

Solution Note

SmartLine Transmitters Help Reduce Start-Up Delays & Maintenance Costs While Improving Plant Uptime and Profitability for End-Users



Integrated with Experion PKS, SmartLine Transmitters Improve Operations

Introduction

Honeywell combines technology, knowledge of your plant, and process automation expertise to provide unmatched performance starting from installation of SmartLine transmitters through startup and ongoing operation. The bottom line is accurate and reliable process measurements, efficient plant operations and more value from your automation investment.

SmartLine Transmitters deliver a new level of efficiency and safety throughout the entire plant lifecycle either when operating stand-alone or when integrated with Honeywell's award-winning Experion process control system. Together, SmartLine and Experion help you:

- **Reduce Design Engineering**
- **Reduce Start-Up Delays**
- **Reduce Maintenance Costs**
- **Improve Quality, Uptime And Profitability**



SmartLine Temperature, Level and Pressure Transmitters

SmartLine accomplishes this through these unique features

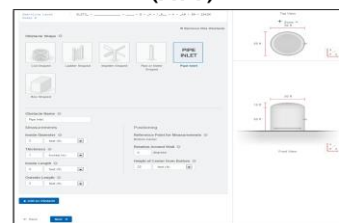
- **Cloud-Based tool (AVT)** allows on-line collaboration to expedite design/engineering
- **Universal Transmitter Wiring** reduces re-work & delays due to wiring mistakes & **Universal Calibration** reduces on-site calibration time
- **Modular Design** makes on-site changes or upgrades easy, reduces spares and maintenance cost while increasing uptime.
- **Smartline's Unique Integration With Experion** improves troubleshooting, operation & maintenance

SmartLine transmitter products, all based upon a common platform, offer comprehensive solutions for all of your process measurement requirements including pressure, temperature, flow and level. The common platform approach helps engineers and buyers quickly engineer, evaluate, and standardize on process measurement requirements. Similarities in device functionality and documentation help expedite transmitter installation and commissioning.

Cloud-Based Design Tools

Intuitive and easy to use cloud-based engineering tools that help collaborate, select the correct device and validate based on application requirements to ensure error-free order entry. Live remote collaboration allows experts across the globe to collaborate in real time to expedite design engineering. Documentation feature further enhances engineering productivity and avoids errors.

Application Validation Tool (AVT)



Universal Transmitter Wiring

Almost any two-wire instrument available today uses circuitry which protects the instrument when wired incorrectly. But **SmartLine alone goes beyond polarity protection.**

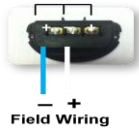
Transmitters are not only protected, they are polarity insensitive:

- When connected to a SmartLine device, not only is the instrument protected against reverse polarity, it will perform properly without the need to re-wire.

- In particular with large installations with multiple contractors and different processes, polarity insensitivity saves time and related costs.

Avoid all the rework and costs associated with returning to the field and reversing the wiring connections.

Either Connection will OPERATE Correctly



Modular Design

SmartLine products offer a level of modularity which makes it easy to make field replacements. This means you can make buying decisions for your current requirements knowing that you can simply upgrade or replace modules later. SmartLine modules are robust; they may be removed under power and in almost all electrical and safety environments except explosion-proof environments where opening the field enclosure is prohibited. SmartLine modules are also designed to be easily removed and reinstalled. By using connection hardware that provides good registration and tactile feedback, not only are the modules easily removable, they can be quickly, properly and confidently reinserted.



SmartLine Experion Integration

Transmitter Messaging

Working within the HART 7 protocol guidelines, Honeywell takes this technology one step further. In addition to supporting the 32 character message in the device memory, SmartLine transmitters post these messages on the transmitter's **advanced graphics display**. This allows the message to be read at the device without the need for a HART hand-held or other host device, providing significant time savings during start-up and verification and this works seamlessly with Experion PKS out of box without the need for additional engineering effort.



Transmitter messaging provides a free-form capability, allowing the control room operator to send a tag-specific message to the transmitter which can then be confirmed by the technician in the field. Verification by

the field technician provides confirmation that the graphic and analog inputs match the location and service of the transmitter.

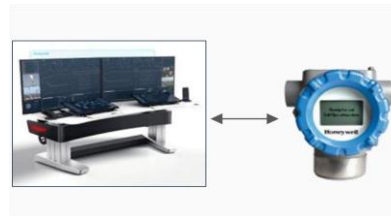
Maintenance Mode Status

SmartLine transmitters provide maintenance mode indication and system status displays in combination with Experion PKS to provide an additional level of safety awareness. For new projects this can also let you know what is active and not active, advising everyone of the transmitter status.

Automatic Device identification and Task Assignment

eliminates the need for two people to perform point-to-point verification while improving safety. This coupled with universal transmitter wiring saves up to 50% of onsite work during loop checkout and trouble shooting.

All of these features work seamlessly with Experion PKS and the Field Device Manager right from the first time, every time.



How It Works

Cloud based Engineering Tool – Reduces Engineering Time

Traditional Approach	SmartLine Approach
<ul style="list-style-type: none"> • Model Selection Mistakes • Continuous Changes • F2F Review Meetings • On-Site Changes 	<ul style="list-style-type: none"> • Live Remote Collaboration with experts • Tool Selects Correct Model • Documentation Feature • Fully pre-configured device
<div style="background-color: yellow; padding: 5px; border: 1px solid black; display: inline-block;"> SAVE UP TO 8 WKS </div>	

Universal Transmitter Wiring – Reduces Commissioning Time

Normal Terminals	Universal Tx. Wiring
<ul style="list-style-type: none"> Instrument does not Operate with polarity conflict Increases Loop check time Increases re-work 	<ul style="list-style-type: none"> Instrument Operates with either polarity with Experion I/O's Reduces loop checking time by 50% Eliminates wiring error by 100% Maintenance made easy
<p>Typically 10-14 Terminations Per Instrument</p>	<p>SAVE UPTO 10 MAN WKS</p>

Modular Design – Reduces Spares Inventory

Traditional Inventory				SmartLine Inventory					
HART Only Facility			List Price		HART Only Facility			List Price	
Item	Qty	Description	Each	Extended	Item	Qty	Description	Each	Extended
1	1	GWR xmtr w/display, flange	\$2,800	\$2,800	1	1	SLG720 w/display, NPT	\$2,700	\$2,700
2	1	GWR xmtr w/display, NPT	\$2,700	\$2,700	2	1	SLG720 w/display, NPT, alt seal mat'l	\$2,900	\$2,900
3	1	GWR w/display, interface, flange	\$4,000	\$4,000	3	3	SLG Advanced display module	\$ 480	\$1,440
4	1	GWR w/display, interface, NPT	\$3,900	\$3,900	4	3	SLG Termination w/light protect	\$ 170	\$ 510
5	1	GWR w/display, flange, alt seal mat'l	\$3,000	\$3,000	5	3	SLG HART module	\$ 270	\$ 810
6	1	GWR w/display, NPT, alt seal mat'l	\$2,900	\$2,900	TOTL				\$9,560
TOTL	4	Complete Units		\$19,300					

Replacements for only 6 variations with a \$9,740 inventory savings

Summary

SmartLine Level, Pressure, Flow and Temperature transmitters deliver robust performance and the best total cost of ownership. The innovative design & software tools reduce complexity along the entire lifecycle towards improving project & operational efficiency & reducing maintenance costs.

- Cloud engineering reduces engineering time and brings expertise to the project installation without the need to travel.
- Universal transmitter wiring save time on start-ups and eliminates maintenance errors.
- Modular design reduce total cost of ownership through reduced maintenance costs, fewer spares and easy upgrades.
- SmartLine integration with Experion reduces start-up delays and simplifies maintenance even while requiring fewer resources.

Modular Design – Reduces Maintenance Cost & Improves Uptime

Traditional Approach		SmartLine Approach	
Complete Unit Replacement	Est. Time	Communications Module Replacement	Est. Time
Permitting (Hot Work and Line Break)	½ hr	Permitting (Hot Work Only)	½ hr
Acquisition and positioning of Scissor Lift (2 people)	2 hr	Acquisition and Positioning of Scissor Lift (2 people)	2 hr
Disconnect and removal	1 hr	Module Replacement	½ hr.
Transmitter separation, replacement, reattach	1 hr	Man lift and crane removal	1 hr
Transmitter and probe insertion	½ hr		
Transmitter wiring, startup, final inspection and checkout	1 hr		
Man lift and crane removal	1 hr		
Total Effort Hours	7 hours	Total Effort Hours	4 hours

Failed Electronics Module:
Value associated with parts replacement vs. complete unit replacement

For More Information

Learn more about how Honeywell' SmartLine Transmitters combined with Experion can improve plant operations visit our website www.honeywellprocess.com or contact your Honeywell account manager.

Honeywell Process Solutions

Honeywell
1250 West Sam Houston Parkway South
Houston, TX 77042

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

Shanghai City Centre, 100 Junyi Road
Shanghai, China 20051

www.honeywellprocess.com