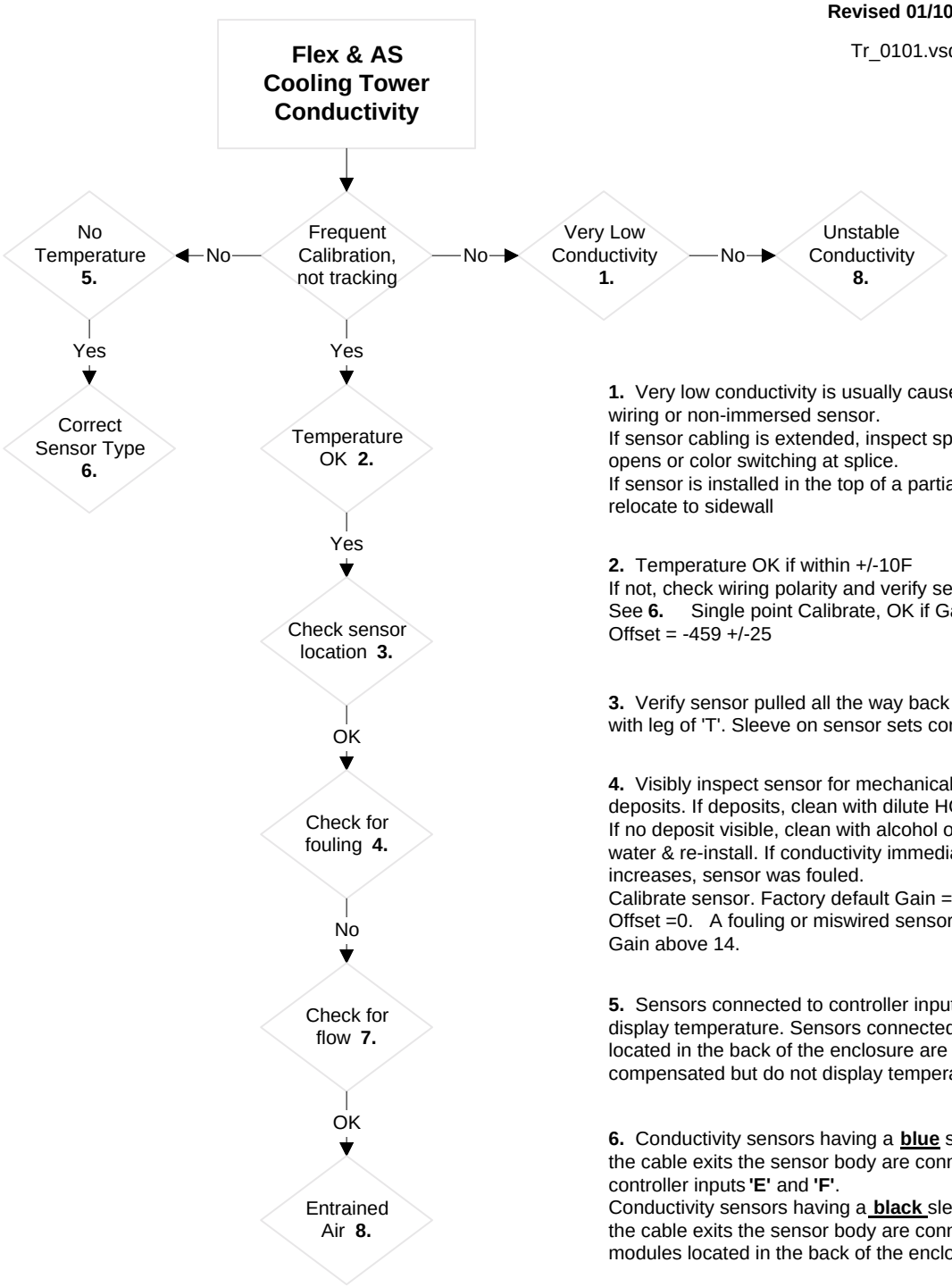
Troubleshooting# 01

Revised 01/10/01

Tr_0101.vsd



1. Very low conductivity is usually caused by open wiring or non-immersed sensor.
If sensor cabling is extended, inspect splices for opens or color switching at splice.
If sensor is installed in the top of a partially filled pipe, relocate to sidewall

2. Temperature OK if within +/-10F
If not, check wiring polarity and verify sensor type , See **6.** Single point Calibrate, OK if Gain = 0.36, Offset = -459 +/-25

3. Verify sensor pulled all the way back so face flush with leg of 'T'. Sleeve on sensor sets correct location.

4. Visibly inspect sensor for mechanical damage or deposits. If deposits, clean with dilute HCl.
If no deposit visible, clean with alcohol or soap & water & re-install. If conductivity immediately increases, sensor was fouled.
Calibrate sensor. Factory default Gain =10 & Offset =0. A fouling or miswired sensor will have a Gain above 14.

5. Sensors connected to controller inputs **'E'** and **'F'** display temperature. Sensors connected to modules located in the back of the enclosure are thermally compensated but do not display temperature.

6. Conductivity sensors having a **blue** sleeve where the cable exits the sensor body are connected to controller inputs **'E'** and **'F'**.
Conductivity sensors having a **black** sleeve where the cable exits the sensor body are connected to modules located in the back of the enclosure.

7. Valve OFF flow & verify that the controller shows flow off. A single tower controller uses input **'U'**, Tower Recirculating to monitor the flowswitch.
If flowswitch not working or bypassed, check for flow at the sensor and at the return. Flow at the sensor does not ensure that you are not blocked downstream from the sensor.

8. Remove the sensor & suspend in the center of a coffee cup of tower water. Conductivity reading should be stable and calibration should succeed - See **4.**

Calibrating Conductivity.
1. Use single point calibration for all conductivities >100uS. Use the Key Current Value option with IR Remote.
2. Measure the tower conductivity & Key Current Value. If you get a Gain from 9-14, key Enter. Your sensor & installation's OK.
3. If the Gain increases each time you calibrate, the sensor is fouling.