# Emerson Enables Industrial Sites to Digitally Transform Safety Operations

*New Location Awareness solution reduces installation time, investment costs and leverages proven, secure WirelessHART® infrastructure for accurate, reliable, real-time personnel location system*

## Personnel Safety at Industrial Sites

According to a report from the International Labour Organization, every 15 seconds 153 workers have a work-related accident. That adds up to 6,300 a day or 2.3 million accidents a year. Industrial sites such as refineries, chemical plants, oil rigs and power plants are continually striving to protect their personnel's safety. Part of that safety plan is knowing where your personnel is during an emergency and getting to them quickly if aid is needed.

Despite the need, many operations have not leveraged technology to improve their existing personal safety system due to the high cost and the complexity to install and maintain a truly reliable and effective solution.

## Emerson's Location Awareness offering

Emerson's Location Awareness system, a new offering in its Plantweb™ digital ecosystem, enables industrial companies to immediately identify where personnel are located real-time in the event of an emergency. Location Awareness provides a way for industrial producers to digitally transform safety operations for less than half the cost of existing solutions with installation times reduced from weeks to days.

A 2016 OSHA study shows "Personal Recordable Incidents" fall into five major categories:

- Falls, Slips and Trips – 42%
- Overexertion / Bodily Reaction – 28%
- Contact with Object / Equipment – 10%
- Exposure to Hazardous Environment – 10%
- Fires / Explosions – 10%

Location Awareness could assist employees in "over 70% of the sources of Personal Recordable Incidents" reported by OSHA. The system is a scalable installation that is managed using a new Plantweb™ Insight Location application, part of Emerson's award-winning software suite. It has many use cases for safety and security including

- **Safety Mustering** – In an emergency, know that personnel are safety and accounted for at designated muster points.
- **Man-Down Alerts** – Know where fallen personnel is located to quickly dispatch emergency responders
- **Geofencing & Monitoring** – Keep workers safe by creating zones of known hazardous locations or designated work zones to keep contractors safe and efficient.

The installation complexities and high cost of existing technologies have prevented many industrial facilities such as refineries, oil rigs, power plants and more to install and implement an effective location system for safety. Many industrial sites already have a *Wireless*HART-based infrastructure installed for networking wireless sensors and would be able to leverage this personnel safety system.

A high level of reliability, critical for this type of system, is assured because Location Awareness uses *Wireless*HART infrastructure, proven in use in tens of thousands of plants and facilities worldwide with over 12 billion operating hours. "The process automation market has a need for an affordable and accurate location monitoring system," says Ron Martin, group president, measurement and analytical for Emerson Automation Solutions. "Emerson's Location Awareness provides a reliable and secure means to implement a personnel location system, for less than half the investment and with a significantly reduced installation time as compared to alternative systems."

**How Location Awareness works**

In the event of an emergency, the priority is locating and ensuring the safety of all personnel onsite. The Plantweb Insight Location application's safety mustering feature provides real-time visibility by showing which employees have or have not checked in to their respective muster points. Man-down alerts allow personnel in a dangerous situation to initiate an alert, so the emergency response team can reach them as soon as possible.

Certain areas in plants and facilities need increased visibility for both safety and security reasons. The feature helps prevent dangerous situations from occurring by allowing designation of a perimeter around areas and sending an alert if and when that perimeter is crossed. The geofencing feature also improves monitoring the location of onsite personnel to ensure they are in the appropriate areas of the facility, especially important during atypical periods of operation such as shutdowns and turnarounds.

Many competing systems require extensive power wiring to the wireless infrastructure components, but Location Awareness does not because most of the components have their own power source.

Emerson's Location Awareness can be quickly implemented and easily accessed anytime and is suitable for all hazardous process industries. The solution is comprised of the following:

- **Plantweb™ Insight Location application** – The easy-to-learn software interface creates a safe and secure environment by enabling accurate, reliable, real-time personnel location 24/7/365. In an emergency, the application allows companies to mitigate risk and shorten response times by providing real-time location information in order to quickly identify where personnel are located so aid can be quickly rendered when or where needed.
- **Emerson Wireless Gateway and Access Points** - Engineered with industry-leading security, scalability and data reliability, the Emerson Wireless gateway connects *Wireless*HART self-organizing networks with host systems and data applications.

Emerson Access Points enables customers to connect with *Wireless*HART mesh network and utilize IT devices

- **Emerson Location Anchor** – Collects real-time data from tags within range and communicates data back through the gateways and access points. The anchors are designed with universal mounts that enable a quick one-person installation. The anchors are battery-powered and intrinsically safe.
- **Emerson Location Personnel tags** – Unlike may competing systems, the personnel tags are rated for use in Zone 0, which is very important because many man-down situations occur when personnel have inadvertently entered one of these very hazardous areas. To further ease use and maintenance, the personnel tags are rechargeable and have a lengthy battery life of over two months, and are designed for universal wearability.

In whatever industry you operate, personnel protection is critical. Emerson's Location Awareness system enables companies to digitally transform safety by actively monitoring the position of personnel and alert them to safety concerns in real-time. The system can be installed within days, at reduced investment over other systems, while leveraging the proven, secure *Wireless*HART mesh infrastructure for an accurate, reliable safety system.

Location Awareness will be available in July 2019. For more information, please visit www.Emerson.com/LocationAwareness