Field Products

Honeywell

SmartLine Pressure Transmitters Modular, Accurate and Robust for the Lowest Cost of Ownership

Honeywell Innovation and Expertise

When faced with demanding field instrument application requirements, industrial operations worldwide rely on Honeywell.
Honeywell leverages years of process plant knowledge and experience to enable greater efficiency, improved safety and higher product quality.

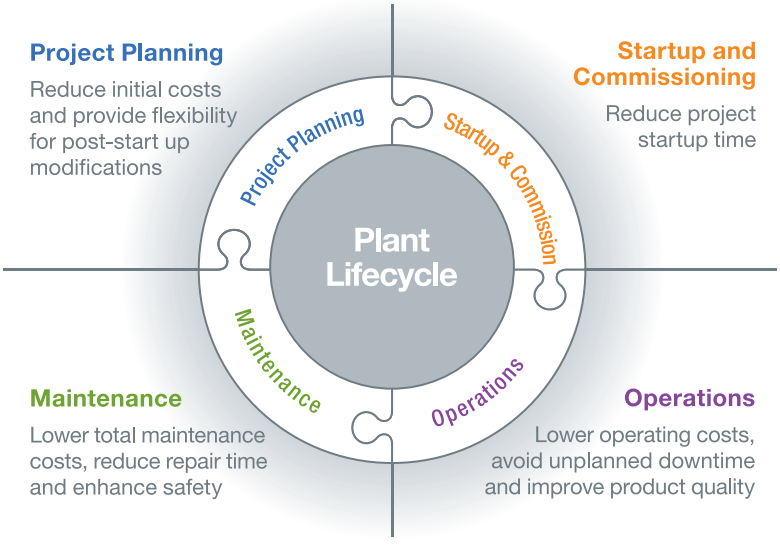
Honeywell has a long history of delivering products that provide accurate and reliable process measurement and control. Not only does our pressure transmitter portfolio deliver on that promise, but it helps manufacturers reduce overall installed costs and improve process efficiency.

With advanced integration and visualization, our pressure smart measurement system helps Experion PKS capture complete process knowledge. And, no matter where your operations are located, timely and knowledgeable Honeywell support is always close and convenient.

Redefining Smart—A New Level of Pressure Measurement

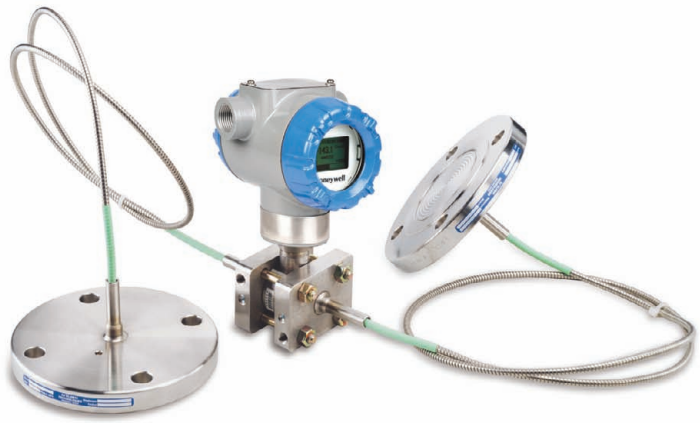
Honeywell's SmartLine® series smart measurement system sets a new standard for total performance in harsh process environments, featuring the industry's first modular and most robust pressure transmitters. The SmartLine pressure transmitter delivers total value across the entire plant lifecycle, from construction, operations to maintenance. With better performance, modular construction, an advanced display and the best integration features available when used with Experion® PKS, Honeywell helps our customers reduce project costs and startup time, avoid unplanned downtime, improve product quality, reduce spare parts inventory and shorten time to repair.

- The industry's best total performance and stability help you save process materials and improve product quality.
- An innovative modular design reduces complexity along the entire lifecycle, from avoiding initial purchasing costs, providing flexibility for post-start up modifications, reducing maintenance and inventory costs by eliminating the number of spare parts required and simplifying module replacements and upgrades.
- A rich transmitter interface with an advanced display, local configuration and Honeywell's Field Device Manager software provides capabilities for field operators to more efficiently perform tasks, solve problems and avoid errors with no need for a handheld device.
- Unique Smart Connection Suite control system integration delivers transmitter messaging, maintenance mode indication and tamper alerts to improve your field time to repair and control room communication, avoid unit trips and make your employees more efficient.



The Right Product for Your Application

Honeywell's SmartLine series ranges from absolute, differential, gauge, and remote seal transmitters to flanged (level) and multivariable transmitters as well as remote indicators. Regardless of the application, Honeywell has the right instrument to meet your performance and cost requirements.



Improving the Industry's Best Transmitters

Honeywell continues to improve the performance and long-term value of its field instrumentation products. Innovative features make the industry's most accurate, dependable and cost-effective line of transmitters even better.

Honeywell transmitters are recognized for their unsurpassed accuracy and performance. Now, the SmartLine series has enhanced that reputation even further with industry leading total performance:

- Transmitter stability—0.01%/year
- Reference accuracy—0.035% span standard, 0.025% span optional
- Total probable error as good as 0.12%
- Response time—80mS or faster
- In-built /on-board static pressure and temperature compensation
- Rangeability/Turndown of up to 400:1
- Unequaled local display capabilities
- External zero, span and configuration capability
- Polarity-insensitive electrical connections
- Comprehensive on-board diagnostic capabilities
- Integral dual-seal design for safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- World-class static pressure rating—4500psig with the option up to 6000psig
- Full compliance to SIL 2/3 requirements as a standard
- Available 15-year warranty
- Multiple performance tiers available: ST 800 and ST 700

SmartLine Features:

- Modular design
- Transmitter interface and configuration
- Polarity insensitivity
- Smart Connection Suite control system integration

Modular Design

All SmartLine pressure transmitters are modular in design, making it easy to replace hardware, add indicators, change electronic modules or even meter bodies without affecting overall performance or impinging on approval body certifications.

With plug-in modules, users can easily add or upgrade:

- Basic or advanced digital display as determined by their application requirements
- Field-exchangeable communication modules to deploy HART, Honeywell Digital Enhanced (DE), FOUNDATION fieldbus or Profibus communication
- Wiring terminal boards for standard or advanced lightning-protected applications
- Three-button local configuration

It takes only a matter of minutes to replace the electronics, even in the field under power with no re-calibration required. This avoids the time-consuming procedure of removing a sensor from a pipeline or network, particularly in highly critical processes.

Best of all, Honeywell's unique modularity reduces inventory requirements and lowers overall operating costs.

Transmitter Interface and Configuration

A rich transmitter interface with an advanced display and local configuration provides capabilities for field operators to more efficiently perform tasks, solve problems and avoid errors with no need for a handheld device.

Advanced Graphics LCD Display:

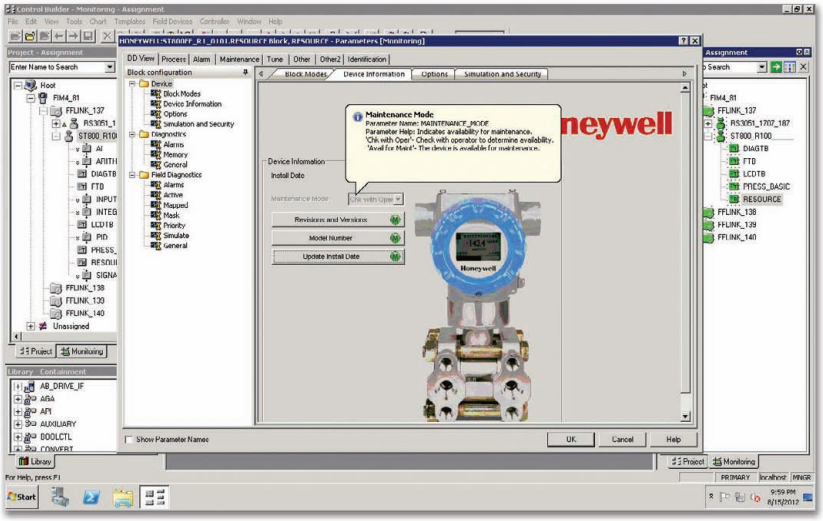
- Up to eight separate screens with three formats to meet unique display requirements: process variable, bar graph and trend
- Full library of engineering units with the ability to add custom units
- Configurable screen rotation timing
- Supports multiple languages
- Two diagnostic indications
- 90-degree position adjustments to facilitate all installation positions
- Square root display capabilities may be set separately from the 4-20 mA DC output signal

Flexible Configuration

In addition to configuring with any handheld device or through asset management DTMs, users can configure the transmitters through externally accessible buttons, even in an intrinsically safe, Class I, Div. 1 environment. This can be done both on the bench for set up and in the field without needing a handheld device.

Polarity Insensitivity

SmartLine transmitter wiring can be reversed without damaging or effecting the normal operation of the transmitter. This avoids costly rework on large installations where multiple contractors may use different wiring standards and eliminates return trips to re-wire "incorrectly wired" devices.



Smart Connection Suite

SmartLine transmitters integrate with all control systems. All products and protocols have been tested and integrate with Honeywell's Experion Process Knowledge System (PKS). With seamless integration to Experion, operators can take advantage of these unique benefits:

- **Honeywell extended diagnostics**—assess the health of critical field assets
- **Maintenance status display**—ensure the transmitter is in the right mode before maintenance can be performed
- **Transmitter messaging**—uniquely allows the operator to send messages to the transmitters advanced display informing technicians of device calibration requirements and other key parameters.

Integration with Experion also provides the operator with a summary health status of a transmitter or group of transmitters. Device identification in the field is simplified using our unique transmitter messaging capability. Safe maintenance modes are also confirmed through maintenance mode indication. These together identify the right product, the right maintenance activity and a safe mode to perform maintenance.

Today's Most Advanced Sensing Technology—Accurate Measurements

Honeywell's SmartLine pressure transmitters are designed around a high-performance piezoresistive sensor, which integrates process pressure measurement with on-board static pressure and temperature compensation measurements to compensate for any error resulting from temperature or static pressure effects. SmartLine pressure transmitters support replacement of virtually any other transmitter, while providing better process performance.

Other advanced capabilities include:

Overload Protection: The unique overload barrier protects the sensor from high-speed shocks and overpressure up to the full static pressure rating protecting the sensor from failure and eliminating the need for recalibration.

Sensor Stability: The transmitter offers industry leading sensor stability of ±0.01% per year to keep the data output from shifting and increase the time needed between calibrations. The device's Faraday shield enhances stability by preventing mobile ion migration from causing drift. Additionally, a full-length glass-to-metal seal between sensor pin-outs and the sensor capsule prevents changes in leakage current, which ultimately causes drift.

Static Pressure and Temperature Compensation:

The transmitter incorporates both an ambient temperature sensor and a static pressure sensor, providing the ability to compensate for these changes to deliver the most accurate output even under changing process conditions. Both of these data points can be outputted as secondary and tertiary variables to provide better performance under a wide variety of installed conditions.

For More Information

To learn more about Honeywell's SmartLine Pressure Transmitters, visit www.honeywellprocess.com or contact your Honeywell account manager.

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