

**Note:**

This *Field Guide* is for use with the 275 or 375 Hart Communicator. For the YHC4100 Hart Communicator, refer to *Field Guide FGP-183*.



Yokogawa’s EJX Differential Transmitters have the unique ability to measure Static Pressure that can be monitored via Hart communication, displayed on the indicator or converted to a 4 to 20mA analog signal (via Moore’s HART Loop Interface and Monitor).

The static pressure has the option of being measured as an Absolute Pressure or with a Gauge Pressure Reference.

**Section 1.0 Range**

Upper Range Value and Lower Range Value of the static pressure can be set in the range of 0 to the Maximum Working Pressure (MWP) of the transmitter. (Refer to the GS sheet for the MWP of the transmitter) The upper range value must be greater than the lower range value. Minimum Span is 0.5MPa (73 psi). Measuring either the pressure of the high-pressure side or low-pressure side is user-selectable.

**Section 2.0 Accuracy**

**Section 2.1 Absolute Pressure**

**1 MPa or higher:**

+/-0.2% of Span

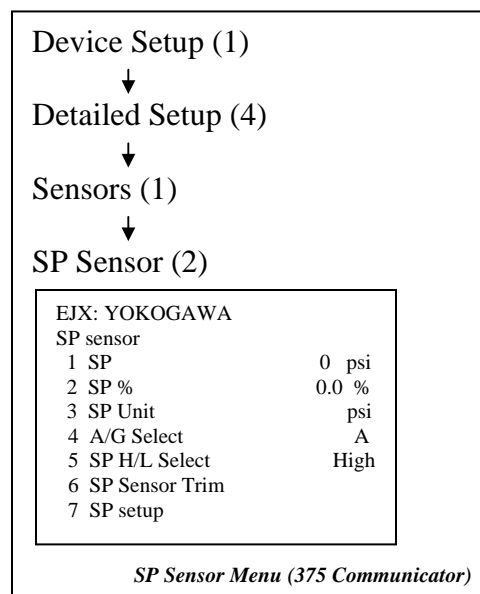
**Less than 1 MPa:**

+/-0.2% x (1 MPa/Span) of Span

**Section 2.2 Gauge Pressure Reference**

When the EJX static pressure reading is using Gauge Pressure Reference, the EJX uses a pre-programmed value of 1,013 hPa (1 atm) to determine the static pressure. This pre-programmed value is changeable with a 275 / 375 communicator. Since the EJX is using this fixed reference, any actual change of atmospheric pressure will greatly affect the accuracy of the reading.

**Section 3.0 Hart 275 / 375 Menu Tree for Static Pressure.**



**Section 3.1 SP (1)**

Displays the Static Pressure. (*Read Only*)

**Section 3.2 SP % (2)**

Displays the Static Pressure in percent of SP Span. (*Read Only*)

**Section 3.3 SP Unit (3)**

Displays the unit the Static Pressure is displayed in. (*Read Only*)

**Section 3.4 A/G Select (4)**

Displays if the SP is Absolute or Gauge Referenced. (*Read Only*)

**Section 3.5 SP H/L Select (5)**

Displays if the SP is measuring from the high-pressure side or low-pressure side. (*Read Only*)

**Section 3.6 SP Sensor Trim (6)**

Sends you to a sub-menu.

SP sensor trim	
1 Static Press trim	
2 SP LTP	1.00 psi
3 SP UTP	1.00 psi
4 SP trim info	

*SP sensor trim menu display (HART 375)*

**Section 3.6.1 Static Pressure Trim (1)**

Takes the operator to another sub-menu. All items in this sub-menu are currently unavailable.

**Section 3.6.2 SP LTP (2)**

Allows the operator to set the lower trim for static pressure.

**Section 3.6.4 SP UTP (3)**

Allows the operator to set the upper trim for static pressure.

**Section 3.6.5 SP trim info (4)**

Displays the current trim setting and can clear the trim settings if desired.

**Section 3.7 SP Setup (7)**

This selection sets up the static pressure function.

SP setup	
1 SP Range	
2 SP unit	psi
3 SP Damp	0.00 sec
4 SP A/G Setup	
5 SP H/L Select	High

*SP setup menu display (HART 375)*

**Section 3.7.1 SP Range**

This section has two different operations.

**Keypad input** (1) allows for all the following to be entered using the on-screen keyboard:

- SP LRV (1)**
- SP URV (2)**
- SP Unit (3)**
- SP LSL (4) (*Read Only*)**
- SP USL (5) (*Read Only*)**
- SP min Span (6) (*Read Only*)**

**SP Applied values** (2) allows for **0%** (1) and **100%** (2) static pressure to be applied to the transmitters and those values set.

### **Section 3.7.2 SP Units (2)**

Allows the operator to choose the units the SP will be displayed and transmitted in.

### **Section 3.7.3 SP Damp (3)**

Allows the operator to set the Damping if required. (seconds)

### **Section 3.7.4 SP A/G Setup**

This section has two operations

**A/G Select** allows the operator to assign the static pressure to be an absolute reading or Gauge reference reading.

**Atm. Pres Value** allows the operator to assign the pressure to be used as reference for the Gauge reference reading.

### **Section 3.7.5 SP H/L select**

Allows the operator to assign whether the high-pressure side or low-pressure side is used for static pressure.

## **Section 4.0 Settings when shipped**

**Unit:** MPa

**Span:**

**L capsule:** 0 to 16 MPa

**M capsule:** 0 to 25 MPa

**H capsule:** 0 to 25 MPa

**Absolute Value**

**Measuring high-pressure side**

**Trim:** off