

Steam Trap Wireless Monitoring Solution

Steam Leak Detection

Problem: Steam Trap Leak Monitoring

Industrial plants use large quantities of steam in various operations. Significant loss of steam from the boiler costs plants millions of dollars annually. Studies of this problem reveal the loss originates primarily from steam traps used to remove condensate from the steam lines between the boiler and the various points of use.

A calculation of the magnitude of the loss shows probable loss of between \$100,000 and \$150,000 worth of energy per year for a typical industrial plant. Since it is prohibitively expensive to conduct leak detection monitoring manually, plant engineers typically look for a method of automatically identifying leaks in the steam traps.

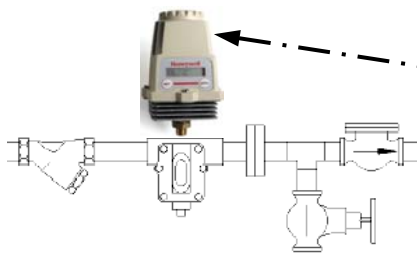
Signal wiring for an automatic warning system would greatly exceed the cost of the transducers.

Solution: Cost Effective Honeywell Wireless Steam Leak Detection

Honeywell **XYR 5000** Wireless Acoustic Transmitters are available for steam leak monitoring applications. The unit operates through the use of an acoustic sensor combined with a radio frequency transceiver. Steam leaks typically generate high frequency waves that closely match the response of the wireless acoustic sensor.

Honeywell Acoustic Transmitters meet all the technical requirements of the leak detection application while conforming to budgetary constraints. Honeywell XYR 5000 Wireless Transmitters provide reliable leak detection without the need for costly tray/ conduit wiring.

Honeywell not only provides best in class field instrument, but also offers economical, reliable solutions to meet different application needs and budgetary needs. These solutions include pressure, temperature and analog measurements using wireless technology for other monitoring applications.



Honeywell XYR 5000 Acoustic Sensor Mounted on a Steam Trap



XYR 5000 Base Radio



Honeywell XYR 5000 Wireless Family

Honeywell Wireless Sensors represent a natural solution from the standpoint of performance and economy. Key reasons to use Honeywell Wireless Acoustic Sensors are:

- Operating savings of \$10 to \$40 per foot in wiring installation. For savings of \$30/foot, total savings of up to 2000ft x \$30/ft = \$60,000 are possible (for 2000 ft distance).
- Reliable and secure performance using Frequency Hopping Spread Spectrum (FHSS) and encryption technology.
- Self test capability with failsafe diagnostics.
- Powered by C size 3.6 VDC Lithium battery with expected life of up to 5 years.



Honeywell XYR 5000 Wireless Acoustic Transmitter

Honeywell Wireless Transmitters Benefits

The use of Honeywell Wireless Sensors increases profitability in the following ways:

- **Improved plant performance** through affordable process and asset data.

- **Maintenance costs decreased** through higher reliability and stability with self-diagnostics
- **Installation costs lowered** as the Honeywell Wireless Sensors can be mounted via a simple mounting bracket with no additional installation cost. No wiring required
- **Ease of configuration** with integral push buttons and local display
- **Excellent service** through the extensive Honeywell sales and service network
- **0.1% accuracy** suited for most applications

Additional Benefits from Use of the Honeywell Wireless Solution:

Self-Diagnostics

- **Low Battery Alarm**– Indicates the need to replace the battery
- **Contains extensive self-checking software** and hardware that continuously monitors the operation. Any sensor or device parameter out of spec is identified and reported

Broad Operating Temperature Range

- -40 °F to +185 °F (-40 °C to +85 °C)

Rugged Construction

- 316 L, 316 or 17-4 pH wetted parts
- GE Lexan housing (passes UL 746C “Outdoor Weatherability Specification”).

Honeywell Economical Wireless Level Solution Details

Description	Model
Honeywell Acoustic Transmitter	WN571
Honeywell Base Radio with mounting bracket, RS485 to RS232 converter	WBR-MB, RS

Honeywell

U.S.A.: Honeywell Industrial Control, 16404 North Black Canyon Hwy., Phoenix, AZ 85053 • **Canada:** The Honeywell Centre, 155 Gordon Baker Rd., North York, Ontario M2H 3N7 • **Latin America:** Honeywell Inc., 480 Sawgrass Corporate Parkway, Suite 200, Sunrise, Florida 33325 • **Japan:** Honeywell K.K., 14-6 Shibaura 1-chome, Minato-ku, Tokyo, Japan 105-0023 • **Asia:** Honeywell Pte Ltd., Honeywell Building, 17 Changi Business Park Central 1, Singapore 486073, Republic of Singapore • **Pacific Division:** Honeywell Pty Ltd., 5 Thomas Holt Drive, North Ryde NSW Australia 2113 • **Europe and Africa:** Honeywell S. A., Avenue du Bourget 3, 1140 Brussels, Belgium • **Eastern Europe:** Honeywell Praha, s.r.o. Budejovicka 1, 140 21 Prague 4, Czech Republic • **Middle East:** Honeywell Middle East Ltd., Technology Park, Cert Complex, Block Q, Muroor Rd., Abu Dhabi, U.A.E.