

# IYORK®

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Supersedes: NOTHING

896

Form 160.49-M2 (SB10)

File with Form:

160.49-M2

SUBJECT: YK                    CHILLER - REFRIGERANT LEVEL SENSOR CALIBRATION

Although the condenser refrigerant level sensor (R22 - 025-31713-000; R134a - 025-31712-000) used on the subject chillers is supposed to be calibrated as received from the manufacturer, it might be necessary to field calibrate this device if the calibration is not correct. If field calibration is necessary, perform the following procedure.

The refrigerant level sensor has a cover plate secured by two screws. Remove this cover plate to expose the two calibration points, "Z" (zero) and "S" (span) and output signal terminal strip. These calibration points determine the level sensor output voltage when the refrigerant level is at minimum and maximum respectively. The level sensor output voltage is measured at the terminal strip between terminal 2 (common) and 3 (signal). In the procedure below, the level sensor will be calibrated at the 0% and 50% level.

- 1.) Shutdown the chiller. After the vanes have fully closed (vane switch closed), the orifice will be driven to the fully open position. With the orifice fully open, adjust the LEVEL SENSOR "Z" (zero) calibration screw until the level sensor output voltage is 0.05 vdc.
- 2.) Start the chiller and manually control the variable orifice actuator or adjust the LEVEL SETPOINT until the condenser liquid refrigerant level is at the midpoint of the site glass. With the refrigerant at this level, adjust the level sensor "S" (span) calibration screw until the output voltage is 2.5 vdc. Note: Due to turbulence within the condenser, it will be difficult to maintain the level at the midpoint of the site glass. Therefore, the calibration should be performed with the level as close to the site glass midpoint as can be achieved.
- 3.) Seal the calibration screws with a small amount of sealant.
- 4.) Replace refrigerant level sensor cover plate.



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