

**750 Series II
CONDUCTIVITY/TDS
&
RESISTIVITY
MONITOR/CONTROLLER
Operation
Manual**

22 October 08

INSTALLATION • OPERATION • MAINTENANCE

Conductivity/TDS Models: 756II, 757II, 758II & 759II

Resistivity Models: 751II, 752II, 753II & 754II

ACCURACY • RELIABILITY • SIMPLICITY

**MYRON L
COMPANY**
Water Quality Instrumentation
Accuracy • Reliability • Simplicity



750 Series II

Model 758II -121-SC

(A Digital Conductivity
Monitor/controller,
with a Range of 0-2000 μ S,
and a Second Alarm/control,
Displaying Full Scale)

750 Series II MONITOR/CONTROLLER QUICK REFERENCE GUIDE

If you read nothing else in this manual please read this Quick Reference Guide.

PLEASE READ and COMPREHEND ALL WARNINGS, CAUTIONS and ADVISEMENTS CONTAINED WITHIN THIS MANUAL.

Failure to comply is beyond the responsibility of the Myron L Company.

WARNING: ALL MONITOR/CONTROLLERS ARE FACTORY SET TO OPERATE ON 115 VAC. BEFORE APPLYING POWER ENSURE THE INPUT POWER "115/230 VAC" SELECTION IS CORRECT FOR YOUR REQUIREMENTS. FAILURE TO DO SO IS BEYOND THE RESPONSIBILITY OF THE MYRON L COMPANY. See section II.E.2. and figure II.E.1.

NOTE: SOME MODELS MAY HAVE EITHER A 24 VAC OR A 24 VDC INPUT POWER REQUIREMENT - CHECK LABELS CAREFULLY.

WARNING: ENSURE POWER IS OFF WHILE INSTALLING ELECTRICAL EQUIPMENT. IF MONITOR/CONTROLLER IS INSTALLED, ENSURE THE POWER IS OFF BEFORE SERVICING. FAILURE TO DO SO COULD CAUSE DAMAGE TO THE INSTRUMENT, AND COULD BE HARMFUL OR FATAL TO PERSONNEL. ONLY QUALIFIED PERSONNEL SHOULD INSTALL OR SERVICE ELECTRICAL EQUIPMENT.

WARNING: THE DISPLAY WILL BE IRREPARABLY DAMAGED IF THE DISPLAY HARNESS IS INSTALLED UPSIDE-DOWN OR MISALIGNED. THE HARNESS MUST BE INSTALLED AS SHOWN IN FIGURE II.E.8.

CAUTIONS:

Before installation, ensure you have the correct model (with options), AND it is ranged for your application. See sections I.A., I.B. & I.G. Do you have the correct sensor? See section I.E. Mounting requirements. What is needed? See section II.B.

The following will give the installer and user a quick overview. See the sections listed for details.

REMOVING FRONT PANEL

NOTE: When opening instrument, remove front cover with care; a ribbon cable connects the front panel and main board.

1. Ensure power is **OFF**.
2. Remove the four (4) screws on the front panel.
3. Carefully wiggle the front panel to loosen the gasket and pull gently toward you. Do not pull more than about 8 inches/20CM or you could damage the wiring harness.

REASSEMBLY

1. Carefully reinstall the front panel, bottom first. Ensure no wires have been pinched between enclosure and front panel.
2. Reinstall the four (4) screws and tighten.
3. To operate, turn power **ON**.

INTRODUCTION - Section I.

This section covers the specifications of your new Monitor/controller including sensor information.

INSTALLATION - Section II.

This section covers how to install your new Monitor/controller; mechanically and electrically.

OPTIONS & ACCESSORIES - Section III.

This section covers the specifications, installation, set up, and operation of each option.

QUICK LOCATOR

SC/SCO MODULE, (Second Relay), see section III.A.

4A/4AO MODULE (4-20mA), see section III.B.

TP/TPO MODULE (Temperature), see section III.C.

TH/THO MODULE (Alarm /control Harness), see section III.D.

DUAL (stacking) Temperature (TPO) & 4-20mA (4A/4AO), see section III.E.

3SO/3SE MODULE (3 Sensor option) , see section III.F.

3RO/3RE MODULE (3 Range option), see section III.G.

3SRO/3SRE MODULE (Combined 3 Sensor & 3 Range option), see section III.H.

PA/PAO (Piezo Alarm), see section III.I.

RA (Remote Alarm), see section III.J.

OPERATING PROCEDURES - Section IV.

This section covers a brief description of different models and their features; how they work, and how to set them up for your particular use.

QUICK SET POINT CONVERSION (SPC) /

REVERSING SET POINT - See Section IV.C.1.

Conductivity/TDS Monitor/controllers are configured to trigger the alarm relay as the conductivity/TDS reading increases. Resistivity Monitor/controllers are configured to trigger the alarm relay as the resistivity reading decreases.

To reverse:

1. Locate the jumper block for the alarm to be configured. See figure V.A.1.
2. Remove and rotate the jumpers 1/4 turn and reinstall them on their posts.

QUICK CHECK-OUT PROCEDURE -

See Section IV.C.2.

It is assumed that the Monitor/controller power is ON, that it is

connected to an appropriate Sensor, and that the Sensor is immersed in water within the range that the Monitor/controller will be required to read; and the front panel is removed.

1. Make a note of the reading on the display.
2. While pressing the Calibration/Full Scale Test Switch (FSSW), verify that the front panel display is indicating a full scale reading. If not, see Calibration, section V.C.
3. Press and hold the "SET POINT" switch on the front panel. Using a tweaker or a small screwdriver, adjust the Set Point trimmer adjustment screw on the circuit board to sweep the display from zero to full scale. (A digital display may be blank at the full scale end. This is normal.) Listen for the alarm relay to click on and off as the alarm set point moves past the water reading.
4. Adjust the alarm to the desired set point value. Release the "SET POINT" switch.

NOTE: For Models with SC/SCO module, repeat STEPS 3 & 4 to check out Set Point #2.

QUICK SET POINT ADJUSTMENT -

See Section IV.C.3.

The set point setting is based upon the user's particular water purity specifications or requirements. **NOTE:** The optional **second** relay/alarm is "stacked" on the first relay/alarm, therefore, when setting the optional **second** relay/alarm Set Point, the #1 Set Point must be 'set' first.

1. While pressing the "SET POINT" switch, turn the Set Point #1 adjustment screw (see figure V.A.1) until the desired set point value is indicated on the display.

HYSTERESIS (DEAD BAND) ADJUSTMENT -

See Section IV.C.4.

PRIMARY COMPONENT IDENTIFICATION - Section V.A.

Review the figure below to familiarize yourself with the Main circuit board assembly. The diagram has the second alarm/control module option installed.

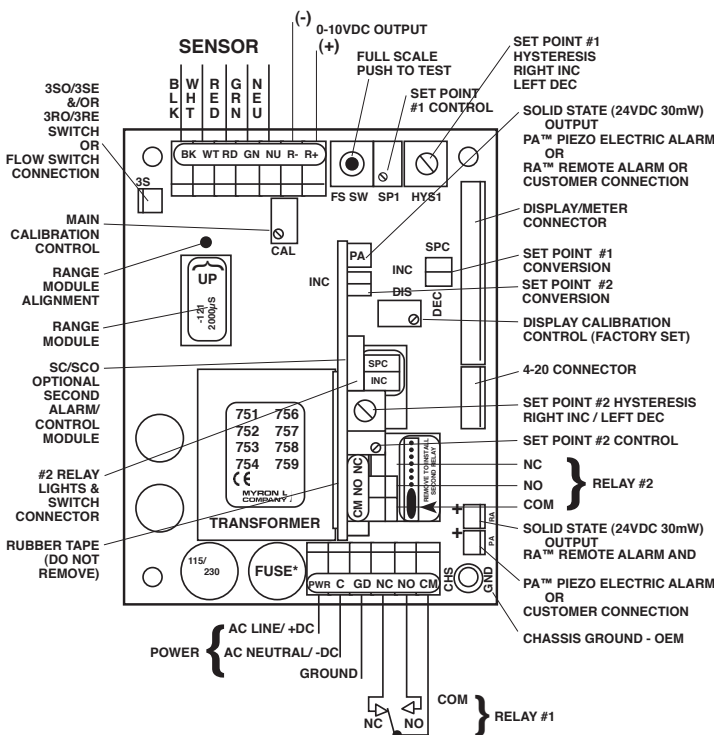


Figure V.A.1

QUICK CALIBRATION - Section V.C.

WARNING: When performing calibration procedures, the technician must take extreme care to avoid contacting the circuitry other than the **CAL**ibration control. Failure to do so could result in damage to the equipment, property and/or personal injury.

The following assumes the front panel has been removed and the power is ON.

ELECTRONIC CALIBRATION (CIRCUIT ONLY) - See Section V.C.1.

Full Scale Adjustment

1. Press and hold the Full Scale Test switch. The display should indicate Full Scale for the particular range selected, i.e. 0-500 ppm should indicate 500. If not, set to Full Scale with the **CAL**ibration control.
2. Turn power **OFF**.
3. Re-install front panel as described in "REASSEMBLY".
4. To operate, turn power **ON**.

10VDC Calibration - See Section V.C.1.b.

Using Standard Solutions - Section V.C.2.

The **BEST** method of verifying and recalibrating your conductivity/TDS Monitor/controller is with NIST traceable Standard Solution (available from the Myron L Company). Because it includes the sensor, the entire system is recalibrated. **NOTE:** Since standard solution calibrations are NOT practicable with resistivity models, another means of verification or calibration of resistivity models is to use the transfer standard method, using a hand-held or portable instrument capable of resistivity measurements, i.e. the Myron L Ultrameter II™. See section V.C.4 for description.

The following procedure describes the easiest method for standard solution calibration of your Conductivity/TDS Monitor/controller.

1. Using a standard solution which is 60-90% of full scale of the instrument, rinse thoroughly and fill a clean glass beaker with the standard solution.
2. Place sensor in the beaker of standard solution. The level of standard solution must be high enough to cover at least 1/2" above cross hole.
3. Slowly shake the sensor to remove air bubbles from inside the sensor bore hole.
4. Allow 5-10 minutes for temperature to equilibrate. For the quickest and the best results, both the sensor and solution should be at the same temperature.
5. Turn power **ON**.
6. If the reading is different from the standard solution, adjust **CAL**ibration control on the main circuit board until the reading matches the solution value.
7. After adjustment, turn power **OFF**.
8. Re-install front panel as described in "REASSEMBLY".
9. To operate, turn power **ON**.

SENSOR SUBSTITUTE CALIBRATION - See Section V.C.3.

TRANSFER STANDARD METHOD - See Section V.C.4.

VIII. WARRANTY

All Myron L Company Conductivity/TDS and Resistivity Monitor/controllers have a **TWO** Year Limited Warranty. If any Monitor/controller or sensor fails to function normally, return the faulty unit to the factory prepaid. If, in the opinion of the factory, failure was due to materials or workmanship, repair or replacement will be made without charge.

A reasonable service charge will be made for diagnosis or repairs due to normal wear, abuse or tampering. Warranty is limited to the repair or replacement of Monitor/controller or sensor only. The Myron L Company assumes no other responsibility or liability.

MYRON L COMPANY
2450 Impala Drive
Carlsbad, CA 92010-7226
USA
Tel: +1-760-438-2021
Fax: +1-760-931-9189

E-Mail: info@myronl.com
techquestions@myronl.com

www.myronl.com

ADDITIONAL INFORMATION

Custom Monitors/controllers available, contact us with your special needs. Price and delivery upon request.

ALL SPECIAL ORDER ITEMS ARE NON-RETURNABLE AND NON-REFUNDABLE.

Because of our policy of continuous product improvement, the Myron L Company reserves the right to make changes in design, specifications, and prices without notice.

Minimum order \$25.00. All prices are US dollars and are F.O.B. Carlsbad, CA. USA.

Terms: 1% 10 days, net 30 days upon approved credit.

Credit Cards accepted: Visa, MasterCard, and American Express.