

## Technical Note

### SmartLine Transmitter Advanced Graphic Display



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, to improve configuration, process viewing and integration capabilities, SmartLine offers an advanced graphics display with enhanced HMI capabilities.

#### Overview

An increasing number of pressure transmitters are provided with integral display options, but most suppliers typically provide preformatted or segment-type liquid crystal displays that only display basic process variable information. SmartLine offers an advanced graphic display adding a wealth of process information through multiple display screen capabilities. In addition to multiple process views, this display supports menu-driven integral configuration, comprehensive diagnostic messages and unique Smart Connection Suite features such as transmitter messaging and maintenance mode Indications<sup>1</sup>.

#### Advanced Graphics Display Capabilities

The advanced graphics display is a dot matrix LCD display capable of multiple displays and data formats.

#### Process Variable Formats

The advanced graphics display offers three user selectable display formats and up to eight screens in these formats may be displayed.

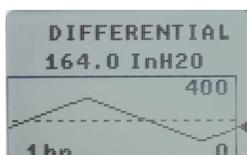
#### Screen Formats



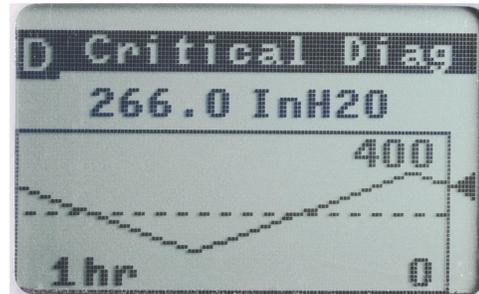
Large PV



Bar Graph



Trend



Advanced Graphics Display

#### Screen Rotation

In order to facilitate multiple displays, the custom configured screens will sequentially rotate with the rotation timing user selectable from three to thirty seconds in one second intervals.

#### Normal Screen Rotation:

Screen 1, screen 2, screen 3..... up to eight screens as configured by the user.

#### Display Measurement Units

Custom/user defined units are available as well selecting the following standard pressure units:

- Pascals (Pa)
- Kilo pascals (KPa)
- Mega pascals (MPa)
- Kilograms/centimeter squared (KGcm<sup>2</sup>)
- TORR (TORR)
- Atmospheres (ATM)
- inches of water at 40C (i4H2O)
- Inches of water at 39o F (inH2O)
- Feet of water (FTH2O)
- Millimeters of water (mmH2O)
- Meters of water (MH2O)
- Inches of mercury (inHG)
- Millimeters of mercury (mmHG)
- Bar, (Bar)
- Millibar (mBar)
- Pounds/square inch (PSI)

<sup>1</sup>For more information read Transmitter Messaging & Maintenance Mode Indication Tech Note SO-12-50-ENG

In addition, when users select the square root mode for flow applications, the display can be configured with the following units:

- Percent (%)
- Liters/Hour (L/hr)
- Liters/Min (L/min)
- Gallons/Hour (gal/hr)
- Gallons/Min. (gal/min)
- Custom Units

### Diagnostic Display Capability

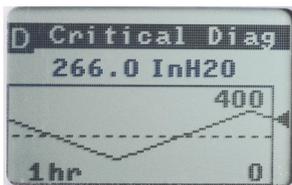
The advanced display also supports various messaging capabilities including critical and non-critical diagnostics.

### Non-Critical Diagnostic Support

Non-critical diagnostics are defined as those that do not directly impact the immediate validity of the process variable. A non-critical diagnostic is identified by a “D” placed in the upper left corner of the display. No other indication is provided without user intervention so as to minimize loss of process variable views. At any time the user may enter the configuration menu and query for information regarding the indicated non-critical diagnostic.

### Critical Diagnostic Displays

Critical diagnostics defined as those that invalidate the PV value are indicated via a “D” in the upper left corner of the display but will also be accompanied by a “Critical Diagnostic” banner on the configured display screens. In addition, a message indicating the fault category of the diagnostic will be inserted into the screen rotation scheme as shown below.



Critical Diagnostic Indicator



Critical Diagnostic Message

### For More Information

Learn more about how Honeywell's SmartLine pressure transmitters deliver value across the entire plant lifecycle, visit our website [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell distributor or account manager

### Honeywell Process Solutions

Honeywell  
512 Virginia Drive  
Fort Washington, PA 19034  
[www.honeywellprocess.com](http://www.honeywellprocess.com)

Fault categories are identified as:

- Meter Body Fault
- Electronics Fault
- Meter Body Comm Fault

When a diagnostic or other message is received by the transmitter it will be interspersed with the other user configured screens. Rotation timing of more than ten seconds will temporarily be set to ten seconds to avoid the possibility of missing a message due to screen rotation.

### Critical Diagnostic Screen Rotation:

Screen 1, “**Diagnostic Message**”, Screen 2, “**Diagnostic Message**”, Screen 3..... up to the eight screens as configured by the user.

### Smart Connection Suite Support

The advanced graphic display also works in conjunction with various elements of Honeywell's Smart Connection Suite features. Smart Connection Suite includes transmitter messaging and maintenance mode indication, which are both supported by the advanced graphic display<sup>1</sup>.

### Display Languages

The advanced graphic display supports multiple languages to allow the user to configure the transmitter and display the output screens in local languages to avoid costly configuration errors. The current languages available are:

- English
- Spanish
- German
- French
- Russian

Better local views of your process and features such as transmitter messaging and maintenance mode indication can help to improve your process control, locally diagnose problems, reduce maintenance and substantially contribute to improving your personnel and plant safety as well as the safety of the surrounding community.

<sup>1</sup>For more information, read the *Transmitter Messaging & Maintenance Mode Indication Tech Note SO-12-50-ENG*