Process Solutions

Honeywell

SmartLine Transmitter Messaging & Maintenance Mode Indication

SmartLine Transmitters deliver a new level of efficiency and safety throughout the plant lifecycle either when operating stand-alone or when integrated with a process control system. For example, SmartLine's unique transmitter messaging and maintenance mode indication features reduce start-ups and improve maintenance efficiency.

Transmitter Messaging

HART 7 protocol provides the ability for handheld devices and hosts to send 32 character messages to field devices. These messages (supported by device descriptions or DDs) then reside in the device memory and are available for reading by handheld and other host type devices supporting this HART 7 feature.

Honeywell Takes Messages One Step Further
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 integral **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 savings in time.

This unique feature is available on SmartLine transmitters with the integral Advanced Graphics Display option.

Permissible Messages: Honeywell transmitter messaging works within the parameters of HART 7, meaning allowable messages can be up to 32 (ASCII) characters in length thus supporting almost any free form message.

Messaging Improves Safety & Efficiency: Because transmitter messaging provides a free form capability, comprehensive messages can be sent to the transmitter alerting various personnel of required actions helping to reduce start up and commissioning times, increase maintenance efficiency and improve plant safety.

There can be several hundred temperature measurement points across plant locations including remote areas. Apart from

temperature transmitters, even the temperature sensors, have to be maintained efficiently in order to achieve desired results. Temperature sensors in tough applications are maintenance intensive and involve frequent intervention to fix issues relating to open sensor, sensor degradation, etc. Therefore, transmitter messaging is essential in communicating to field operators and enhancing maintenance and safety.

Messaging Examples:
- Replace the Sensor Element (26 Characters)
- Set transmitter Span (20 Characters)
- Enable write protection jumper (30 Characters)
- Fix the Open Sensor (19 Characters)

Message Posting & Screen Rotation: Messages residing in the transmitter memory are automatically posted on the transmitter's optional Advanced Graphics Display. These messages are inserted in the customer's configured display rotation scheme as an additional screen.

The advanced display is capable of up to eight screen displays and utilizes a screen rotation scheme to present multiple screens. Screen rotation timing is a configurable display parameter and may be set anywhere between 3 and 30 seconds.

Due to the informative nature of transmitter messaging, the display's screen rotation timing may be automatically adjusted. When rotation timing is set for 10 seconds or less, transmitter messaging will not make any adjustments to screen rotation timing and will simply intersperse the message between the screens previously configured by the user. If, however, the screen rotation timing was set for more than 10 seconds, transmitter messaging will automatically intersperse the message

and adjust the screen rotation timing to 10 seconds thus making the message more readily available.

Transmitter Messaging Screen Sequencing:

- *Normal Screen Rotation:* Screen 1, Screen 2, Screen 3. Up to 8 screens as configured by the user.
- *Transmitter Messaging Screen Rotation:* Screen 1, "***Transmitter Message***", Screen 2, "***Transmitter Message***", Screen 3. Up to the 8 screens as configured by the user.

Note*: auto insertion of message and maintenance screens does not affect the allowable number (8) of user configurable screens)*

Sending & Resetting Messages: Messaging is supported by the transmitters' standard set of DDs and EDDLs, allowing messages to be created and or deleted by any HART hand held, PC based or host based configuration tool. Specific screens provide message input and message reset capabilities. Messages sent to the transmitter will remain in memory and display on the transmitters Advanced Graphics Display until they are reset or replaced by a new message. Only one message per transmitter is possible at any given time.

Experion Maintenance Mode Indication

In combination with Honeywell's Experion PKS, SmartLine transmitters are capable of providing visual indication regarding availability for maintenance.

Honeywell Puts Safety First: For safety reasons, plant and equipment maintenance should only be pursued when the transmitter and the associated loop are in the proper modes for maintenance. Maintenance on devices operating in active control loops can upset the process, trigger alarms and result in lost process, equipment damage and unsafe conditions. SmartLine transmitters are capable of receiving and displaying a

maintenance mode indication as determined in combination with the Experion PKS operator and system status providing an additional level of safety awareness. When the proper modes are set by the operator or the system, the transmitter will display the message *"Available for Maintenance"* on the transmitter's **Advanced Graphics Display**. Similar to Transmitter Messaging, this message will be automatically inserted into the display rotation sequence between normal configured display screens.

Maintenance Messaging Screen Rotation: Similar to Transmitter Messaging, the Maintenance Mode Indication message will be interspersed with the already user configured screens as follows:

Screen 1, "***Available for Maintenance***", Screen 2, "***Available for Maintenance***", Screen 3. Up to 8 screens as configured by the user.

Transmitter Messaging & Maintenance Indication Mode Together

Transmitter messaging and maintenance mode indication used together provide a powerful tool for:

- Quickly identifying the right device and the sensor element for maintenance
- Providing an indication of action required
- Indicating a safe (device /loop) environment for maintenance activity.

Through these actions, you're able to:

- Reduce start-up times
- Improve maintenance efficiency
- Reduce process down time
- Increase plant safety

Review our other SmartLine plant lifecycle savings opportunities through:

- Modular design
- Advanced display and HMI technology
- Tamper reporting
- Polarity insensitivity

For More Information
Learn more about how Honeywell's SmartLine Temperature Transmitters deliver value across the entire plant lifecycle, visit our website www.honeywellprocess.com or contact your Honeywell distributor or account manager.

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