

# SMARTLINE PRESSURE TRANSMITTERS

Modular, Accurate and Robust for the Lowest Cost of Ownership



**Honeywell**

# 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. Honeywell's pressure transmitter portfolio delivers on that promise and also helps manufacturers reduce overall installed costs and improve process efficiency.

With advanced integration and visualization, Honeywell's SmartLine Pressure transmitters help the Experion® control system capture complete process knowledge. And, no matter where your operations are located, timely and knowledgeable Honeywell support is always close and convenient.



# EXPECT MORE FROM SMARTLINE PRESSURE TRANSMITTERS

Honeywell's SmartLine® smart pressure measurement system sets a higher standard for total performance in harsh process environments, featuring the industry's first modular and most robust pressure transmitters.

The SmartLine Pressure Transmitters deliver total value across the entire plant lifecycle, from construction to operations to maintenance. With better performance, modular construction, an advanced display and the best integration features available when used with the Experion control system, Honeywell helps 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 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.
- SmartLine's rich transmitter interface with an advanced display, local configuration and the Field Device Manager (FDM) software provide capabilities for field operators to more efficiently perform tasks, solve problems and avoid errors with no need for a handheld device.
- SmartLine enables safer plant operations as it can detect and report tamper attempts with unauthorized changes
- SmartLine Connection Advantage reduces implementation costs and increases operational efficiency with features like unique control system integration, automatic maintenance mode setting and indication, control room to field transmitter messaging.

# A SMART TRANSMITTER FOR EVERY APPLICATION

With its SmartLine ST800 and ST700 Pressure Transmitters and the SmartLine SMV800 Multivariable Transmitter, Honeywell offers a complete range of absolute, differential, flange, gauge and remote seal pressure transmitters to suit every application need.

In addition, the SMV800 transmitter provides a highly accurate compensated flow variable by measuring three separate process variables: differential pressure, static pressure and temperature for air, gases, steam and liquids.

SmartLine transmitters are part of an integrated solution built over years – that has one essential ingredient: trust in the quality of the equipment and services delivered by Honeywell.”

– DR. DIETER TUPPINGER,

SENIOR VICE PRESIDENT PETROBRAZI SITE

MANAGEMENT PETROBRAZI



# INDUSTRY'S BEST TRANSMITTERS

The SmartLine transmitters are recognized for their unsurpassed accuracy and performance.

Smartline Multivariable Transmitter measures differential pressure, static pressure and process temperature with minimal process intrusions. It provides reliable, accurate and stable flow measurement with use of standard and dynamic compensation algorithms.

## SMARTLINE PRESSURE TRANSMITTER FEATURES:

- Modular design
- Rich user interface and local configuration capability
- Universal terminals
- SmartLine Connection Advantage with Experion
- Transmitter stability — up to 0.01 % URL per year for fifteen years
- Reference accuracy — up to 0.035% span with optional 0.025 % span
- Total probable error as good as 0.12 %
- Response time — as fast as 80 ms
- In-built/on-board static pressure and temperature compensation
- Rangeability/turndown of up to 400:1
- Unequaled local display capabilities
- External zero, span and complete device configuration capability
- Comprehensive on-board diagnostic capabilities
- Integral dual-seal design for Highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- World-class static pressure rating—4500 psig with the option of up to 6000 psig
- Full compliance to SIL 2/3 requirements as a standard
- Available with additional 15 year warranty
- Multiple offerings available: ST800, SMV800 and ST700 device type manager (DTMs) tools.
- Available with factory leak tested assemblies with SmartLine Manifolds



# DESIGNED FOR EFFICIENCY



## Modular Design

The 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. 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.

- Modular hardware and upgradeable firmware
- Standard, basic or advanced digital display as determined by the application requirements
- Terminal board with lightning protection
- Field-exchangeable communication modules to deploy HART, Honeywell Digital Enhanced (DE) or FOUNDATION Fieldbus communication
- Two- or three-button local configuration

## Transmitter Interface and Configuration

A rich transmitter interface with an advanced graphic 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. Now, whether on the bench or in the field, you can literally configure the whole transmitter without a handheld device.

## Universal Terminals

SmartLine transmitter wiring can be reversed without damaging or affecting 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.

“Our company has been using the Honeywell SmartLine pressure and differential pressure transmitters in both new and upgrade projects. These products have demonstrated excellent accuracy, reliability, and stability during their use for many years. Maintenance is also very low due to the modular design.”

- DONGSENG CHEN

YANGZHI PETRO CHEMICAL, SINOPEC



# SMARTLINE MANIFOLDS SAFE ASSEMBLIES READY TO USE OUT OF THE BOX!

SmartLine Accessories combine our market-leading pressure transmitters with quality manifolds in a single, integrated solution.

- Block and Bleed models for in-line pressure transmitters
- Two, three and five-way configurations
- Wide and compact body styles
- Traditional or wafer-style variants
- NACE compliant material options
- Available with factory integration and mounting brackets

## WHY HONEYWELL?



### RELIABILITY AND SAFETY

- Precise and certified manifolds
- Factory leak tested, integrated for safe operations



### EASE OF SELECTION, ORDER AND DELIVERY

- AVT enabled selection
- Single order consolidated delivery



### PEACE OF MIND

- Avoid any compatibility issues
- Installation ready transmitter - out of the box!
- Uniform documentation, certification and warranty



# EXPERION INTEGRATION

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 unique transmitter messaging capability. Safe maintenance modes are also confirmed through maintenance mode indication. Together, these features help in identifying the right device, the right maintenance activity and a safe mode to perform maintenance.

## SMARTLINE CONNECTION ADVANTAGE WITH EXPERION

All SmartLine transmitters integrate with all control systems. In addition, seamless integration with the Experion control system brings these unique advantages:

### Transmitter Messaging

Allows the operator to send and display custom messages to the display so field operators can quickly identify the right transmitter and task.

### Unique Tamper Reporting

Notifies the control room that an attempt to change a write-protected configuration has been made or that the write protection has been switched off.

### With comprehensive testing

Honeywell provides trouble-free integration for faster startups.

### Maintenance Mode Indication

Displays a message on the display that the transmitter and/or the loop is in a mode suitable for maintenance.

### Field Device Manager (FDM)

Is Honeywell's centralized asset management system for smart field device configuration and maintenance. When SmartLine data is integrated into FDM, users can create hierarchical screen displays for quick and easy views of device health from areas of the plant or process.



"Honeywell SmartLine transmitters are our preference because of their quality and advanced diagnostic features, including onboard local PV trend, modularity, reverse polarity and message display. Most importantly, we are looking for advantage of seamless integration of field instruments into Experion through FDM."

- YE CHAN

FORMOSA PLASTICS CORPORATION



# 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 offset 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:

### Sensor Stability:

The transmitter offers industry leading sensor stability of up to  $\pm 0.01\%$  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.

### 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.

### 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.



## Discover SmartLine Here

### SmartLine Warranty

To boost your confidence and efficiency, choose an extended warranty option for your SmartLine transmitters – and protect your investment even after your factory warranty has expired.

### For more information

To learn more about Honeywell's SmartLine Transmitters, visit [www.honeywellprocess.com/smartline](http://www.honeywellprocess.com/smartline) or contact your Honeywell account manager.

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FUTURE  
IS  
WHAT  
WE  
MAKE IT**

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