Pressac Technology Catalogue

Pressac

Your IoT Technology Partner

“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

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.

60

Over 60 years’ experience and technical expertise

Designed and manufactured in the UK

ISO quality, environmental and security assured

5,000 sqm high-tech UK manufacturing facility

Imagine a smarter approach to building and asset management

What if you always knew what was happening inside your buildings? If you knew how rooms and resources were being used, what the conditions were, or how energy was being consumed?

We bring you the technology that makes it happen. Our sensors provide businesses with the data to create smarter, healthier workplaces and achieve new levels of operational efficiency.

Workspace occupancy

Understand utilisation to drive informed space planning and smarter workspace management.

Environmental monitoring

Monitor indoor air quality to ensure standards are met and HVAC is managed in the most efficient way.

Energy monitoring

Track granular energy consumption at an equipment, circuit or board level to identify issues and energy waste.

Smart building

Combine occupancy, environmental and energy monitoring technology to gain invaluable insights and know your building like never before.

Flexible

From occupancy to air quality and energy monitoring, our sensors give you all the data you need to create a smarter workplace.

Our sensors simply mount onto the relevant surface – such as a desk, wall or cable – and send their data wirelessly. Making them quick to install and easy to retrofit into existing buildings. Environmentally friendly, they use low-power technology and they're either self powered, use ultra-long-life batteries or mains-powered, so there's minimal maintenance.

Room conditions sensors

Monitor occupancy, light, sound, temperature and humidity in a room or space

Room occupancy sensors

Detect when someone occupies a room and monitor ongoing occupancy

CO_2, temperature and humidity sensors

Monitor the ambient CO_2, temperature and humidity in a room or space

Table occupancy sensors

Detect when a person occupies a table and monitor ongoing occupancy

Door/window sensors

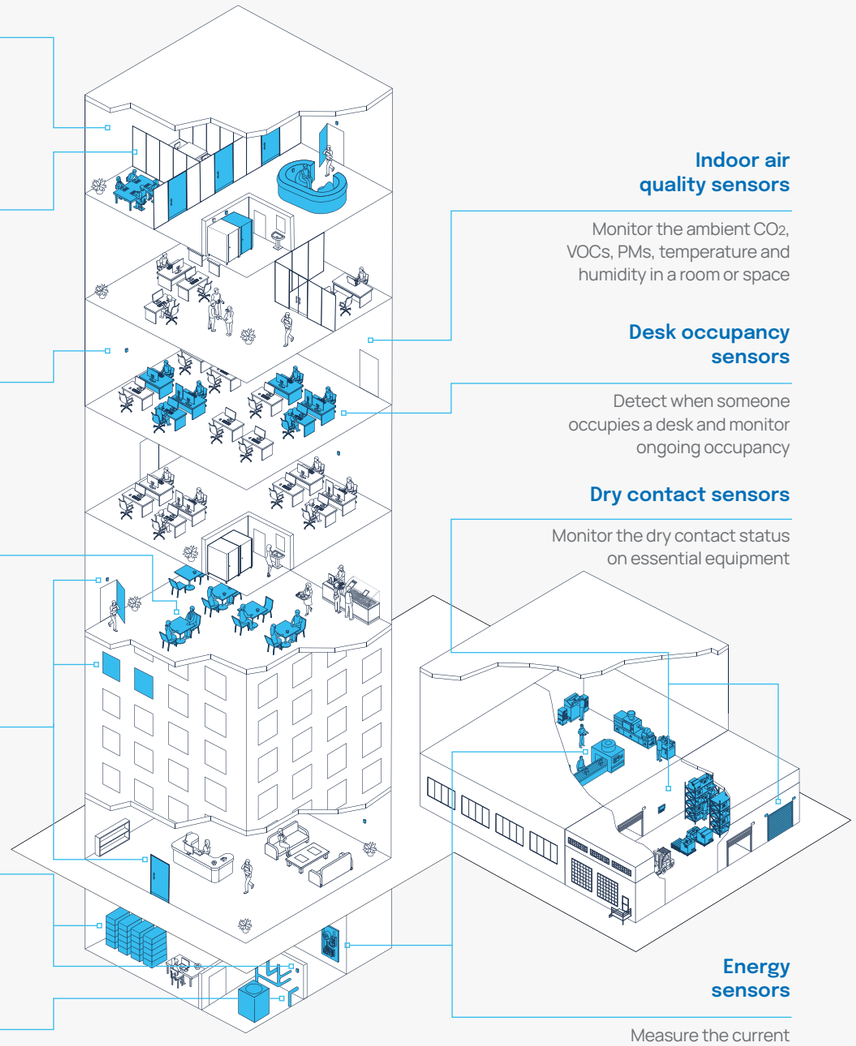
Detect when a door or window is opened or closed

Temperature sensors

Monitor the ambient temperature and humidity, and detect changes

Pulse counter

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



Indoor air quality sensors

Monitor the ambient CO_2, VOCs, PMs, temperature and humidity in a room or space

Desk occupancy sensors

Detect when someone occupies a desk and monitor ongoing occupancy

Dry contact sensors

Monitor the dry contact status on essential equipment

Energy sensors

Measure the current drawn by a power cable

Scalable

We use the open EnOcean wireless standard, which is designed for licence-free data transmission in buildings with thousands of devices - such as inside a commercial building - making our sensors scalable and interoperable.

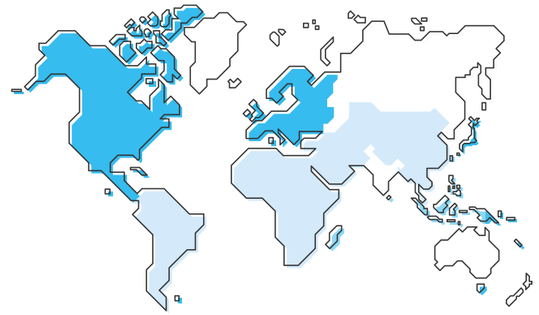
It uses internationally approved ISM bands:

- 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)

Radio frequency approved

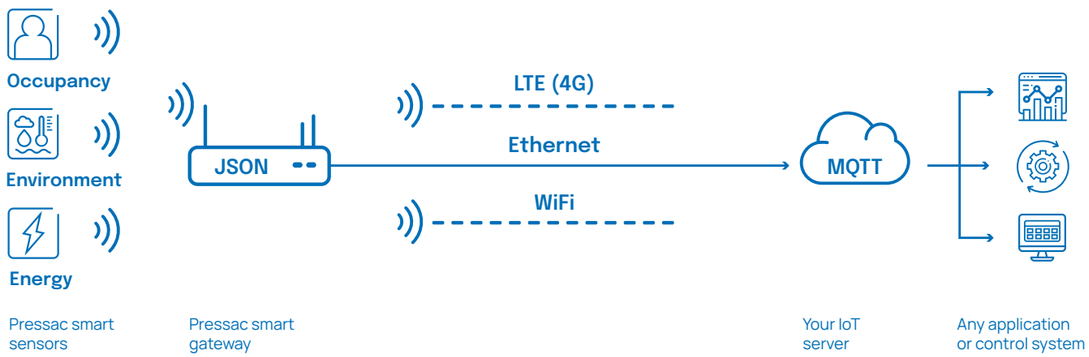
Radio frequency available

Please consult local authority



Secure

You're in full control of your data. Pressac smart gateways send your sensor data securely to your chosen IoT server via your network or 4G – there's no middleware or subscription fees. And because our technology is system agnostic, you can integrate your sensor data into any IoT platform, either cloud or on-prem for a future-proof technology solution.



All our products are fully tested to ensure they are reliable, robust and compliant with the highest quality, environmental and security standards (ISO 9001, 14001, ISO/EIC 27001). 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:** aws qualified device, Microsoft Azure Certified, MQTT, Node-RED, Google Sheets

Environment monitoring sensors

Scan to find out how a state-of-the-art office block in London reduced air handling unit energy consumption by 35%, while still achieving the best-possible indoor air quality.

Our sensors monitor the indoor environment to give you an accurate picture of the conditions, enabling you to see issues instantly, understand how conditions change throughout the day and manage environments more efficiently.

Our multi-sensors enable the monitoring of a range of different parameters with just one device, giving you all the data you need to create a smarter workplace.

Indoor air quality (IAQ) sensor

Measure ambient carbon dioxide (CO_2), volatile organic compounds (VOCs), particulate matter (PM), temperature and relative humidity:

- CO_2 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: 5V USB to DC mains adapter (supplied)
- Dimensions: 110 x 110 x 39 mm (approx)
- RESET AIR accredited monitor

Room conditions sensor

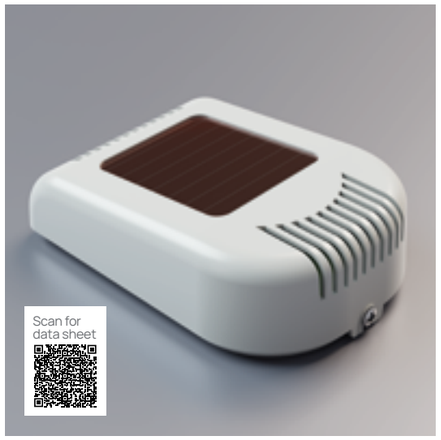
Measure occupancy, light, sound, temperature and humidity:

- Wide angle occupancy detection
- 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: 5V USB to DC mains adapter (supplied)
- Dimensions: 110 x 110 x 42 mm (approx)

Solar-powered

Our solar-powered range makes installation and maintenance easy. The small wireless sensors simply stick to the wall and use ambient room lighting for power, with a back-up battery power source giving you continual operation in the evening.



CO_2, temperature and humidity sensor

Measure carbon dioxide (CO_2), ambient temperature and relative humidity:

- CO_2 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 for low-light conditions
- 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 for low-light conditions. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

Temperature sensor

Measure ambient temperature:

- Temperature 0-40°C

- 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 for low-light conditions. Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx))

Occupancy monitoring sensors

Our small, discreet sensors anonymously detect occupancy to give you an accurate picture of space usage, enabling you to see near real-time utilisation, manage workspaces smartly and plan space more efficiently.

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
- 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 life typically 5+ years
- Dimensions: 93 x 65 x 31 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 life typically 5+ years
- Dimensions: 93 x 65 x 28 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 life typically 5+ years
- Dimensions: 93 x 65 x 28 mm (approx)

Energy monitoring sensors

Our wireless energy monitoring sensors measure near real-time energy consumption at a circuit, equipment or meter level. Enabling you to track how energy is being used, detect issues and identify savings.

Current sensor: one channel

Measure AC (50Hz or 60Hz) in one cable.
Measurement range:

- 1A–60A
- 2A–200A

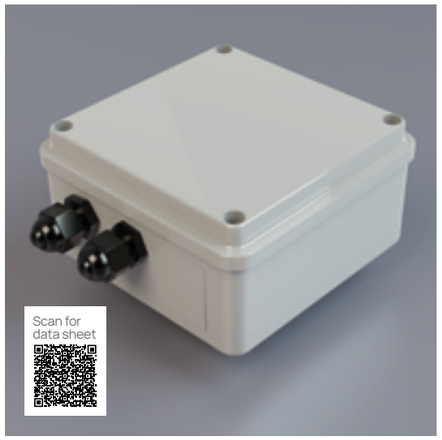
- Reports average every 30 seconds
- Sensor clamps around electrical cable. Wireless transmitter can be fitted outside the panel or equipment for reliable data transmission
- Self-powered using ultra-low energy from the measured conductor
- Dimensions: size of clamp increases with amperage

Current sensor: three channels

Measure AC (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

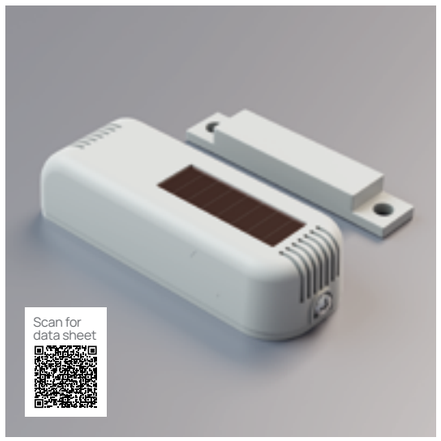
Counts the number of pulses from electricity, water, or general meters, as well as machinery and equipment with a pulse output. Reports the number of pulses:

- 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 time and receive alerts when something changes.

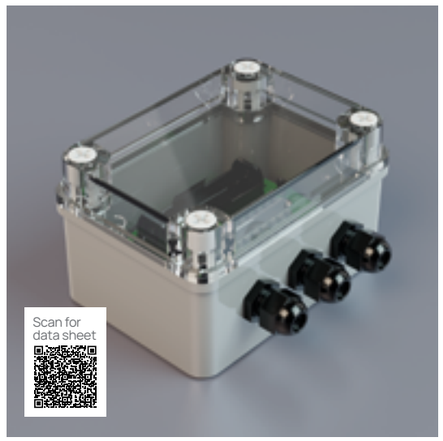


Door and window sensor

- Mounted to frame and door/window. Uses 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 for low-light conditions.
- Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

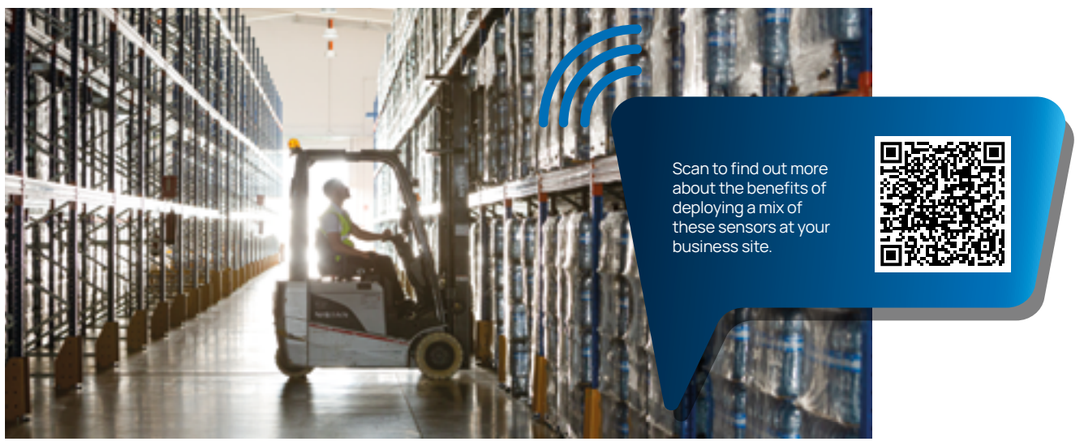
Dry contact sensor

- Detects the 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 for low-light conditions.
- Battery life typically up to 10 years
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

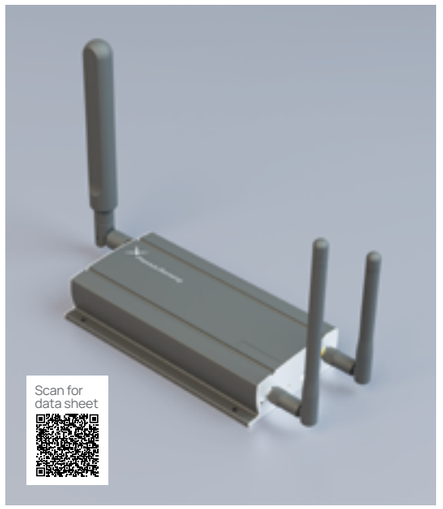


Industrial temperature sensor

- Measures temperature of air 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 life typically up to 10 years
- IP65 rated
- Dimensions: 110 x 80 x 66 mm (approx)



Gateway



Smart gateway

Receives live data from multiple sensors, converts it into an easy-to-use format:

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

Smart data integration

Our smart gateway receives live data from multiple sensors, converts it into easy-to-use JSON format and makes it available locally or in the cloud, via MQTT, enabling you to easily integrate the data into your existing applications.

In simple terms, the gateway receives data from the sensors and make it usable.

How does our gateway stand out in terms of connectivity options?

Scan to find out.

Smart repeater

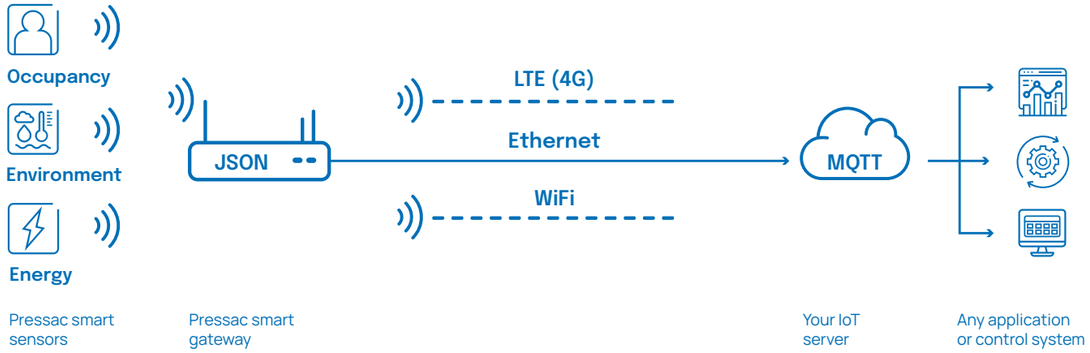
- Repeats sensor data telegrams to extend indoor wireless range up to 90 metres
- Select which sensors to repeat
- Powered via USB
- Dimensions: 93 x 65 x 28 mm (approx) plus antenna

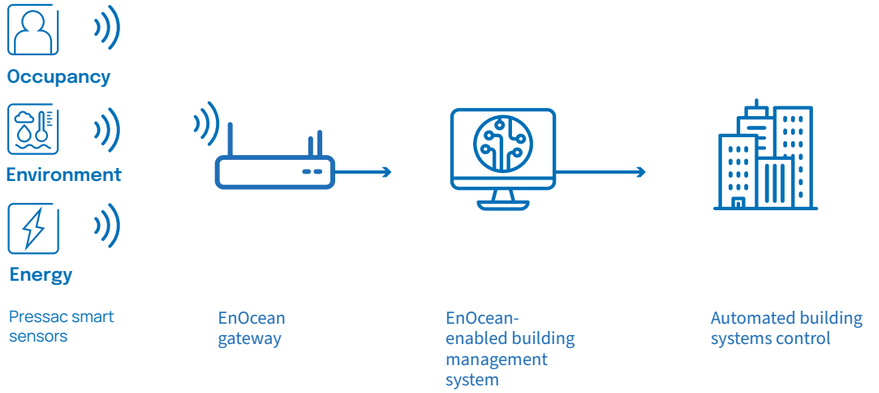
Accessing and integrating sensor data

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 a way that's right for you.

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 a third-party EnOcean gateway that facilitates the connection.





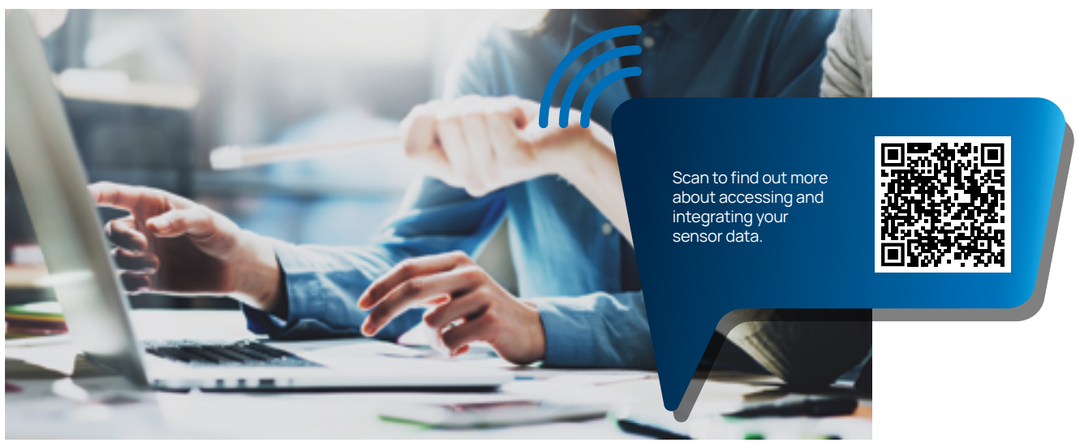
Integrate data into any software or platform

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

Access your sensor data in a spreadsheet

Live data can be sent to your Google Sheets account using our smart gateway.

*Ready-made connections with: aws qualified device, Microsoft Azure Certified, MQTT, Node-RED, Google Sheets



Our services

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

Radio planning

If you're looking for a solution 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's floor plans to give you a preliminary idea of how the 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 experts can provide email and telephone support to ensure everything's set up and working correctly.

"In order to take things further and make bigger, more impactful changes we really needed accurate data, which Pressac's sensors provide.

It's been vital in helping us with decision-making."

Dr. Konrad Saur, Vice President - Innovation at Trelleborg Sealing Solutions

Working with Pressac

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.

Ready to talk?

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

If you'd like to find out more about our sensors, or working with us, we can arrange a Technology Briefing session for you at our Nottingham site. We'll showcase the sensors that are relevant to your needs, arrange a Q&A with our technical team and give you a tour of our factory.

Email: sales@pressac.com for more information.


“I can finally concentrate”
“This room is really comfortable”
“I mustn’t forget to turn the lights off”
“I’m glad I could find a space to work”

Pressac

Pressac

The leading manufacturer of smart building sensor technology

Pressac design and manufacture smart-building sensor technology. Helping tens of thousands 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 technology partner to some of the world's leading IoT software and services companies, Pressac provide scalable, cost-effective, compliant solutions that deliver the very best performance, flexibility and reliability.

Find out more

If you're looking for a forward-thinking technology partner who offers smart, scalable, secure sensing solutions - get in touch.

Call us: +44 (0)115 936 5200

Email us: Info@pressac.com

Visit us: www.pressac.com

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