










Protocol 3 Calibration Offsets








Purpose: An introduction to using offsets on the Protocol 3 control.

Accessing the Configuration Menu:

To access the Configuration Menu, and all of its sub-menus, the control must be in its cycle complete or stopped state (not running), if it is not in that state press the  button to stop the control before proceeding.

1. Press  and  together from the Select a Mode screen. This should access the Main Menu.
2. From the Main Menu, use  or  to scroll to Configuration Menu. Press  when configuration menu is highlighted.
3. A prompt will appear to enter an unlock code. Enter the correct code with  and  (the default code is 0010), then press . This should access the Configuration Menu.

Working with the Input Configuration:

With Input Configuration highlighted, press . The Input Configuration menu allows you to configure items associated with the Control Input Setup, The Control Input Cal, The High Limit Input Setup, and the High limit Input Cal. The Control Calibration Offset parameters are in the Control Input Cal menu. The High Limit Calibration Offset parameters are in the High limit Input Cal menu. The two inputs are calibrated separately. Use  and  to scroll to Control Input Cal or High Limit Input Cal then press . From this screen, you have the choice of three different Calibration types. They are Factory Calibration, Single Point calibration, and Two Point Calibration. Only one choice is active at any given time. The highlighted choice is the active choice. Use  or  to scroll and highlight the desired choice. Press  with your choice highlighted to configure the settings within that choice.




Factory Calibration

Factory means no calibration offset. Selecting this choice disables the Single Point and Two Point Calibration options. There is no settings to configure for this choice.

Single Point Calibration

The screen will show the value that the process input (PV) is offset. This offset will be the same throughout the controller's input range.

Example: If the control was reading 100 degrees, and you measures 110 degrees inside the oven with the Calibration Offset set to Off, you would want to enter a Calibration Offset of 10 degrees. This would increase the displayed temperature by 10 degrees to match the actual temperature measured in the

oven. Use  or  to set the value, then press .

Two Point Calibration

The Two Point Calibration allows you to pick two temperature points with two different offsets. The actual offset at any given temperature will be interpolated between the chosen points and extrapolated above and below the chosen points.




Example: Given the following settings,



Calibration Low Temp = 100, Calibration Low Offset = 1,


Calibration High Temp = 200, Calibration High Offset = 2

The offset at 0 would be 0, the offset at 150 would be 1.5, and the offset at 300 would be 3.




Choosing Two Point Calibration, the screen will show Calibration Low Temp, the point that the low offset

will occur. Use  and  to change the value, then press .

The Calibration Low Offset value, the amount of offset to apply will be shown. Use  and  to change the value, then

press . the screen will then show Calibration High Temp, the point that the High offset will occur.

Use  and  to change the value, then press .



The Calibration High Offset value, the amount of offset to apply will be shown. Use  and  to change the value, then press .

Example:

If with the calibration type set to Factory Calibration (no offset) the display on the control read 100 when the actual temperature measured 99, and if the display on the control read 200 when the actual temperature measured 195, you would want to enter the following Two Point Calibration settings.

Calibration Low Temp = 100, Calibration Low Offset = -1,
Calibration High Temp = 200, Calibration High Offset = -5.

Retuning to the Main menu

Pressing and holding  and pressing  several times will return the control to the Select a Mode Menu.