



# Wireless tank monitoring

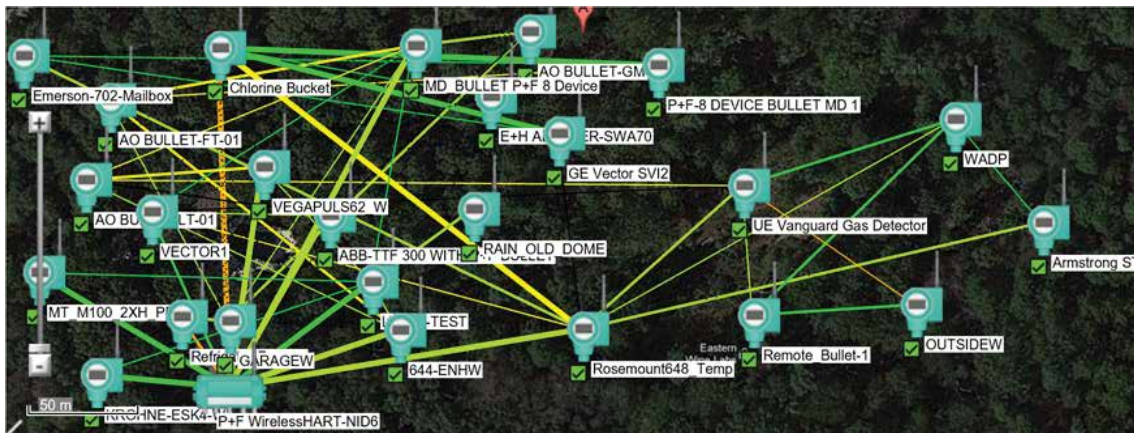


# Our wireless system

MERCON's storage tanks monitoring system is a solution for tank farms, refineries, gas terminals and other industries. It provides wireless spill prevention, personnel and equipment protection as well as environmental safety complemented with process measurements. Our solution offers the ability to build a completely new monitoring system or add a new safety layer to an existing one.



From the beginning, our aim was to create an easy to deploy and expand, highly flexible, fully wireless solution, minimizing investment and startup time. Thanks to intelligent, mesh WirelessHART network architecture, each device can communicate directly with other devices or indirectly through other network elements, without using special signal repeaters. Additionally, this network architecture is self-adapting, re-routing signals automatically through other devices if one of them fails or loses connectivity.



The system integrating field mounted devices from different manufacturers do not require signal cable connections, reducing material and labour costs in new projects or upgrades of existing plants. Without physical signal cables any last minute or after startup modifications are easy to make by simply relocating the sensors or introducing new ones.

## Vanguard gas monitors

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UE's Vanguard is an ATEX certified, compact, wireless, toxic and combustible gas detector. Connecting is very easy and does not require any cables - each unit has a built-in WirelessHART communication module. The start-up requires only a few single button presses.

Its unique sensors do not require any tools or a hot permit to replace in the field. The same is true for its exceptional, 5+ year lifetime guaranteed battery. Using FLEXsense™ technology, the monitor automatically identifies any new connected sensors and configures itself accordingly.

The Vanguard seamlessly integrates with existing control systems (PLC, DCS, ESD), supervisory control and data acquisition (SCADA) or asset management systems (AMS).

### Features:

- WirelessHART communication
- single button operation and calibration
- built-in graphic display
- robust Ex d aluminum housing
- sensors: CH<sub>4</sub>, H<sub>2</sub>S, CO, ammonia



## TraceTek leak detectors

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TraceTek is a unique industrial leak detection technology based on a conductive polymer cable detecting target media at any point along its length. It provides reliable and accurate fluid leak detection systems for tank farms, pipelines, transfer lines, pumps and valves.

The majority of the market solutions for leak detection perform indirect detection by a moving float or a capacitance change. TraceTek monitors the leak directly.

### Features:

- quick leak detection,
- sensitive only to target media,
- 100% sensing certainty, no false alarms,
- accurate location of the leak source,
- modular design allowing expanding,
- no electromechanical parts.



## Overfill protection

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Magnetrol's A10 displacement type level switches offer the industrial user a wide choice of alarm and control configurations in floating roof applications or directly in medium. Single, dual or triple switch series are available.

Echotel® 961/962 ultrasonic level switches offer reliable liquid overfill protection. The switches meet safety demands with advanced transducer design, extensive hazardous location approvals and a new self-test technology for electronics and transducer.

### Features:

- single, dual or triple switch point series,
- field adjustable,
- design eliminating switch short cycling, optional ground checker control for A10.

### Applications:

- floating roof storage tanks,
- process and field storage tanks, wellstream separation,
- compressor waste liquid tanks,
- biofuel reactors, tanks and sumps.

## Continuous level measurement

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Pulsar® model R86 is Magnetrol's non-contact, latest generation radar transmitter, that fits virtually all level measurement and control applications. It is the right choice for many end-users that until now did not even consider such solutions for their tank monitoring.

### Features:

- resistance to condensation, vapour, turbulence, foam and varying specific gravity,
- measuring range up to 40 meters,
- superior accuracy and resolution thanks to 26 GHz frequency,
- proactive self-diagnostics,
- 20 events history including diagnostic details,
- antenna alignment not required.

### Applications:

- process and field storage tanks,
- power generation: deionization, storage, water service,
- chemical: mixing & blending, neutralization, storage tanks.



## Wireless controlled valves

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Currently a broad range of field wireless devices is available on the market. The next step are wireless controlled valves which - with proper control structure are also being implemented in the field with success.

Virtually any type of valve can be equipped with wireless positioner and limit switches: ball shut-off valves, control valves, butterfly valves, solenoid valves and other.

### Features:

- wireless interface not considered nor available before,
- no interference with other wireless networks,
- dynamic network optimization and intelligent routing between units to bypass obstacles that obstruct the transmission path,
- gateways and adapters available from various manufacturers.

### Applications:

- control valves,
- pressure/vacuum relief valves,
- heat exchangers,
- on/off valves currently actuated by personnel,
- solenoids in not critical safety circuits,
- hard-to-reach locations.



## Temperature measurement

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All industrial processes require temperature measurement. In storage tanks temperature control is crucial for the proper operation of the tank gauging system. Without it standard volume and mass calculation can be inaccurate. Temperature sensors on storage tanks are often installed in difficult to access locations making wireless solutions beneficial.

### Features:

- fast and easy commissioning,
- intuitive and intelligent operating concept,
- configuration performed directly at the transmitter via the display, as well as via EDD, DTM and handheld.

### Applications:

- process and storage tanks,
- refineries,
- chemical industry,
- petrochemical industry,
- pulp & paper industry.



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