

# Calibration of Rosemount Transmitter

## 1. Zero Calibration

When adjusting the transmitter, please turn off the protection setting, which is usually the red switch in front of the meter and its status may be ON or OFF.

If it is ON, you will not be able to make the calibration adjustment.



**Figure 1:** [Rosemount Transmitter 1151DP5E22M6Y1](#)

## Calibration Steps

First, ventilate the transmitter, and connect measuring circuit with the manual operator.

Then, operate on the manual operator as follows.



Finally, calibrate the transmitter through zero calibration according to the manual operator.

It is important that the zero calibration must be for the transmitter whose output is within 3% around zero.

## 2. DAC Calibration (Output Calibration)

The output calibration means to calibrate the signal output conversion from digital-to-analog (DAC).

Operate on the manual operator as follows.



And set the control loop as manual mode.

Before confirming, notice that if the positive and negative wiring is correct. Finally, the output of the field device is set to 4mA, and the output of the transmitter is 4mA. Then record the actual value of the reference table, and input the value on the transmitter.

Check whether the output of the manual operator is consistent with the value of the reference table. If it is consistent, change the output to 20mA, and then repeat the operation until it's accurate. If not, you should continue to input the reference value and inspect whether it is consistent with the manual operator output. Finally, set the control loop as automatic control.



Figure 2: [Rosemount Transmitter 1151HP7S22M4B1](#)

## 3. ADC Calibration (Sensor Calibration)

The sensor calibration is to calibrate the analog-to-digital converter (ADC). The main work to be done is zero calibration and full calibration. Full calibration requires three times the accuracy of the transmitter. Operate on the manual operator as follows.



If the accuracy value of transmitter is 0.25mA, the lower limit output will be 0.06mA.

## Related Info

[Benefits of Rosemount Fieldbus Transmitter](#)

[Rosemount Transmitter Series 1151, 2088, 2051, 3051CA, 3051S](#)