

## HOFMANN ELECTRONICS

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ELECTRODE TEST PLUG for the **CTH-3, CTH-1, BCH-1** and **DCH-2** COND. CONTROLLERS

The 4-pin test plug is useful for a simple and quick instrument testing in the field.

A simulated 1000 uS and actual temperature compensation are build into the plug.

This plug will simulate all HOFMANN PVC & POLYPROP. electrodes  
(*CEV-M-XX, CEV-SP-XX, CEP-M-XX AND CEP-SP-XX*)

To test an instrument simply replace the electrode with this plug.

A CTH-3 or DCH-2 controller if working correctly will show aprox. 1000uS (*depending of course on the actual electrode calibration.*)

A CTH-1 or BCH-1 blind controller can be checked for proper bleed & inhibitor settings.

You can now test for:

- Steady readout of the conductivity,
- Temperature compensation working,
- Bleed and inhibitor set points are actually switching,
- Biocide locking out bleed & inhibitor dosing.

### **Readout:**

If you experience a fluctuating reading with the electrode but not with the test plug the problem is associated with the electrode assembly. Turbulence in the water flow, air bubbles in the sample line, a faulty electrode or a ground loop all can cause this problem. Only a process of elimination will help find the offending part.

The fault is the instrument if the readout fluctuates with the test plug inserted.

### **Conductivity value displayed:**

This test plug by no means is meant to be a calibration device for conductivity but gives a good indication of the calibration setup.

If you can adjust 1000uS (test plug inserted) and the calibration screw slot is aprox. vertical (11o'clock) the controller performs correctly.

The fault is with the instrument if you cannot achieve a readout of 1000uS with the test plug inserted.

Caution! Early models of the CTH-3 had a range of 0-2000uS. (*pre 1996*) An internal jumper sets a divide by ten range. The LCD shows 100 with actual conductivity of 1000uS.

### **Temperature compensation:**

As we are simulating conductivity with the plug the value of 1000uS will reduce if the temperature of the plug is raised. Apply some form of heat (*hold in hand or blow into the back of the plug*) and you will see the displayed reading decrease rapidly. This is normal and indicates the compensation circuit is working correctly.

### **Bleed & inhibitor settings:**

You can test the bleed and inhibitor set points with 1000uS displayed (*test plug inserted*)

The relays and LED lights must switch cleanly without chatter.

An electrical interference is present if the relays chatter with the electrode connected but not with the test plug.

Relay chatter when switching even with the test plug connected indicates faulty set point controls (*dirty, and can be fixed by carefully squirting a small amount of electrical cleaner into the pot meter.*)

This device helps an operator to quickly pin point some problems occurring in an installation. It is however by no means meant to be a tool to perform an analysis on site.



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