type of volatile organic compound. Also, if continuously operated in high-temperature and high-humidity environments, sensitivity for eTVOC values may decrease.

*3. Information for heat stroke and discomfort index are only guidelines to be used for air conditioning and physical condition management. An individual difference and physical condition will greatly affect an individual feeling. Sensor output is not to be used for determining the presence of symptoms. Use only as a guideline. Warning levels for heat stroke may not be the same as those issued by public institutions.

*4. SI (Spectral Intensity) values corresponds to the destructive energy seismic motions exert on a structure.

*5. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by OMRON Corporation is under license.

*6. Communication distance may vary according to obstacles between the communication equipment, radio wave conditions.

*7. Performance values are obtained based on the various conditions of individual tests, and do not guarantee the values obtained under combined conditions for rated values and performance values.

*8. Reference output values are provided for reference only, and do not guarantee that operation will always take place normally within that range.
2JCLE-BU

Environment Sensor (USB Type)

Dimensions

(Unit: mm)

CAD Data
Safety Precautions

To assure the correct use of the product basic safety measures should always be followed including the warnings and cautions listed in this document.

⚠️ Warning

Warning: Improper use may result in death or serious injury.

• In places where radio communications are prohibited, turn off the Bluetooth®.

• Do not place the unit closer than 22cm (9 inches) from implantable medical devices such as pacemakers.

• Keep the unit out of the reach of young children.

If young children swallow any small piece, immediately consult a doctor.

• Please stop using the unit immediately, if there is strange smell or smoke from the unit.

• Do not subject the unit to extreme temperatures, humidity, moisture, or direct sunlight.

• Internal condensation due to severe change in temperature may cause malfunction.

⚠️ Caution

Caution: Improper use may result in minor or moderate injury to the user or damage to the equipment.

* Property damage refers to damage related to houses and household belongings, as well as domestic animals and pets.

• Do not use the unit in the field of strong electromagnetic waves and static electricity.

• Please read the instruction manual of your smartphone or tablet for the wireless communication.

• This unit is not a measurement instrument.

The measured values must be treated as a reference, and do not use it for the purpose of verification or diagnosis.

• Do not disconnect the unit from the connected device during USB communication. Doing so may cause failure or data loss.

• Do not forcefully grip the unit or handle it in a reckless manner. Doing so may cause the unit to be damaged or may cause injury.

Precautions for Correct Use

• Do not use this product with its vent holes (both sides) and window covered. This will prevent accurate measured values from being obtained.

• Do not disassemble or modify the unit.

• Do not subject the unit to strong shocks or vibrations, drop it, step on it.

• As this is a precision instrument, do not pull forcefully on its mounting portion or subject it to stress such as twisting, bending, or shock. Doing so may cause failure or deterioration.

• Do not immerse the unit or any of the components in water.

The unit is not waterproof. Do not wash it or touch it with wet hands. Be careful that water does not get into the unit.

• Depending on the surrounding environment and the mounting position, the measured characteristic may vary. The measured values must be treated as a reference.

1) Do not subject the unit to extreme temperatures, humidity, moisture, or direct sunlight.

2) Do not use the unit where it will be exposed to dew condensation.

3) Do not subject the unit to water, oil or chemical materials.

4) Do not use the unit where it will be exposed to flammable gas or corrosive vapors.

5) Do not use the unit where it will be exposed to dust, saline matter or iron powder.

6) Install in a location as far away from heat-generating instruments, etc., as possible.

• This Product operates in the unlicensed ISM band at 2.4GHz. In case this Product is used around the other wireless devices including microwave and wireless LAN, which operate same frequency band of this Product, there is a possibility that interference occurs between this Product and such other devices.

If such interference occurs, please stop the operation of other devices or relocate this Product before using this Product or do not use this Product around the other wireless devices.

• Due to the use of radio waves, third parties may intercept transmissions either deliberately or accidentally. Do not use this Product for matters related to vital secrets or human lives.

• This product is designed and manufactured as a general-purpose item for general industrial products. Usage for the following applications is not intended and OMRON shall not provide any warranty for this product if customers in fact use this product for such applications.

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(b) Applications requiring high reliability (Ex. Gas/water/electricity supply systems, systems that operate continuously for 24 hours, applications regarding rights and assets such as payment systems, etc.)

(c) Applications in severe conditions or environments (Ex. Equipment installed outdoors, equipment subjected to chemical contamination, equipment subjected to electromagnetic interference, equipment subjected to vibration and shock, equipment operated continuously for long period of time, etc.)

(d) Applications in conditions or environments not listed in these specifications

• In addition to the contents of (a) through (d) above, this product is also not designed for use with automobiles (including two-wheel vehicles, the same applies hereinafter). Do not use for applications where mounted on automobiles. Ask your OMRON representative for details regarding products for mounting on automobiles.

• Firmware updates may be provided to improve product functions or to fix bugs. Visit the following URL and search the product name. Check the "Software" page for the appropriate product.

https://www.components.omron.com/