2JCIE-BU

Environment Sensor (USB Type)

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 3.

Ordering Information

Model	Communication Interface	Output data	Minimum packing unit (Unit: pcs)
2JCIE-BU01	Bluetooth® low energy USB communication	Temperature, Humidity, Light, Barometric pressure, Sound noise, 3-axis acceleration *1, eTVOC *2, Discomfort index *3, Heat stroke warning level *3, Vibration information *1 (No. of earthquakes, No. of vibrations, SI value *4)	1

Specifications

Ratings

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

Characteristics

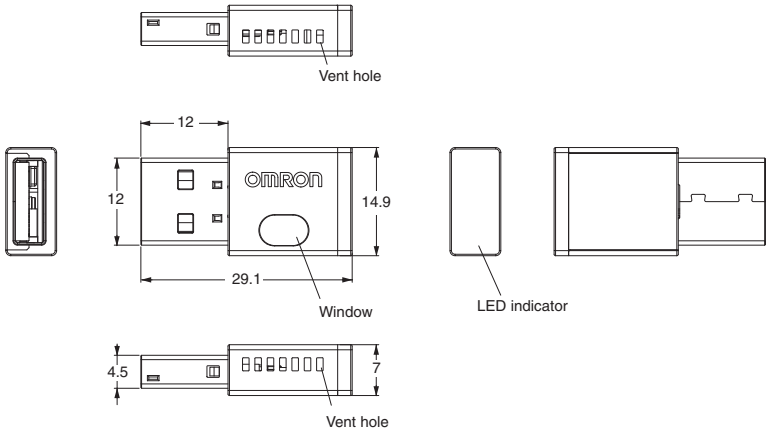
Item	Measurable range	Accuracy (Vcc = 5.0 V, Ta = 15 to 35°C if not specified) *7
Temperature	−10 to 60°C	±2°C
Humidity	0 to 100%RH	±5%RH
Light	10 to 2000 lx	±100 lx
Barometric pressure	700 to 1100 hPa	±4 hPa
Sound noise	40 to 94 dB	For reference *8
3-axis acceleration	−2000 to 2000 mg	For reference *1, *8
eTVOC	0 to 32768 ppb	For reference *2, *8

***1.** 3-axis acceleration values can only be obtained in the specified operation mode. For details, refer to the Communication Interface 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.

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.
  (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.

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