EcoStruxure™ Building-IoT Well-Being Sensors

The IoT Well-Being Sensor Solution offers 2 flexible, wireless, USB-C or battery-based, easy-to-install multisensors that are used in a variety of spaces inside buildings. The sensors monitor indoor air quality by measuring levels of carbon dioxide and volatile organic compounds, as well as temperature, and humidity.

Regulatory Compliance and Safety Information

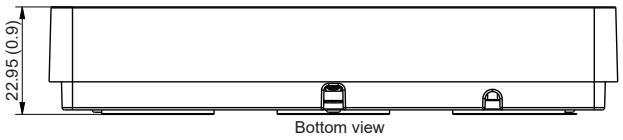
Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

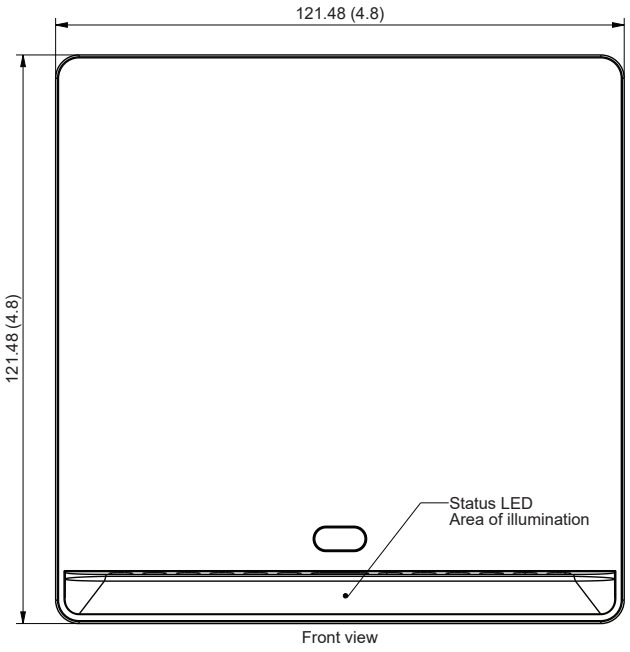
Carefully read these instructions and all information relevant to this product before trying to install it. See the list of technical literature.

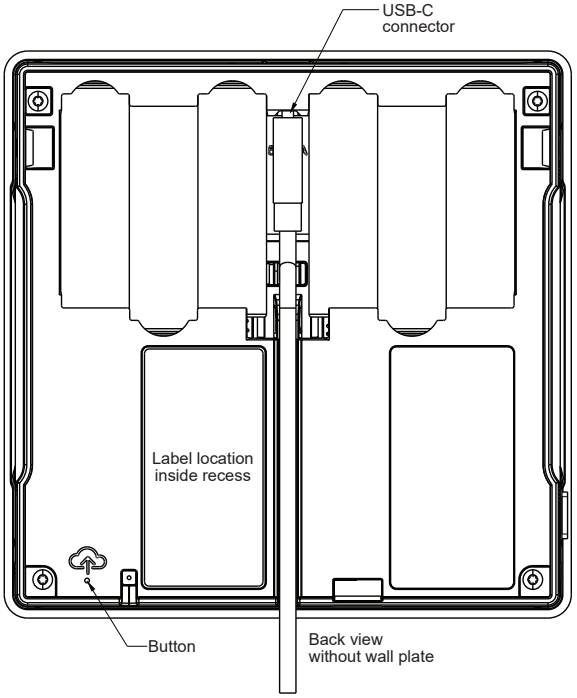
The technical literature and declarations of conformity can be accessed on the Schneider Electric Exchange website, ecoxpert.se.com. Contact your local Schneider Electric sales office for a hard copy of the documentation or for additional information.

Dimensions

mm (inches)







Installation Restrictions

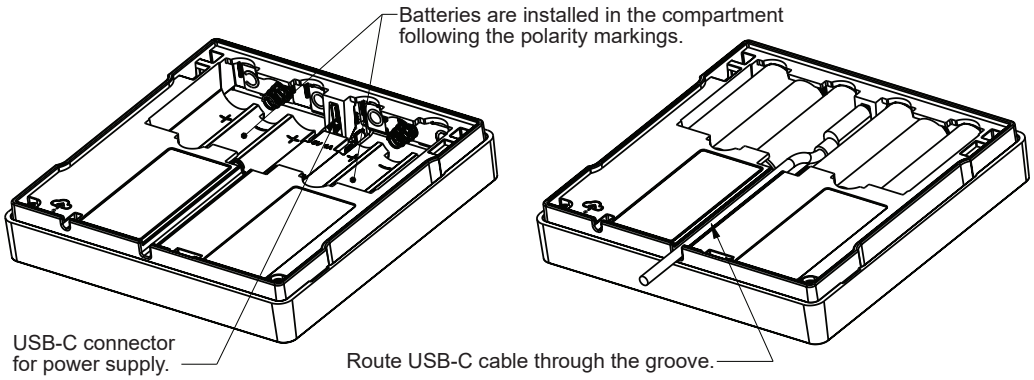
NOTICE

REDUCED DEVICE PERFORMANCE

- This device is for indoor use only and is not suitable for wet locations.
- Do not install the device close to an exterior window.
- Install the device 3 to 6 feet above ground level.
- Ensure that the device is not tilted.
- Keep all sensors on the device clean of dust, paint, and other contaminants.
- When replacing a device, install the new device in the same position and direction as the replaced device.
- When replacing the batteries, connect the USB-C cable to secure the retention of the calibration data.
- It is recommended to use the L91 batteries provided with the device to meet the required performance.
- Do not use rechargeable or alkaline batteries, mix and match batteries, or place new batteries in with old ones.
- Do not press the microphone with anything.
- Avoid using sharp objects to press the button.

Failure to follow these instructions can result in reduced device performance or equipment damage.

Installing the Batteries and USB-C Cable



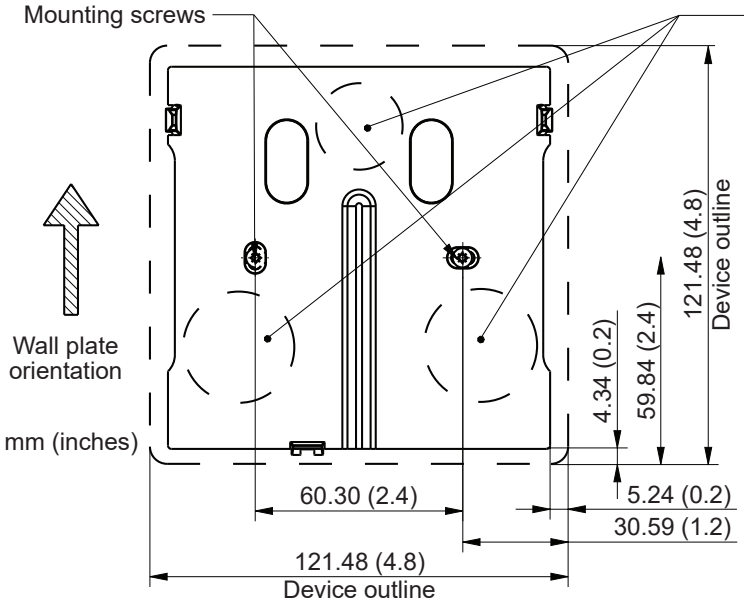
⚠ DANGER

DISPOSAL OF BATTERIES

- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

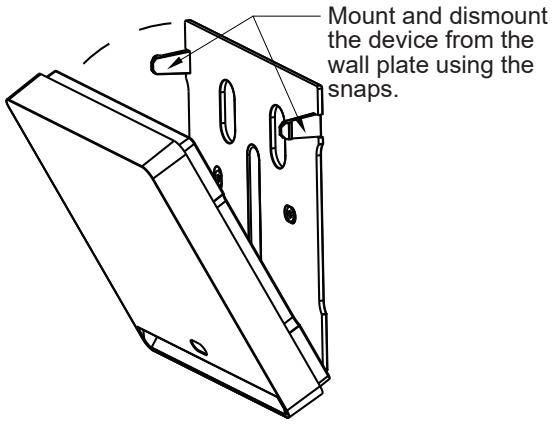
Failure to follow these instructions will result in death or serious injury.

Installing the Wall Plate and Mounting the Device

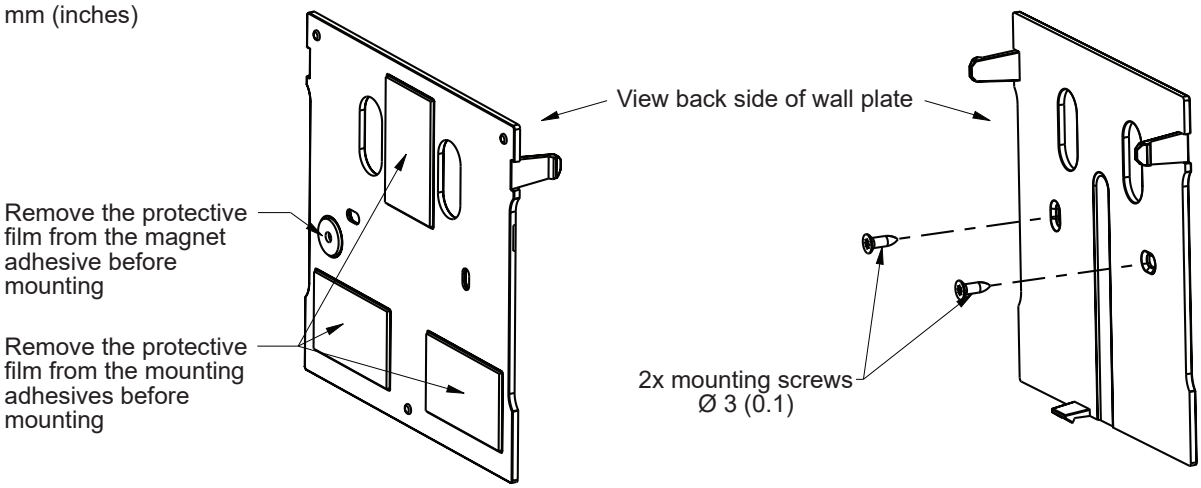


Important!

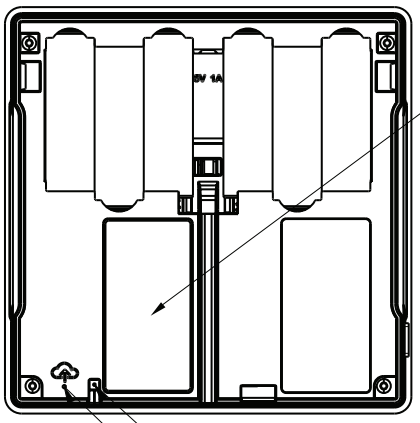
- While mounting the wall plate using adhesive tape, press these marked areas for 5-10 seconds to help ensure proper adhesion to the wall.
- If mounted using screws, press for 5-10 seconds only on the bottom right area to help ensure proper adhesion of the magnet to the wall.



Mounting options (adhesive tape, screws, or both):



Commissioning the Device



Part Numbers

Product	Part Number
EcoStruxure Building-IoT Sensor Solution, Well-Being[a]	EBIOTPCWE1
EcoStruxure Building-IoT Sensor Solution, Advanced Well-Being[a]	EBIOTPCWE2

a. Including installation equipment and instructions.

LED Behaviors

Operation	Button	LED	Description
Current connection status	Short press of <3s	Blinking red every 1s for 5s	The sensor is not connected to a network
		Blinking green every 1s for 5s	The sensor has successfully connected to a network
Starts the connection process	Medium press of >3s and <10s	Blinking yellow every 1s	The sensor is attempting to connect to a network
		Blinking green every 1s for 5s	The connection process was successful
		Blinking red every 1s for 5s	The connection process failed
Wireless settings reset	Long press of >10s	Solid red for 5s	After 5 seconds, all Wireless settings are reset to default values and the device is rebooted
CO_2 sensor (Can be enabled/ disabled)	N/A	Green, yellow or red indicating the CO_2 level based on upper and lower thresholds	This feature behaves differently depending on whether the sensor is battery[a] or USB-C[b] powered

a. If the CO_2 level rises to or above the upper threshold, the red LED will blink for 1 second. Only when the level goes below the upper threshold then comes back above will the LED blink again.
b. The LED will blink for 5 seconds every 1 minute based on the CO_2 level compared to the upper and lower thresholds:
   - Green: CO_2 level is < lower threshold
   - Yellow: CO_2 level is >= lower threshold, and < upper threshold
   - Red: CO_2 level is >= upper threshold

General Specifications

Sensor measurements	Measurement range	Measurement Accuracy	Resolution
Temperature[a]	0 to 50 °C (32 to 122 °F)	+/- 0.5 at 25 °C (77 °F), 1 degree 0 to 45 °C (32 to 113 °F)	0.01 °C (0.018 °F)
Relative Humidity[a]	5 to 95 % RH	+/- 3 % (20 to 80 % RH) at 25 °C (77 °F) Typical Including hysteresis of +/- 1.5 % Non-linearity error 1.7 % Long-term stability at 25 °C (77 °F) 0.5 % RH/ Year	0.008 % RH
Air Pressure	300 to 1100 hPa	+/- 0.6 hPa Typical	0.18 Pa
Noise[d]	35 to 77 dBA	+/- 3 dBA	
Light	0 to 10,000 lux		
Particulate Matter (PM)[bc]	0 to 1,000 ug/m3	PM 1 and PM 2.5 +/- 5 ug/m3 (+ 5 % measured value) (0 – 100 ug/m3), +/- 10 % (100 – 1000 ug/m3) PM 4 and PM 10 +/- 25 ug/m3 (0 – 100 ug/m3), +/- 25 % (100 – 1000 ug/m3) (sensor-to-sensor deviation)	
Carbon dioxide (CO_2)	0 to 5,000 ppm	+/- 30 ppm + 3 %	1 ppm
Volatile Organic Compounds (VOC)[b]	0 to 100 % AQI	+/- 15 % (sensor-to-sensor deviation)	

a. Accuracy requires vertical mounting, no draft, and time for auto-calibration.
b. These values are automatically calibrated and are normally finished within 7 days after each power on.
c. PM is only available on the Advanced Well-Being Sensor.
d. The device cannot capture or record sound but only monitor (measure and report at an interval) sound pressure levels promoting privacy.

Material
Sensor type
Temperature, humidity, pressure (solid state), CO_2 (Photoacoustic Spectroscopy), VOC (metal oxide), PM (laser scattering, **only** available on EBIOTPCWE2)
Enclosure
PC-ABS (Polycarbonate/Acrylonitrile Butadiene Styrene)
Ingress protection rating
IP 20
Color
White
Surface finish
Glossy

Mechanical
Dimensions
121.48 L x 121.48 W x 22.95 H mm (4.8 L x 4.8 W x 0.9 H in)
Weight
250 g (0.55 lb)

LED indicator
Red, green and yellow
Button
1

Electrical
Powered by
6 x 1.5V AA L91 Lithium batteries, USB-C
Cable
USB-C to USB-C only
Estimated battery life span
Up to 3 years for EBIOTPCWE1, and up to 2 years for EBIOTPCWE2

Wireless connectivity
Communication protocol
2.4 GHz, Sensor Network supporting Mesh Technology
Wireless communication range, indoor
15 sq. m (50 sq. ft), open space
Output power
Up to 8 dBm

Environment
Environmental conditions
Indoor use only, avoid dusty environments
Ambient temperature, operating
0 to 45 °C (32 to 113 °F)
Ambient temperature, storage
-20 to 60 °C (-4 to 140 °F)
Humidity
5 to 95 % (non condensing)

Installation
Mounting
Wall-mounted
Tamper detection
Tamper status reporting for product removal after installation and commissioning.
Installation equipment, included
Mounting tape, screws, USB-C cable (if applicable), 6 x 1.5V AA L91 batteries, installation instructions

Addendum - California Proposition 65 Warning Statement for California Residents

⚠ **WARNING**: This product can expose you to chemicals including Styrene, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

部件名称 (Part Name)	有害物质 (Hazardous Substances)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑料部件 (Plastic Parts)	O	O	O	O	O	O
电子件 (Electronics)	X	O	O	O	O	O

本表格依据 SJ/T11364 的规定编制。 (This table is made according to SJ/T 11364.)

O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
(Indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572.)

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。
(Indicates that the concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572.)

Regulatory Notices

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna; increase the separation between the equipment and receiver; connect the equipment into an outlet on a circuit different from that to which the receiver is connected; consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Cet appareil est conforme à la norme RSS exempte de licence d'Industrie Canada. L'opération est sous réserve des deux conditions suivantes: (1)

Cet appareil ne doit pas causer d'interférences; et (2) Cet appareil doit accepter toute interference fonctionnement indésirable de l'appareil.

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