Process Solutions

Honeywell

SmartLine Transmitter Integral Configuration Capability

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, In addition to conventional configuration techniques through a host system, computer or hand held configuration device SmartLine offers options for local configuration without additional equipment.

SmartLine Configuration Techniques

Overview

All digitally enabled field instruments offer conventional configuration capabilities through their communications protocol such as HART in combination with either PC based configuration management software, a host control system, or through a handheld configuration product. SmartLine products now offer a time saving and equipment savings method of configuration through an externally accessible 3-button keypad used in combination with either the SmartLine basic alphanumeric or advanced digital displays[1].

Three – Button Programming

Suitable for all electrical or environmental conditions, the optional configuration buttons are located under the transmitter nameplate tag located on the top of the device. The tag swings open to expose the buttons which are labeled for 1) zero/step up, 2) step down and 3) span/enter as shown in figure 1. Pressing <enter> will enter the configuration mode. Up/dn and enter keys may then be used to step through the configuration parameters to make and save changes.

Buttons with No Display

SmartLine products with the 3-button programming and without a display support setting zero and span. Depressing both the zero and the step down buttons together will set the zero value to the pressure currently applied to the transmitter. Simultaneously depressing the span and step down buttons will set the span to the pressure currently applied to the transmitter.

Figure 1: SmartLine Configuration Buttons

Buttons with Advanced or Basic Display

When specified with an integral basic or advanced display the simultaneous depressing action for setting zero and span is disabled. Zero & span as well as all configuration parameters are now set in conjunction with the basic and advanced display menus shown on the next page.

Safety First

To enhance operational safety, the configuration buttons can be disabled after configuration is completed. This is accomplished with the device write protection jumper or software settings available via handheld or remote configuration software. The jumper setting will always override the software setting in the write protect on mode. Additional safety is also available when the unique SmartLine Tamper Reporting[2] feature is employed.

Configuration Menus and Parameter Storage

SmartLine Pressure products are modular in design and configuration parameters are stored in the various modules. This permits replacing modular components while minimizing reconfiguration requirements. Configuration parameters are stored as shown in figures 2-5 below.

[1] Read Display Module Tech Note, SO-12-57-ENG
[2] Read the Tamper reporting Tech Note, SO-12-49-ENG

Basic Display Configuration

Parameter	Applicability	Locally Writable
LCD Contrast	Always	Yes
Rotation Time	FF Only	Yes
PV Display	HART/DE	Yes
PV Decimals	HART/DE	Yes
Pressure Units	HART/DE	Yes
Range/Cal Units	FF Only	Yes
Zero Correct	Always	Yes
LRV Correct	HART/DE	Yes
URV Correct	HART/DE	Yes
Reset Corrects	HART/DE	Yes
DAC Zero Trim	HART/DE	Yes
DAC Span Trim	HART/DE	Yes
Loop Test	HART/DE	Yes
LRV	Always	HART/DE
URV	Always	HART/DE
Damping	Always	HART/DE
NAMUR	HART/DE	Yes
Filter Perf	HART Only	Yes
Transfer Func	HART/DE DP Only	Yes
Flow Cutoff	HART/DE DP Only	Yes
Flow Breakpoint	HART/DE DP Only	Yes
Tag ID	HART/DE	Yes
Install Date	HART/FF	HART Only
Firmware	Always	Yes
Protocol	Always	Yes
Model Key	Always	Yes
Exit Menu	Always	N/A

Advanced Display Configuration
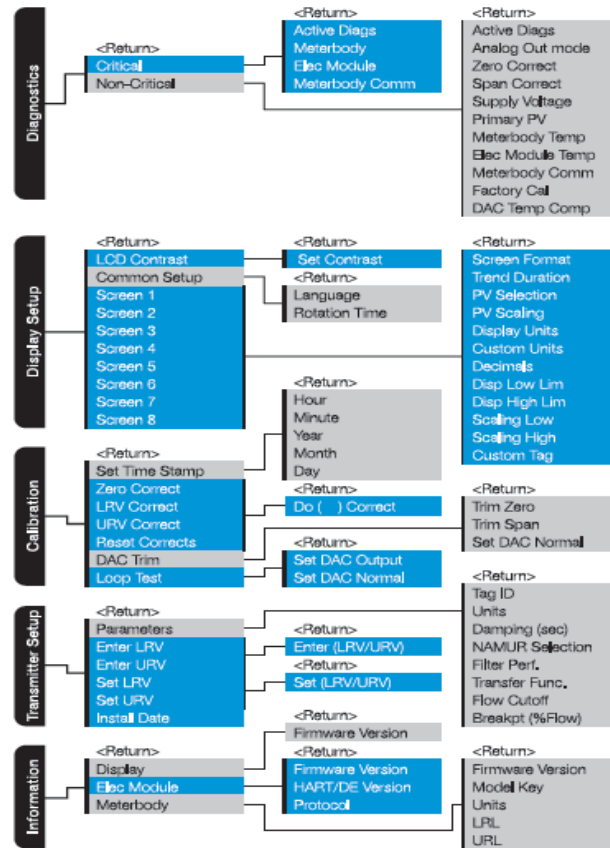
Parameter Storage Locations

Parameter	Stored Location	Type
Advanced Display		
LCD Contrast (Adv)	Com Module	Read/Write
Language	Com Module	Read/Write
Rotation timing	Com Module	Read/Write
Screen Format	Com Module	Read/Write
Trend Duration	Com Module	Read/Write
PV Selection	Com Module	Read/Write
PV Scaling	Com Module	Read/Write
Display Units	Com Module	Read/Write
Custom Units	Com Module	Read/Write
Decimal	Com Module	Read/Write
Display Low Limit	Com Module	Read/Write
Display High Limit	Com Module	Read/Write
Scaling Low	Com Module	Read/Write
Scaling High	Com Module	Read/Write
Custom Tag	Com Module	Read/Write
Display Firmware Rev	Display	Read Only

Figure 2: Advanced Display Parameters

Parameter	Stored Location	Type
LCD Contrast (Basic)	Com Module	Read/Write
PV Display	Com Module	Read/Write
PV Decimal	Com Module	Read/Write
Pressure Units (Display)	Com Module	Read/Write
Display Firmware Rev	Display	Read Only

Figure 3: Basic Display Parameters

Parameter	Stored Location	Type
Set Time Stamp	Meter Body	Read/Write
Zero Correct	Meter Body	Read/Write
LRV Correct	Meter Body	Read/Write
URV Correct	Meter Body	Read/Write
Reset Corrects	Meter Body	Read/Write
Tag ID	Meter Body	Read/Write
URV/LRV Units	Meter Body	Read/Write
Install Date	Meter Body	One Time Write
Meter Body Firmware Rev	Meter Body	Read Only
Model Key	Meter Body	Read only
Units (LRL/URL)	Meter Body	Read Only
LRL	Meter Body	Read Only
URL	Meter Body	Read Only
LRV	Meter Body	Read/Write
URV	Meter Body	Read/Write
Install Date	Meter Body	One Time Write
Model Key	Meter Body	Read Only

Figure 4: Meter Body Parameters

Parameter	Stored Location	Type
DAC Zero Trim	Com Module	Read/Write
DAC Span Trim	Com Module	Read/Write
Loop Test	Com Module	Read/Write
Damping	Com Module	Read/Write
NAMUR	Com Module	Read/Write
Filter Performance	Com Module	Read/Write
Transfer Function	Com Module	Read/Write
Flow Cut off	Com Module	Read/Write
Break Pt %	Com Module	Read/Write
Comm Module Firmware	Com Module	Read Only
Tag ID	Com Module	Read/Write
Protocol	Com Module	Read Only

Figure 5: Electronics/Communications module Parameters

For More Information

Learn more about how Honeywell's SmartLine pressure transmitters deliver value across the entire plant lifecycle, visit www.honeywellprocess.com/smartline or contact your Honeywell distributor or account manager.

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