

## Local Parameter Setting (LPS)



### Introduction

We have all run into this problem one time or another; you're out in the process area when you realized you need to make a change to a transmitter, but your Hand Held Communicator (HHC) is back at the instrument shop! Your HHC is a great device, but it does you no good when it is left back at the shop. However, if you have a Yokogawa EJA-E or EJX-A series pressure transmitter it is not a problem. Yokogawa's Local Parameter Setting (LPS) gives you easy access to nine (9) basic parameters:

- ⇒ Tag Number
- ⇒ Unit of measure
- ⇒ Set LRV (4 mA)
- ⇒ Set URV (20 mA)
- ⇒ Damping Time
- ⇒ Transfer Function (Linear or Square Root)
- ⇒ Display
- ⇒ Calibrate LRV (Requires applied pressure)
- ⇒ Calibrate URV (Requires applied pressure)

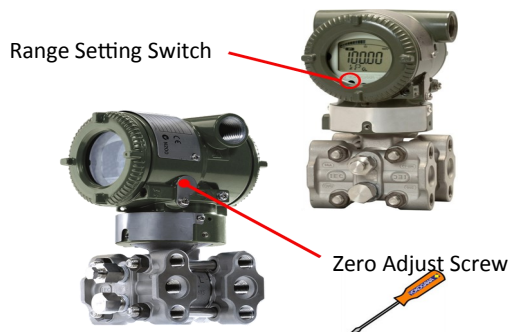
### Available Models

LPS is available on any EJA-E or EJX-A series model with HART (Output Signal code -E or -J) and BRAIN (Output Signal code-D) communication.



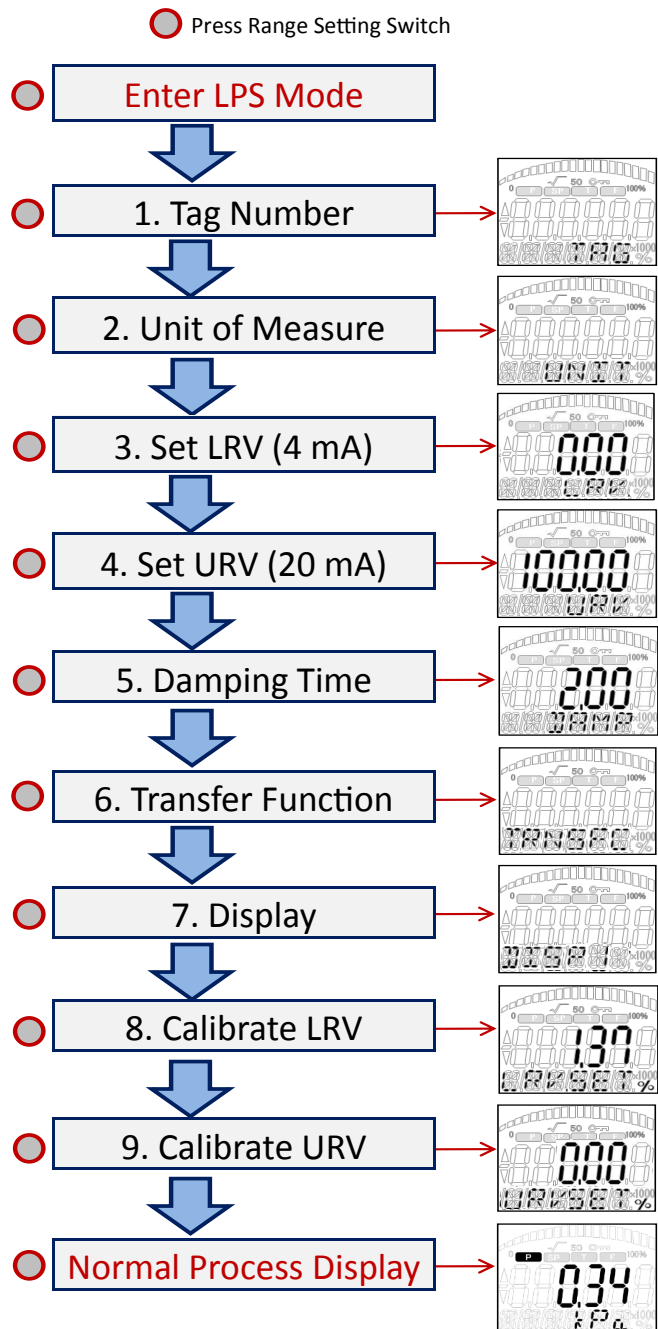
Note: LPS requires Integral Indicator with Switch (code E).

The LPS utilizes the Range-setting Switch on the indicator and the Zero Adjust Screw to work through the menu and change values.



### Menu

Pushing the Range Setting Switch on the indicator enters the transmitter into LPS mode. Each time the button is pressed, the LPS cycles to the next parameter.



# Editing the Tag Number

### Tag Number

Press Button to advance to first character.

### Edit Mode

Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

Repeat sequence until all characters have been updated

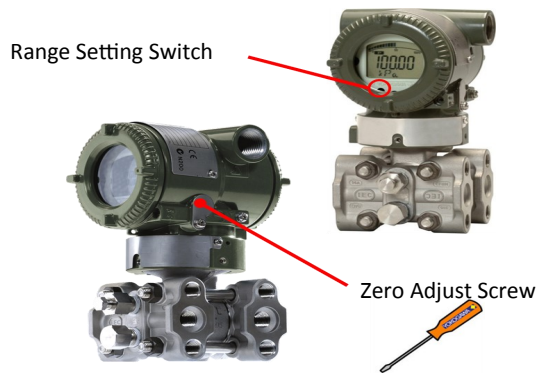
### Changes Accepted

Press Button to advance to next parameter.

### Verify Change

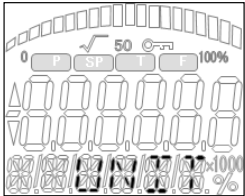
Use the screwdriver to scroll to desired value.

Press Button to advance to first character.



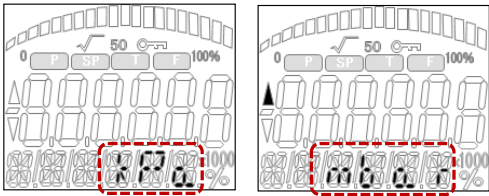
# Editing the Unit of Measure

### Unit of Measure



Press Button to advance to first character.

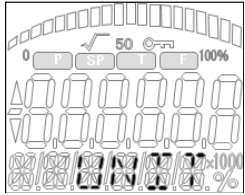
### Edit Mode



Use the screwdriver to scroll to desired value.

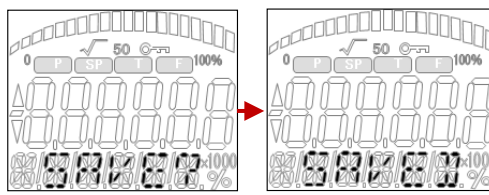
Press Button to advance to first character.

### Changes Accepted



Press Button to advance to next parameter.

### Verify Change

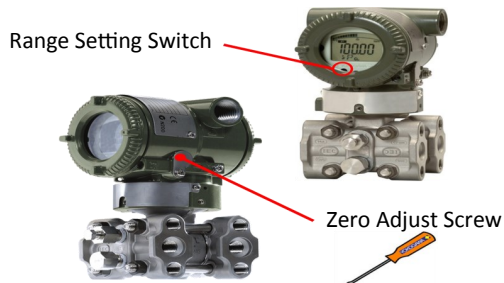


Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

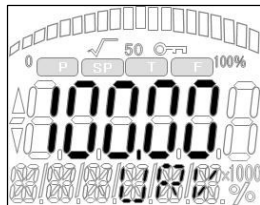
**Available Units of Measure**

psi	Torr	inH <sub>2</sub> O@39°F
atm	kPa	inH <sub>2</sub> O@68°F
Pa	MPa	inHg
hPa	mbar	ftH <sub>2</sub> O@39°F
mmH <sub>2</sub> O@39°F	bar	ftH <sub>2</sub> O@68°F
mmH <sub>2</sub> O@68°F	g f/cm <sup>2</sup>	
mmHg	kg/f/cm <sup>2</sup>	



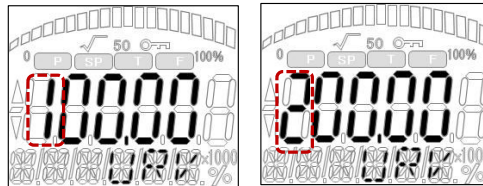
# Setting the LRV (4mA) and URV (20mA)

## Upper Range Value



Press Button to advance to first character.

## Edit Mode

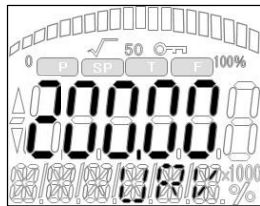


Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

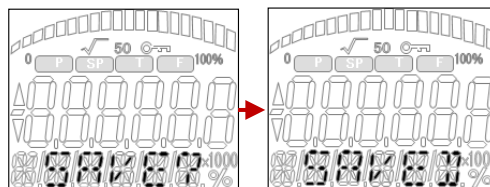
Repeat sequence until all characters have been updated

## Changes Accepted



Press Button to advance to next parameter.

## Verify Change

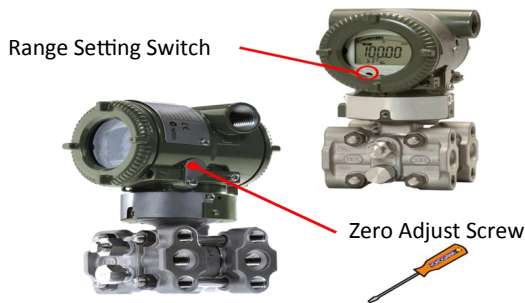


Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

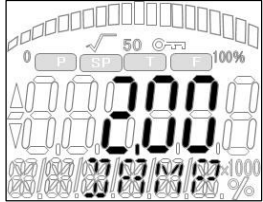
### Helpful Tips

Scroll through to decimal point in order to insert the decimal point. The edit will produce an error if no decimal point is inserted. The process is the same for the LRV.



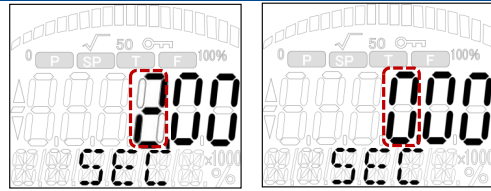
# Setting the Damping Time

### Damping Time



Press Button to advance to first character.

### Edit Mode

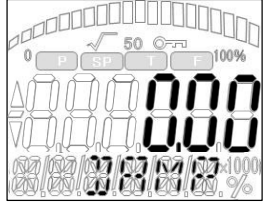


Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

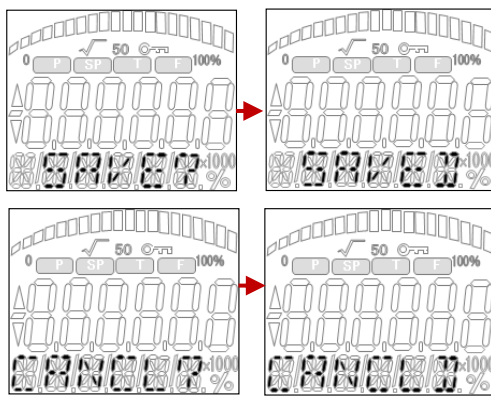
Repeat sequence until all characters have been updated

### Changes Accepted



Press Button to advance to next parameter.

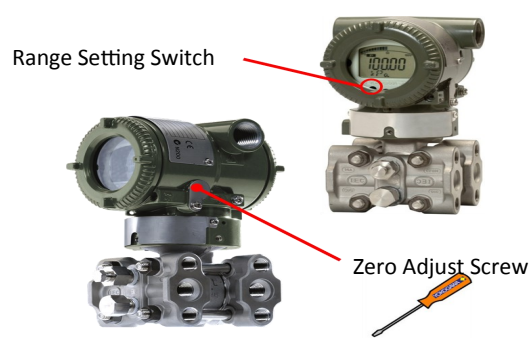
### Verify Change



Use the screwdriver to scroll to desired value.

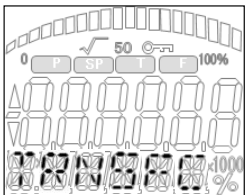
Press Button to advance to first character.

**Helpful Tips**  
 Scroll through to decimal point in order to insert the decimal point. The edit will produce an error if no decimal point is inserted.



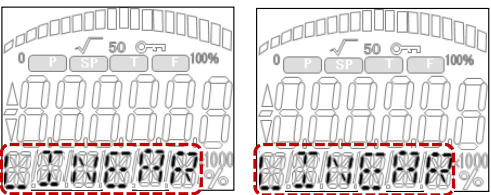
# Editing the Transfer Function

### Transfer Function



Press Button to advance to first character.

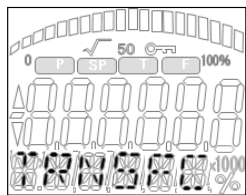
### Edit Mode



Use the screwdriver to scroll to desired value.

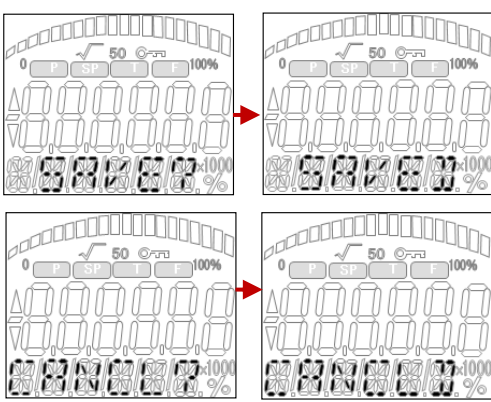
Press Button to advance to first character.

### Changes Accepted



Press Button to advance to next parameter.

### Verify Change



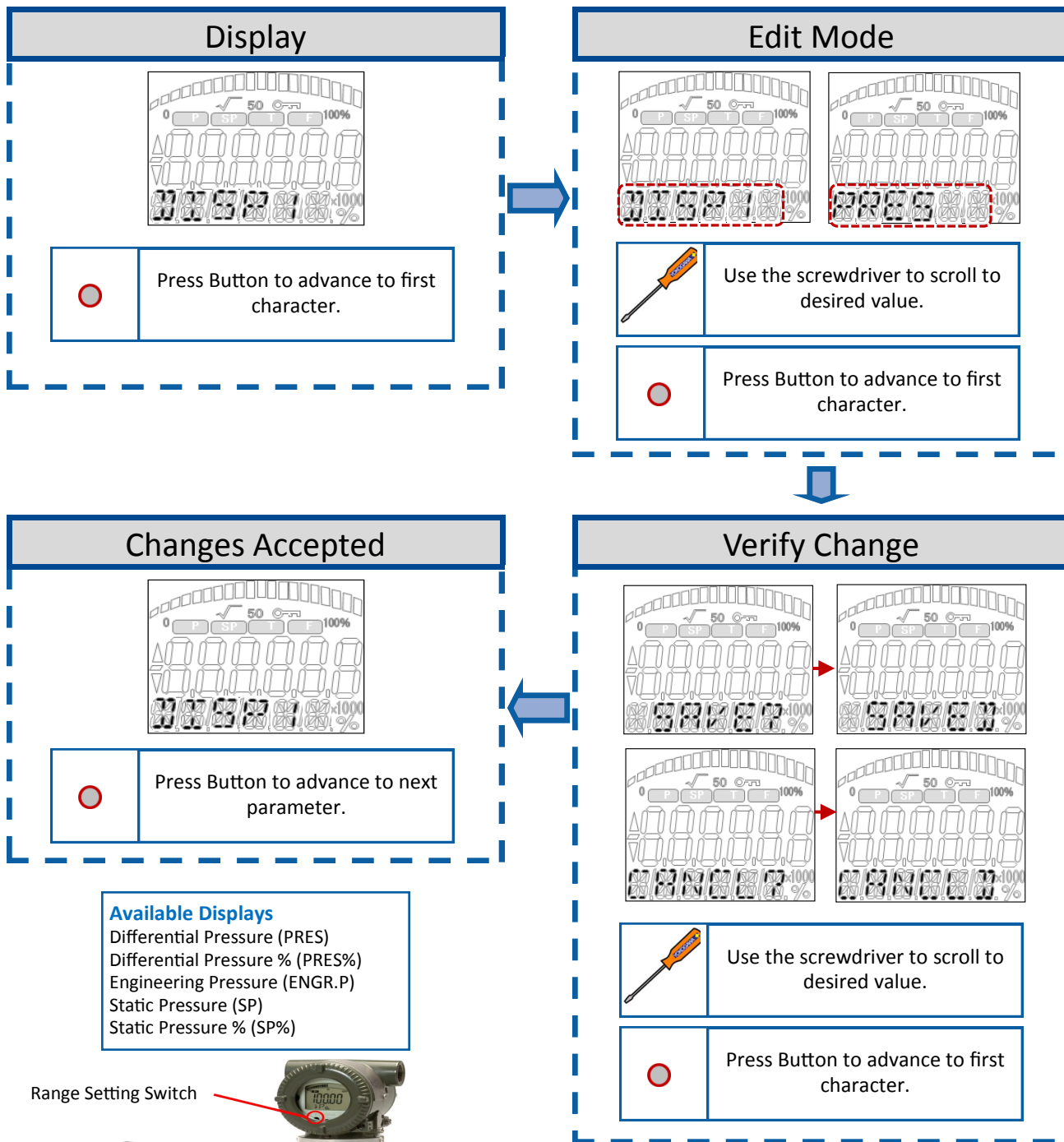
Use the screwdriver to scroll to desired value.

Press Button to advance to first character.

**Available Transfer Functions**  
 Linear  
 Square Root

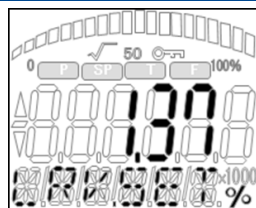


# Editing the Display



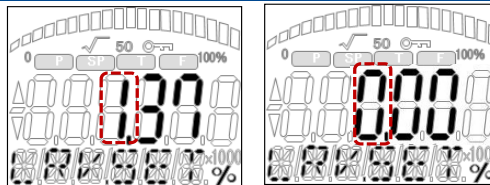
# Calibrating the LRV (%) and URV (%)

## Low Range Value Calibration



Press Button to advance to first character.

## Edit Mode



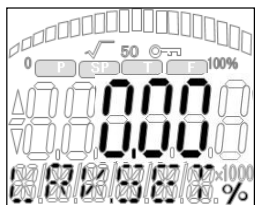
Use the screwdriver to scroll to desired value.



Press Button to advance to first character.

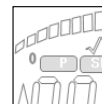
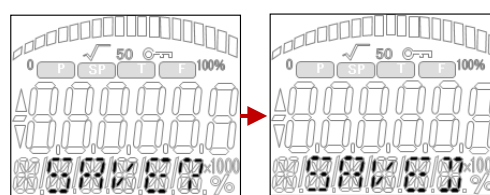
Repeat sequence until all characters have been updated

## Changes Accepted



Press Button to advance to next parameter.

## Verify Change



Use the screwdriver to scroll to desired value.



Press Button to advance to first character.

### Helpful Tips

Scroll through to decimal point in order to insert the decimal point. The edit will produce an error if no decimal point is inserted. URV calibration is the same process.

Range Setting Switch

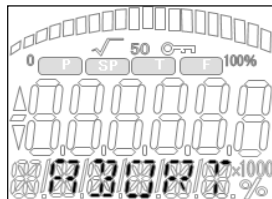


Zero Adjust Screw



## Helpful Tips

### Abort Menu

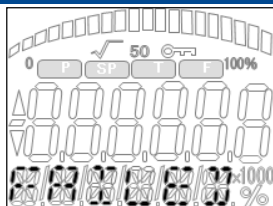


To immediately get out of the menu and return to the normal process value push and hold the button for over 2 seconds. During editing the value, you can return to the menu by pushing and holding the button for over 2 seconds. At that time you can go through the save or cancel process to return to the menu.

### Review Current Setting

In each first window the current setting value is shown. If you want to review only the current setting, but not want to change the value, after seeing the value push and hold the button for more than 2 seconds.

### Fail to Save



When a value is edited and the new update is not input correctly then a FAILED message will appear. This means that the value needs to be changed in order to continue.

### Re-Range by Applying Actual Pressure EXAMPLE (LRV/URV)

Re-Range LRV to 0 and URV to 3 MPa.

- 1) Connect the transmitter and apparatus as shown in Figure 8.1 and warm it up for at least five minutes.
- 2) Press the range-setting push-button. The integral indicator then displays "LRV.SET."
- 3) Apply a pressure of 0 kPa (atmospheric pressure) to the transmitter. (Note 1)
- 4) Turn the external zero-adjustment screw in the desired direction. The integral indicator displays the output signal in % (Note 2)
- 5) Adjust the output signal to 0% (1 V DC) by rotating the external zero-adjustment screw. Press the button to save the value. Doing so completes the LRV setting. (Note 3)
- 6) Press the range-setting push-button. The integral indicator then displays "URV.SET."
- 7) Apply a pressure of 3 MPa to the transmitter. (Note 1)
- 8) Turn the external zero-adjustment screw in the desired direction. The integral indicator displays the output signal in % (Note 2)
- 9) Adjust the output signal to 100% (5 VDC) by rotating the external zero-adjustment screw. Press the button to save the value. Doing so completes the URV setting.
- 10) Press the range-setting push-button. The transmitter then switches back to the normal operation mode with the measurement range of 0 to 3 MPa.

**Note 1:** Wait until the pressure inside the pressure-detector section has stabilized before proceeding to the next step.

**Note 2:** If the pressure applied to the transmitter exceeds the previous LRV (or URV), the integral indicator may display error number "AL.30" (In this case, the output signal percent and "AL.30" are displayed alternately every two seconds). Although "AL.30" is displayed, you may proceed to the next step. However, should any other error number be displayed, take the appropriate measure in reference to, "Errors and Countermeasures" in each communication manual.

**Note 3:** Changing the lower range value (LRV) also automatically changes the upper range value (URV), keeping the span constant.  $URV = \text{previous URV} + (\text{new LRV} - \text{previous LRV})$ .