



ES Service Information

File In/With: 160.69-M1, 160.54-M1
(Supersedes 5-04 version) 160.55-M1, 160.81-M1

SI0076

Equipment Affected: YD, YK, YR & YT Chillers

Refrigerant Level Sensor Calibration Procedure

General

There are two different versions of the Refrigerant Level Sensors. The operation of both the sensors is the same. However, the difference is in the calibration adjustments. Some sensors are equipped with adjustable potentiometers labeled “S”(span) and “Z”(zero). Others are equipped with calibration pushbuttons labeled “F/UP”, “E/DN”, “MAX”, and “MIN”.

1. Remove the cover plate on the Refrigerant Level Sensor to expose the printed circuit board. Locate the calibration adjustments. If it is the sensor type that is equipped with calibration pushbuttons, place the Program Jumper in the “11-18V” position.

In the following procedure the Probe output is measured with a DC Voltmeter connected to the Probe output as follows:

Potentiometer type – terminal 3 (signal) or Microboard J8-13
2 (Gnd) or Microboard J8-3

Pushbutton type – terminal “OUT” (signal) or Microboard J8-13
terminal “V-“ (Gnd) or Microboard J8-3

2. At the keypad, login at SERVICE access level using access code 1 3 8 0.
3. Shutdown the chiller. Manually open the Variable Orifice to the full open position using the keys on the REFRIGERANT LEVEL CONTROL Screen. This will cause the condenser refrigerant level to be at minimum. With the level at minimum, set the 0% point as follows:
 - a. If equipped with calibration potentiometers, adjust the “Z” calibration screw to achieve 0.0Vdc to 0.43Vdc at the output of the Probe.
 - b. If equipped with calibration pushbuttons, hold both the “MIN” and “MAX” buttons in and push the “E/DN” button once and hold it for at least 1 second. The output of the Probe will go to 0.0Vdc to 0.43Vdc.
4. Start the chiller. With the chiller running, manually control the orifice from the REFRIGERANT LEVEL CONTROL Screen using the Open, Close and Hold keys to place the refrigerant level above the site glass. This places the refrigerant level at maximum. With the level at maximum, set the 100% point as follows:
 - a. If equipped with calibration potentiometers, adjust the “S” calibration screw to achieve 5.0Vdc at the output of the Probe.
 - b. If equipped with calibration pushbuttons, hold both the “MIN” and “MAX” buttons in and push the push the “F/UP” button once and hold it for at least 1 second. The output of the Probe will go to 5.0Vdc.
5. If equipped with calibration potentiometer screws, seal with a small amount of sealant to secure the screws.
6. Replace Level Sensor cover plate.
7. On the REFRIGERANT LEVEL CONTROL Screen, select AUTO level control operation.