



Wireless and truly autonomous

ABB announces new wireless measurement products and the world's first temperature sensor with energy harvesting

Minden, Germany, April 2015 – ABB introduces its new WirelessHART field devices for temperature and pressure measurement. The WirelessHART temperature sensor TSP300-W with Energy Harvester is the world's first self-powered wireless measurement device requiring no wiring, no external power supply and ideally no battery replacement. It enables truly autonomous temperature measurement being powered by an on-board micro-thermoelectric generator. The products are being initially offered in Europe, then a few months later in the US followed by the rest of the world.

WirelessHART measurement products

With the new WirelessHART temperature sensor TSP300-W (plus optional with Energy Harvester), WirelessHART temperature transmitter TTF300-W and WirelessHART pressure transmitter 266, ABB offers its customers wireless instruments and integration solutions for temperature, pressure, level, flow and density measurement.

Unique energy management

ABB's wireless devices feature a unique energy management technology based on an ultra-low power design that significantly extends battery life and increases the reliability of a network. Much faster update rates are possible and the battery replacement intervals can be tremendously reduced.

- Ten-year battery life at up to 32 second update rate in reference conditions
- Non-proprietary D size Lithium cells can be procured locally
- Battery residual life configurable as dynamic burst variable through DTM
- ABB battery replacement in Class I Div 2 (intrinsically safe) areas can be accomplished

Energy Harvester for autonomous measurements

The WirelessHART temperature sensor TSP300-W with Energy Harvester is powered by an on-board microthermoelectric generator (micro-TEG), which is driven by the temperature difference between the process and the ambient surroundings. The micro-TEGs used in ABB's WirelessHART temperature transmitters provide a robust and compact solution for energy harvesting from either hot or cold processes. With many industrial processes having



an abundance of heat, the power that can be delivered by TEGs is sufficient to operate wireless sensors in a variety of locations.

ABB's 266 wireless pressure transmitters are designed to interconnect with an external Harvester to further enhance usability and reduce battery replacement intervals.

Many of ABB's measurement products feature a common HMI platform for easier network access, device parameterization and troubleshooting. They can be configured with common HART Handheld terminals and can be integrated into control systems like ABB's System 800xA.

ABB's measurement products enable:

- Reduced installation costs by up to 30% compared to wired HART
- Faster implementation time: up to 75% faster, no trenching and backfill
- Complete remote access to device diagnostics
- Smaller installation footprint: no junction boxes and wiring 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 for an enlarged potential of the mesh network infrastructure for maximum network reliability

Support during deployment of wireless networks

ABB offers a choice of three solutions packages for the deployment of wireless networks tailored to suit customer needs. The solution packages include device commissioning training, site survey, network deployment feasibility report and proposal, wireless network deployment and commissioning as well as optional DCS connectivity. The wireless modules are pre-configured at the factory. For larger projects, ABB is offering a solution including support from engineering to start up.

Radio license

Some countries require country specific radio licenses to install a wireless device. The licenses for the USA, Canada and Europe are available. The radio licensing process is in progress for other countries. To get an updated status please get in touch with your ABB point of contact.



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