



Smart sensors and connected technology used in millions of businesses and homes worldwide



Technology that makes buildings talk

Imagine a smarter approach to building management

What if you always knew what was happening inside your buildings? If you knew how rooms and resources were being used, how equipment was functioning, or what the conditions were? What if you knew all this in real time? What if your buildings could talk?

In today's connected world, this is already a reality. In buildings new, and not so new.

And we create the technology that makes it all happen.

“Our mission is to continually create better, more efficient smart technology for our customers, now and in the future.”

Peter Burbidge, Managing Director, Pressac



A technology partner you can trust

Today's connected buildings give businesses the power to create safer, healthier environments and achieve new levels of operational efficiency.

As a trusted technology partner to some of the world's leading businesses, we understand you need a cost-effective solution without compromising on performance and reliability. And because your needs are likely to evolve along with your business, our solutions are scalable and highly flexible.

Smart

Our sensor technology is designed to give you more choice and flexibility. It enables the monitoring of a range of different parameters, and is not confined to any one platform, meaning you can get the exact data you need, how you need it.

We make large-scale IoT deployment easy. Our sensors use wireless, ultra-low power technology, so they're quick to install and super low maintenance. Making smart sensing more efficient and easy to retrofit into existing buildings.

Room conditions sensors

Monitor the occupancy, light, sound, temperature and humidity in rooms or zones

Room occupancy sensors

Detect when someone occupies a room and monitor occupancy

CO₂, temperature and humidity

Monitor CO₂ levels, ambient temperature and relative humidity throughout the day

Table occupancy sensors

Detect when a person occupies a table and monitor occupancy

Door/window sensors

Detect when a door or window is opened or closed

Temperature sensors

Monitor temperature and humidity, and get updates when they change

Pulse counter

Count the number of pulses from electricity, water, or general meters

People flow sensors

Detect people going in and out of a doorway

Cubicle occupancy sensors

Detect when someone occupies a table and monitor occupancy

Air quality sensors

Monitor CO₂, TVOC, PM, temperature and humidity throughout the day

Desk occupancy sensors

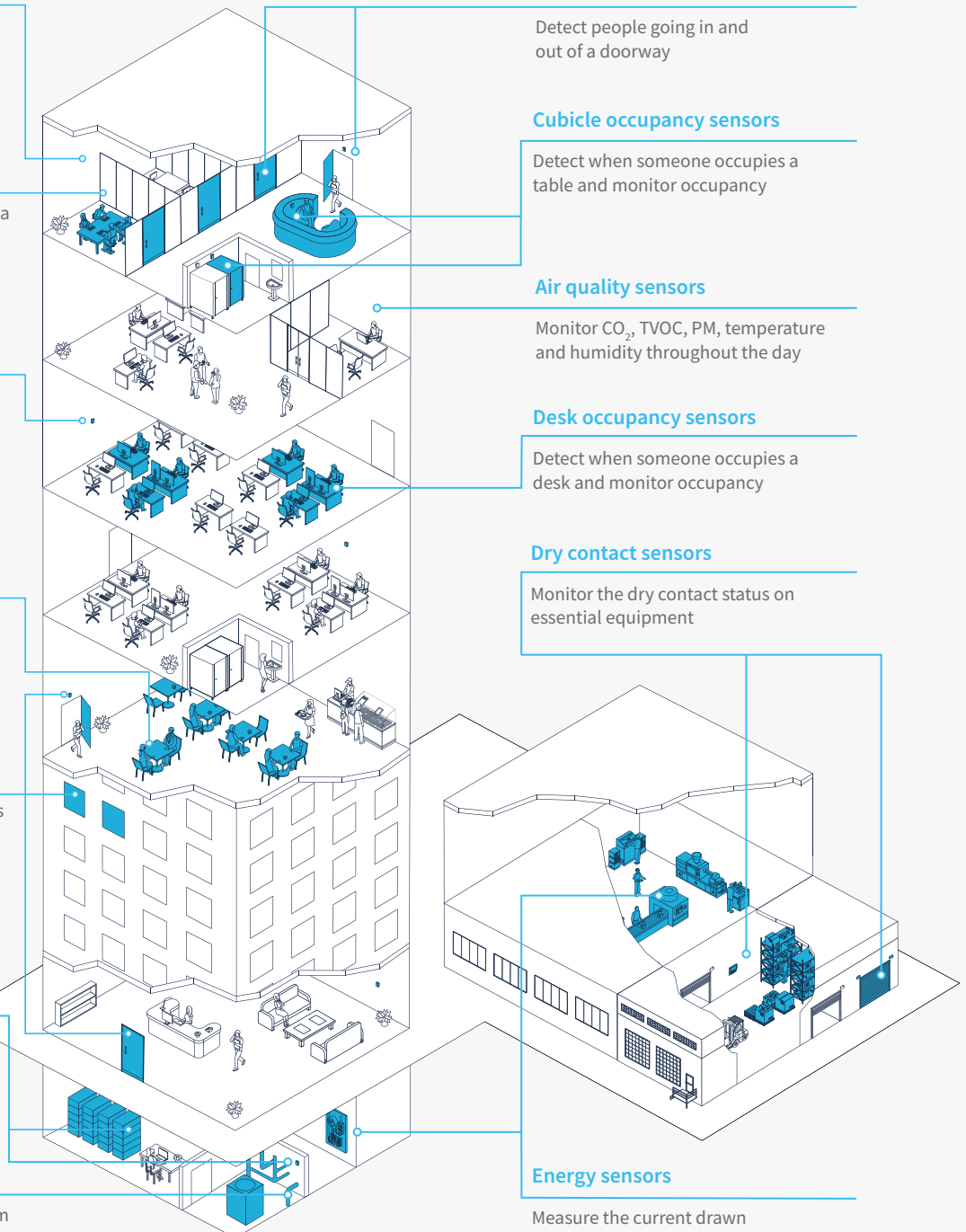
Detect when someone occupies a desk and monitor occupancy

Dry contact sensors

Monitor the dry contact status on essential equipment

Energy sensors

Measure the current drawn by a machine or circuit, every 30 seconds

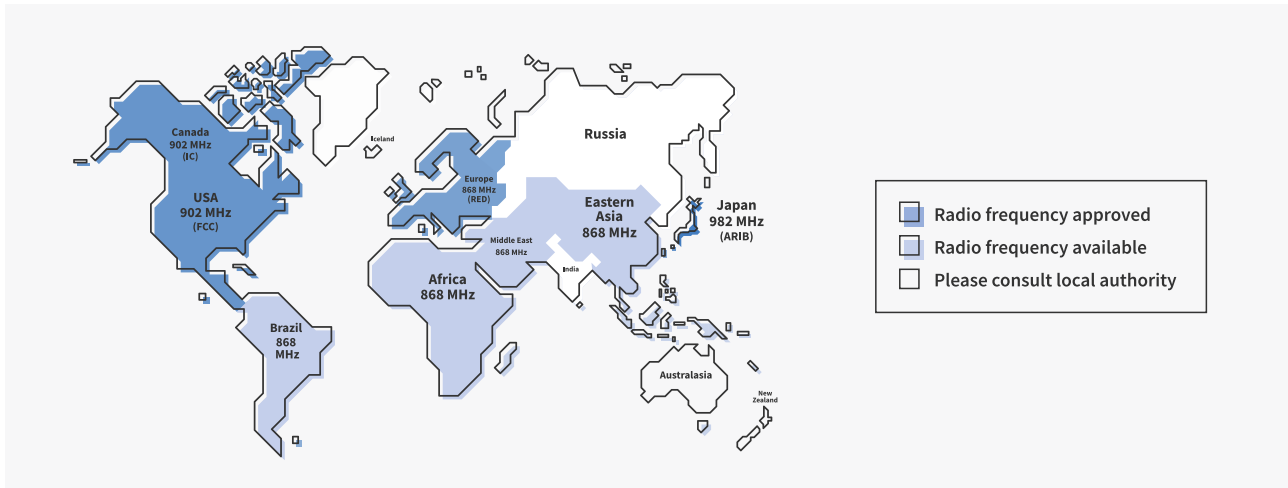


Scalable

We use EnOcean's ultra-low power, internationally approved wireless protocol which is designed for license-free data transmission in buildings with thousands of sensors - such as inside a commercial building - making our technology interoperable and scalable.

- 868 MHz frequency certified for Europe and other countries adopting RED
- 902 MHz frequency certified for USA (FCC specification) and Canada (IC specification)
- 928 MHz frequency certified for Japan (ARIB specification)

And because our technology is system agnostic, you can integrate sensor data into any intelligent cloud platform or smart-building system for a future-proof growth path.

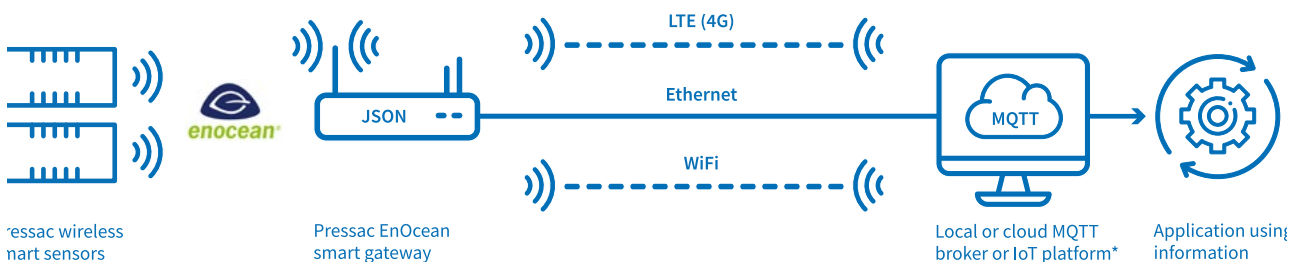


Secure

Sensor data is sent wirelessly and securely using AES-128 encryption. Our smart gateway receives near real-time data from all sensors within range (up to 30 metres in buildings and 300 metres in free field), converts the raw data into an easy-to-read JSON format, then publishes it using MQTT protocol. Data can be sent via Ethernet, LTE (4G) or WiFi to:

- any local or cloud MQTT broker
- IBM Watson IoT, Microsoft Azure IoT Hub or AWS IoT Core
- Google Sheets
- a Node-RED application.

All our products are fully tested to ensure they are reliable, robust and compliant with the highest quality, environmental and security standards – ISO 9001 and ISO 14001 certification. Plus they're approved by third-party test bodies, meaning no product will leave our premises unless we're completely confident it is fit for purpose.



*Ready-made connections with:



Environment monitoring sensors

Our sensors provide accurate, reliable measurements of the conditions in the surrounding environment. Enabling you to continuously monitor the conditions in each room or zone and control heating, ventilation and air conditioning more efficiently.



Indoor air quality (IAQ) sensor

- Measure ambient carbon dioxide (CO₂), volatile organic compounds (VOCs), particulate matter (PM), temperature and relative humidity:
 - CO₂ 0-5000 ppm
 - PM1/2.5/4/10 1-511 µg/m³
 - VOC Index 1-500
 - Temperature -10-50°C
 - Humidity 0-100%
- Reports every 5-60 minutes (configurable)
- Mains-powered
- Dimensions: 110 x 110 x 39 mm (approx)



Room conditions sensor

- Measure occupancy, light, sound, temperature and humidity:
 - Occupancy up to 6 meters
 - Light 0-20,000 lx
 - Sound 0-124 dB
 - Temperature -10-50°C
 - Humidity 0-100%
- Reports occupancy instantly. Reports conditions every 5-60 minutes (configurable)
- Mains-powered
- Dimensions: 110 x 110 x 42 mm (approx)





CO₂, temperature and humidity sensor

- Measure carbon dioxide (CO₂), ambient temperature and relative humidity:
 - CO₂ 0–2550 ppm
 - Temperature 0–51°C
 - Humidity 0–100%
- Reports every 5 minutes (solar-powered) or every 15 minutes (battery-powered)
- Solar-powered (using ambient room light), with a back-up battery. Battery life typically up to 10 years
- Dimensions: 115 x 80 x 35 mm (approx)



Temperature and humidity sensor

- Measure ambient temperature and relative humidity:
 - Temperature 0–40°C
 - Humidity 0–100%
- Reports every 15 minutes, or every 100 seconds if temperature changes by more than 0.5°C or humidity changes by more than 2%
- Solar-powered (using ambient room light), with a back-up battery. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)



Temperature sensor

- Measure ambient temperature and relative humidity:
 - Temperature 0–40°C
 - Humidity 0–100%
- Reports every 15 minutes, or every 100 seconds if temperature changes by more than 0.5°C
- Solar-powered (using ambient room light), with a back-up battery. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

Occupancy monitoring sensors

Our sensors accurately detect and monitor the occupancy of desks, rooms and spaces. Enabling you to see live occupancy and monitor space utilisation over time.



Room occupancy sensor

- Mounted to the ceiling. Detection range within 5 metres based on typical 2.5m ceiling height
- Wide-angle passive infrared (PIR) sensor detects motion within 360-degree radius, up to 6 metres
- Reports instant update if occupancy detected, plus status updates every 10 minutes to 5 hours (configurable)
- Absence time out can be configured between 2 and 60 minutes
- Battery-powered. Battery life typically 5+ years
- Dimensions: 93 x 65 x 31 mm (approx)



Desk occupancy sensor

- Mounted to the underside of a desk. Detection range within 0.5 metres based on typical desk height
- Narrow-angle passive infrared (PIR) sensor detects motion within 180-degree radius
- Reports instant update if occupancy detected, plus status updates every 10 minutes to 5 hours (configurable)
- Absence time out can be configured between 2 and 30 minutes
- Battery-powered. Battery life typically 5+ years
- Dimensions: 93 x 65 x 28 mm (approx)



Table occupancy sensor

- Mounted to the underside of a table. Detection range within 0.5 metres based on typical table height
- Narrow-angle passive infrared (PIR) sensor detects motion within 360-degree radius
- Reports instant update if occupancy detected, plus status updates every 10 minutes to 5 hours (configurable)
- Absence time out can be configured between 2 and 30 minutes
- Battery-powered. Battery life typically 5+ years
- Dimensions: 93 x 65 x 28 mm (approx)



Cubicle occupancy sensor

- Mounted to the wall or ceiling of a cubicle. Detection range within 5 metres based on typical 2.5m ceiling height
- Narrow-angle passive infrared (PIR) sensor detects motion within 180-degree radius, up to 5 metres
- Reports instant update if occupancy detected, plus status updates every 10 minutes to 5 hours (configurable)
- Absence time out can be configured between 2 and 30 minutes
- Battery-powered. Battery life typically 5+ years
- Dimensions: 93 x 65 x 28 mm (approx)



Single door people flow sensor

- Mounted above a single doorway, enabling you to monitor people flow in/out of a room
- Time-of-flight sensor detects people and the direction of movement (bi-directional)
- Accuracy: 86-98%. Comes with a mounting bracket to minimise door interference
- Privacy and GDPR compliant: sensors only detect people movement. No cameras. Fully anonymous
- Mains-powered
- Dimensions: 67 x 124 x 35 mm (approx)



Energy monitoring sensors

Our sensors accurately measure electrical consumption at a circuit, zone or machine level. Enabling you to see granular real-time energy use and monitor ongoing consumption.



Current sensor: one channel

- Measure AC current (50Hz or 60Hz) in one cable.
Measurement range:
 - 1A–60A
 - 2A–200A
- Reports average every 30 seconds
- Sensor clamps around electrical cable. Wireless transmitter can be fitted outside the panel or equipment for reliable data transmission
- Self-powered using ultra-low energy from the measured conductor
- Dimensions: size of clamp increases with amperage



Current sensor: three channels

- Measure AC current (50Hz or 60Hz) in three separate cables.
Measurement range:
 - 1A–60A
 - 2A–200A
 - 2A–600A
- Reports average every 30 seconds
- Sensor clamps around electrical cable. Wireless transmitter can be fitted outside the panel or equipment for reliable data transmission
- Self-powered using ultra-low energy from the measured conductor
- Dimensions: size of clamp increases with amperage



Pulse counter

- Counts the number of electric pulses from electricity, water, or general meters, as well as machinery and equipment with a pulse output
- Reports the number of pulses:
 - 1-10,000 pulses per kWh
 - 1-10,000 pulses per m³
 - 1-10,000 pulses per count
- Accepts dry contact, TTL or optical inputs
- Battery and mains-powered. Battery life typically one year
- Dimensions: 108 x 131 x 58 mm (approx)

Building and asset monitoring sensors

Our sensors let you detect changes and monitor the status of assets remotely. Enabling you to see what's going on around your buildings at any one time and receive alerts when something changes.



Door and window sensor

- Mounted to frame and door/window. Use magnetic fields to detect open/close status
- Reports instant update if changes detected, plus status updates every 15 minutes
- Solar-powered (using ambient room light), with a back-up battery. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)



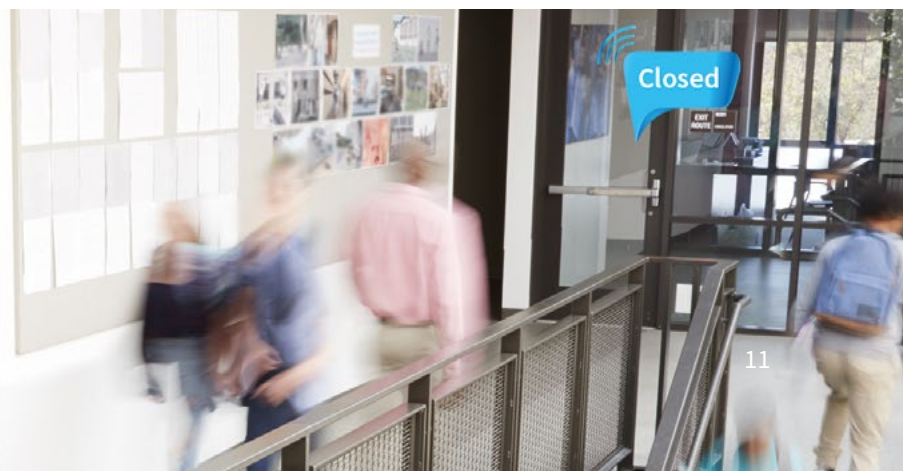
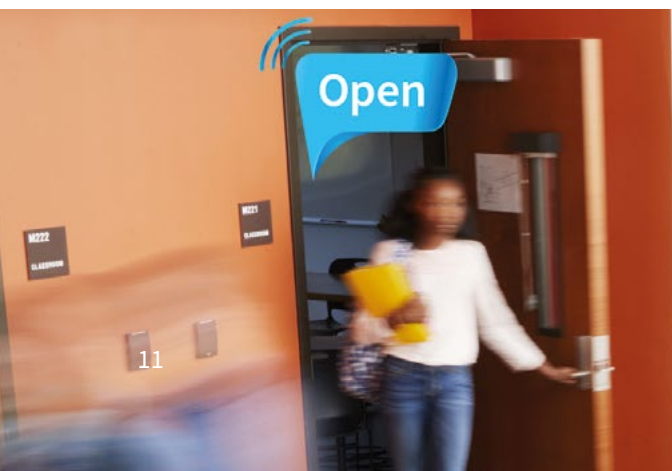
Dry contact sensor

- Detects the live status of any equipment that has a dry contact output
- Push-wire connection of two wires
- Reports instant update if changes detected, plus status updates every 15 minutes
- Solar-powered (using ambient room light), with a back-up battery. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)



Industrial temperature sensor

- Measure temperature of air, gas or liquids, at up to three different points: -20 to 100°C
- Accepts up to three industry-standard PT1000 probes
- Reports can be configured between 30 seconds and 3,600 seconds/60 minutes
- Battery-powered. Battery life typically up to 10 years
- IP65 rated so it can be used near water
- Dimensions: 110 x 80 x 66 mm (approx)



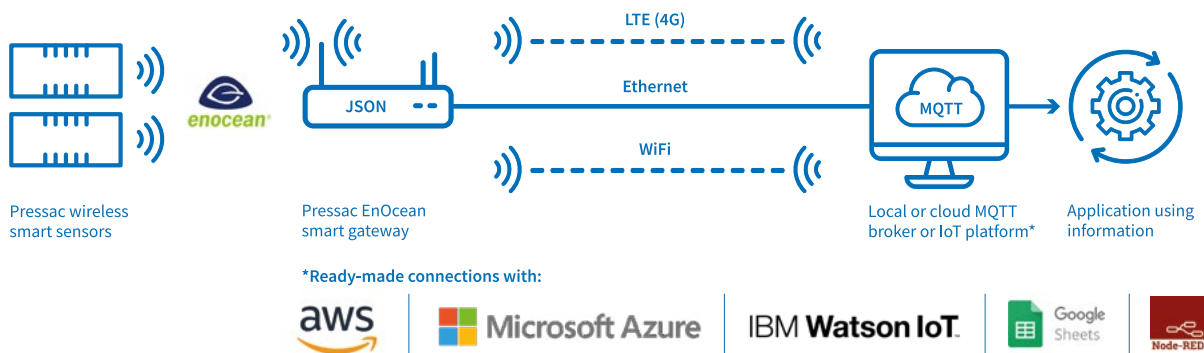
Receivers

Sensor data can be sent securely to a local network or the cloud — via Ethernet, LTE (4G) or WiFi — using Pressac's smart gateway. Enabling you to easily integrate near real-time sensor data into your software application or IoT platform.



Smart gateway

- Receives near real-time data from multiple sensors via the EnOcean wireless radio protocol
- Converts sensor data into JSON (JavaScript Object Notation) format and makes it available locally or in the cloud, via MQTT
- Transmits data via ethernet cable, WiFi or LTE (4G) (ethernet only version available). Failovers can be configured to automatically switch to a backup connection if needed
- Sends data to up to 5 user-defined MQTT brokers
- Includes ready-made connections to IBM Watson IoT, AWS IoT Core, Microsoft Azure IoT Hub, Google Sheets and Node-RED
- Mains-powered
- Dimensions: 150 x 85 x 28 mm (approx) plus antennas



Smart repeater

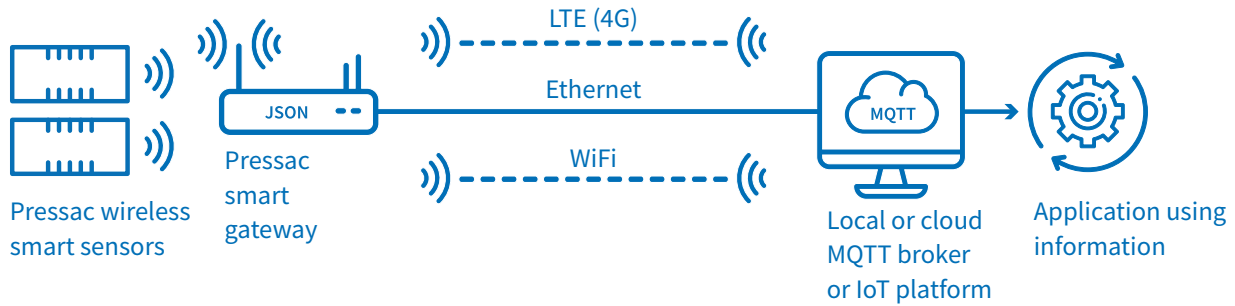
- Repeats sensor data telegrams to extend indoor wireless range up to 90 metres
- Select which sensors to repeat
- Powered via USB
- Dimensions: 93 x 65 x 28 mm (approx) plus antenna

Accessing and integrating sensor data

Our technology is system agnostic, so the data from our sensors can be used in any way you need. There are different options to choose from, making it easy to get your data in the way that's right for you.

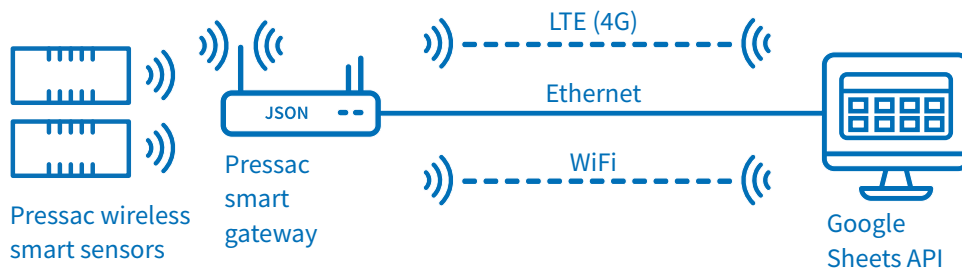
Integrate data into any software or platform

Data can be sent - via Ethernet, LTE (4G) or WiFi – to any local or cloud MQTT broker, IBM Watson IoT, Microsoft Azure IoT Hub or AWS IoT Core.



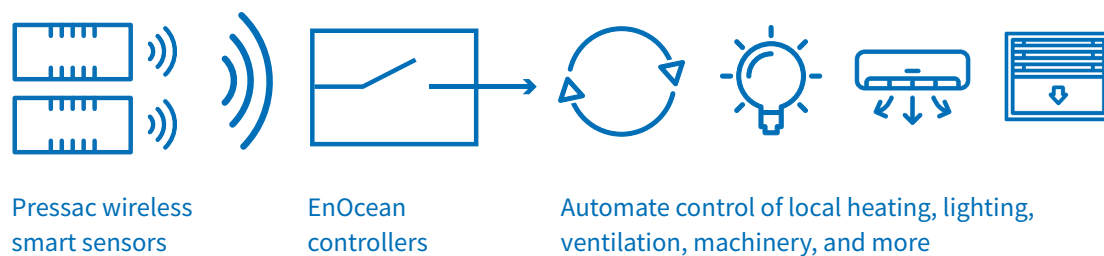
Access your sensor data in a spreadsheet

For proof of concepts, live data can be sent to your Google Sheets account using our smart gateway.



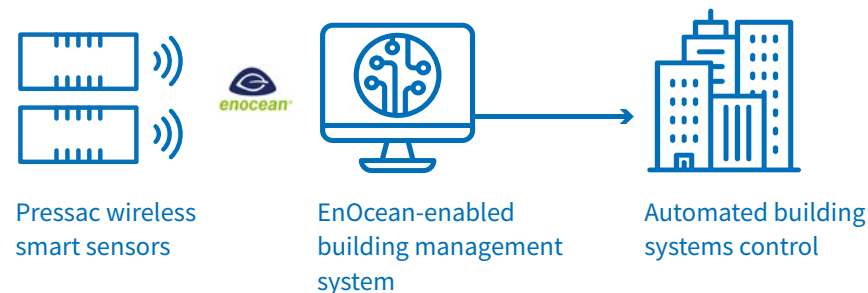
Connect directly to EnOcean controllers

Our sensors can interact directly with EnOcean controllers, allowing you to automate local control systems.



Feed data into existing building management systems (BMS)

Sensor data can be sent to BMS systems that support MQTT via Pressac's Smart Gateway, or using a third-party EnOcean gateway that facilitates the connection.



Our services

We offer the following services to support you to successfully set up your smart system.

Radio planning

If you're looking to buy a wireless sensor system but not sure how many sensors, gateways and repeaters you might need, and where they should be located, our radio planning service can help. We'll use your building floor plans to give you a preliminary idea of how a wireless sensor system could be laid out to ensure optimum performance.

Note: you will need to do on-site testing before installing your sensors to confirm the radio performance on site.

Installation training

Our radio planning and installation training will qualify you as an approved installation partner of Pressac, helping to ensure an even smoother installation. The training is delivered primarily online with on-site options available at Pressac.

Support

As well as our comprehensive support portal, our technical support experts can provide email and telephone support to ensure everything's set up and working correctly.

Partner with Pressac

Partnering with Pressac means benefitting from our unrivalled industry experience, excellent reputation and high-volume manufacturing capabilities.

Our smart sensor technology is designed to help you deploy large-scale, efficient and sustainable IoT solutions that operate reliably, securely and cost-effectively. Our products are priced based on volume and we can manufacture in bulk and ship them as needed worldwide.

As well as off-the-shelf solutions, we also offer bespoke manufacturing in high volumes. With in-house design, development and quality-assurance experts, plus our own high-tech UK manufacturing facility, we can manage the full lifecycle of product creation, from design and prototyping to manufacture and distribution.

Find out more: www.pressac.com



Ready to talk?

Our technical experts will work with you to understand your objectives and identify the sensing capabilities you need.

The sensor partner of choice for large-scale IoT deployments

Pressac design and manufacture smart-building sensor technology. We help millions of businesses and consumers worldwide to connect their buildings and equipment to the network, enabling them to talk to applications, automatically and in real time.

As a trusted sensor technology partner to some of the world's leading organisations, Pressac help deliver smart, scalable, and secure solutions that offer the very best performance and reliability.



Over 60 years' experience and technical expertise



Designed and manufactured in the UK



ISO quality and environmental management assured



5,000 sqm high-tech UK manufacturing facility

Find out more

If you're looking for a forward-thinking technology partner who offers high-quality, cost-effective sensing solutions at scale - get in touch.

Call us: [+44 \(0\)115 936 5200](tel:+441159365200) Email us: Info@pressac.com Visit us: www.pressac.com

