



SmartLine Temperature Transmitters
Modular, Accurate and Reliable for the
Lowest Cost of Ownership



Redefining Smart

Honeywell's SmartLine® transmitters are the industry's first modular and most reliable transmitters, delivering total value across the entire plant lifecycle. Setting a standard for total performance in harsh and noisy process environments, the SmartLine Temperature family includes the STT850 field mounted and the STT650 DIN rail mounted transmitter, offering high accuracy and stability over a wide range of process and ambient temperatures.

SmartLine STT850 Delivers:

Leading Performance

Unique Features That Lower Your Total Cost of Ownership

Efficient Control System Integration

- The industry's most reliable and robust temperature transmitter, featuring dual compartment housing and intuitive diagnostics for both the transmitter and the sensor.
- An innovative modular design reduces complexity along the entire lifecycle, from avoiding initial purchasing costs to reducing maintenance and inventory costs by eliminating the number of spare parts required and simplifying module replacements and upgrades.
- Built-in dual input option and digital output option minimizes the number of instruments needed for both monitoring and switching needs, reducing the initial investment cost.
- 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.
- 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.



With better performance, modular construction, an advanced display and the best integration features, 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.



Modular Design

All SmartLine transmitters are modular in design, making it easy to replace or upgrade hardware in the field, even under power, without affecting overall performance or impinging on approval body certifications. Some modular parts can even be shared between pressure and temperature transmitters, further reducing inventory and enhancing flexibility.

Advanced Display and Configuration

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

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 environment. Now, whether on the bench or in the field, configure, change tag information, change languages and even more without needing a handheld device.



Polarity Insensitivity

Loop wiring can be reversed without damaging or effecting normal operation. This avoids costly rework on large installations where multiple contractors may use different wiring standards and eliminates return trips to re-wire.

Smart Connection Suite

All SmartLine transmitters integrate with all control systems. In addition, with seamless integration with Honeywell's Experion® PKS, operators benefit from these unique advantages:

- 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—allows the operator to send messages to the transmitters advanced display.

Sensor Health

SmartLine Temperature offers robust sensor health diagnostics to closely monitor the health of the sensor. Alerts can be generated and the sensor health trend can be displayed in the advanced display. It has the intelligence to learn the resistance characteristics of all the thermocouple sensors to give the users a real-time dynamic view.

With Plug-in Modules, Users Can Easily Add or Upgrade:

- Basic or advanced digital displays.
- Field-exchangeable communication modules for HART,* Honeywell Digital Enhanced (DE), Foundation Fieldbus* or Profibus*.
- Wiring terminal boards for standard or advanced lightning-protected applications.
- Three-button local configuration.



Honeywell Transmitters are Recognized for Their Unsurpassed Accuracy and Performance:

- Transmitter stability—up to 0.05% of span per year for ten years
- Digital accuracy—0.1 degree C with output accuracy of 0.005%
- Response time—as fast as 130Ms
- Continuous thermocouple health monitoring and trending
- Namur 43/89 and 107 compliance
- 2kv isolation for protection from ground loops and electrical interference
- Redundant and differential temperature measurements
- Sensor drift alert
- Temperature dependant switch over
- Full compliance to SIL 2/3 requirements as a standard
- Advanced display supports:
 - Up to eight screens with three formats: process variable, bar graph and trend
 - Full library of engineering units with the ability to add custom units
 - Configurable screen rotation timing
 - Multiple languages
 - Two diagnostic indications
 - 90-degree position adjustments
- Available 15-year warranty

For More Information



Relevant Solutions
1.888.858.3647
relevantsolutions.com

Honeywell Process Solutions

Honeywell

512 Virginia Drive
Fort Washington, PA 19034 USA

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB

17 Changi Business Park Central 1
Singapore 486073

www.honeywellprocess.com

SmartLine STT650 DIN Rail Transmitter

The SmartLine STT650 DIN rail mounted high performance temperature transmitter offers high measurement accuracy, stability and reliability over a wide range of process and ambient temperatures.

Designed and manufactured to deliver very high performance, the STT650 easily meets the most demanding needs for temperature measurement applications. The total accuracy level of the transmitter, including the ambient temperature effect in harsh industrial environments, allows the STT650 to replace virtually any transmitter available today. Another great value of the offering is the dual channel options combined with its compact design that can help save over 40% panel space, lowering costs and inventory with it.

STT650 Portfolio

- Input Types
 - RTD input
 - Universal input type
 - Single and dual channel options
- Output/Communication protocol
 - 4 - 20ma/PC-based communication
 - HART 7 protocol
 - Fieldbus protocol
 - Profibus PA protocol
- Certifications
 - IS and Non IS versions



The STT650 can accommodate multiple temperature measurements in a smaller area, especially in rotating equipments for tracking asset health.

Key Features

- High accuracy—0.1 degree C for RTD
- Faster response, up to 135msec update
- Stable measurement, 0.12% of span for two years
- Built in 1500VAC galvanic isolation
- Superior noise performance—tested for 2kv surge/2.5kv burst noise
- NAMUR NE43 sensor error response
- Programmable using STT17C PC configuration tool

The STT650 increases value across the entire plant lifecycle for the customers in Power, Cement, Water, Steel, Pharma or F&B verticals by offering:

- Leading performance
- Reliable measurement
- Lower cost of ownership

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