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ABB MEASUREMENT & ANALYTICS

# Wireless measurement products

Instruments and integration solutions for temperature, pressure, level and flow



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# Measurement made easy

Serving your industry

Whether in oil and gas, chemical, power, water and wastewater or any other industry, increased plant efficiency often starts with reliable measurements of process parameters like temperature and pressure. Temperatur oder Druck.

Water and wastewater



Power and steam generation



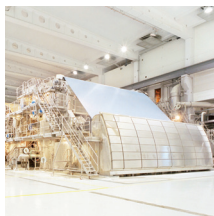
Chemical and petrochemical industry



Oil and Gas



Paper and pulp industry



Mining



Metal



Food and beverage industry



Marine



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# Wireless measurement products

Enabling the future

ABB is an Enabler in digitization. Our innovative measurement technology and analytical technology is constantly developed to bring increasing levels of connectivity in a secure way.

The ABB Wireless Platform enables users to access important process and plant data wirelessly and securely leveraging the latest available technologies.

## WirelessHART as a standard

- Temperature sensor TSP300-W
- Temperature transmitter TTF300-W
- 266 pressure transmitters



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# Lasting batteries

## Reliable networks

ABB's wireless devices are extremely efficient due to their unique energy management based on an ultra low power design. The significantly extended battery life increases the reliability of your network. Much faster update rates are possible and battery replacement intervals can be significantly extended.

- Up to 10-year battery replacement intervals
- Standard D size Lithium cells can be procured locally
- Battery residual life configurable as a variable
- Battery replacement in Ex area possible

### **Wireless instrumentation network deployment made easy**

- Intuitive, standardized operating concept for easy configuration of network access data, device parameters and troubleshooting
- ABB WirelessHART devices can be configured with common HART Handheld terminals
- ABB supplies pre-configured wireless measurement technology for your network for a quick, reliable and cost-effective deployment







# Wireless Measurement Technology

From small to large projects

## Basic

With the ABB Wireless 'Basic' solution for the deployment of your wireless network, you receive remote support consisting of:

- Device commissioning training
- Virtual site survey
- Network deployment recommendation
- The wireless modules are pre-configured at the factory

**Measurement made easy:  
the ready-to-go solution**

## Full

With the ABB Wireless 'Full' solution for the deployment of your wireless network, you receive on-site engineering support for trouble-free WirelessHART network deployment:

- Device commissioning training
- Virtual site survey
- Network deployment recommendation
- The wireless modules are pre-configured at the factory
- Wireless network on-site deployment and commissioning
- Optional control system connectivity

**Measurement made easy:  
the ready-to-go turn-key solution**

## Pro

With the ABB Wireless 'Pro' solution, you receive customized deliverables according to the large scale project scope, from engineering to start up.

**Measurement made easy:  
the individual turn-key solution**

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# Measurement made easy

Experience more possibilities

## **Advantages of the ABB WirelessHART measurement products include:**

- Reduced installation costs by 30% compared to wired HART\*
- Faster implementation time: up to 75% faster, no trenching and backfill
- Complete remote access to device diagnostics
- Lower space requirements: no junction boxes or cabling infrastructure
- Scalability: easy installation of additional measurement instruments
- Measurement and communication with installations that were not feasible with wiring (e.g. mobile assets)
- Energy Harvester equipped devices allow you to boost the potential of the mesh network infrastructure for maximum network reliability

\* based on approx. 50 transmitters

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Your process measurements are now easier to implement in more locations with greater flexibility, increasing plant performance and efficiency.



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# Energy Harvester

A fundamental innovation

ABB has more than 130 years of experience in measurement products.

This sound knowledge has built the strong basis for achieving a fundamental technological innovation:

Welcome to the world of truly autonomous measurement with the Energy Harvester.

The world's first self-powered wireless measurement devices requiring no wiring, no external power supply and ideally no battery replacement.



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# Truly autonomous measurement

Enjoy new independence

## How ABB makes measurement easy for you

The Energy Harvester is powered by an on-board micro-thermoelectric generator. It uses the temperature difference between the process and the environment.

The micro-TEG provides a robust, flexible to install and compact solution for energy harvesting from either hot or cold processes. With many industrial processes having an abundance of heat which is normally lost, the power generated by the TEG is sufficient to operate wireless devices in a variety of locations. This enables faster update rates and extends battery replacement intervals.

The TEG allows you to install wireless devices with top update rates. This enables you to improve uptimes while reducing maintenance expenses.

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Temperature sensors powered by temperature – measurement made easy!

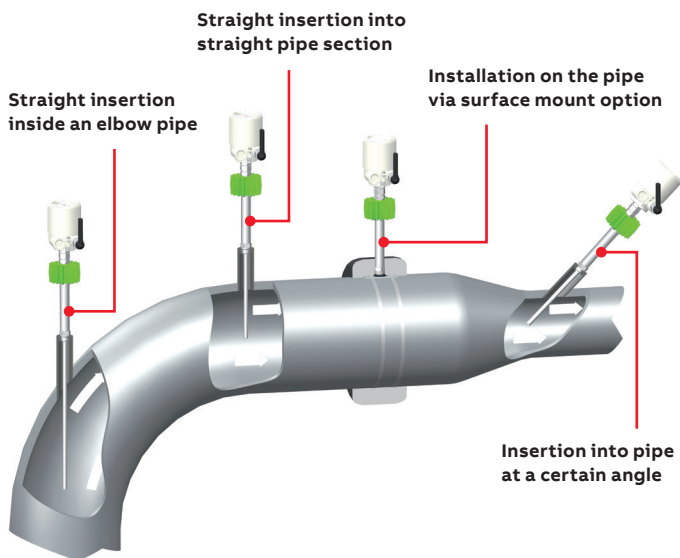


# Flexibility to add anywhere

## Installation options

The Energy Harvester from ABB enables trouble-free commissioning. It is used in various applications and industries.

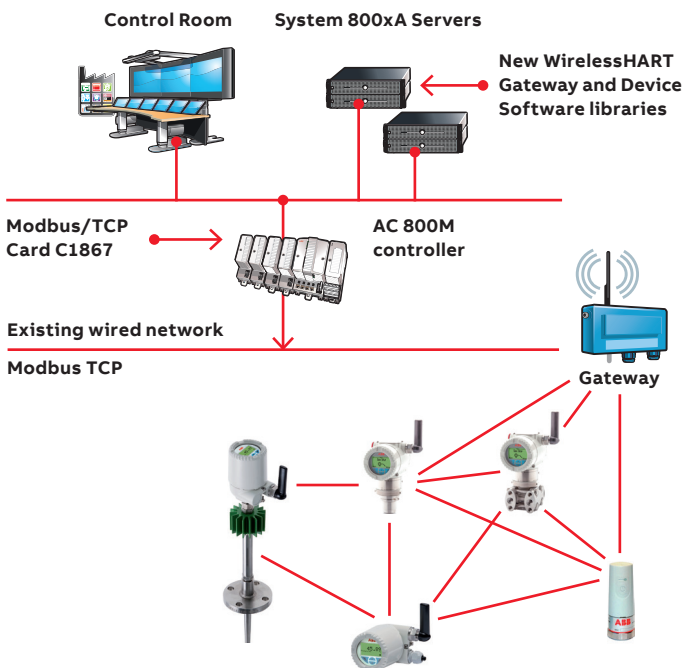
**Several installation options are possible to integrate the WirelessHART temperature sensor TSP300-W with Energy Harvester into your process:**



# The Integrated Wireless HART Solution from ABB

The System 800xA in connection with WirelessHART provides several advantages for your customers:

- Significantly reduce training costs – continue to use System 800xA with WirelessHART devices in the same way as wired HART devices
- Reduce installation time – easily and quickly use variables with new function libraries
- Efficiently manage wireless assets from a Gateway as a central access platform and device-specific DTMs accessible from System 800xA that fully exploit the possibilities of WirelessHART



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# Increased plant performance

Safety, efficiency, flexibility

**The challenge: Monitor process temperature without wiring for control system connectivity nearby.**

**The solution with Energy Harvester: The temperature sensors were installed and visible on the plant control network within one hour.**

“The Energy Harvester is a out of the box solution that can be installed and commissioned in a very short time. At present, this type of product is only available from ABB.”

(A leading chemical company)

“I am very glad to be able to efficiently use the heat from the process to power our devices. The reliability of our measurement has drastically improved as a result.”

(A leading oil and gas company)

**A wireless world of instruments and integration solutions for the reliable measurement of temperature, pressure, level, flow and density**

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Measurement made easy!





# Contact

## **ABB Measurement & Analytics**

For your local ABB contact, visit:

**[www.abb.com/contacts](http://www.abb.com/contacts)**

For more product information, visit:

**[www.abb.com/measurement](http://www.abb.com/measurement)**

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