

---

# TROUBLESHOOTING THE EMS760 OPACITY MONITOR

Please fill in the following and fax to 203.634.6663 or email to: [service@emsct.com](mailto:service@emsct.com).

Company name \_\_\_\_\_

Your name \_\_\_\_\_ ph. \_\_\_\_\_ Email \_\_\_\_\_

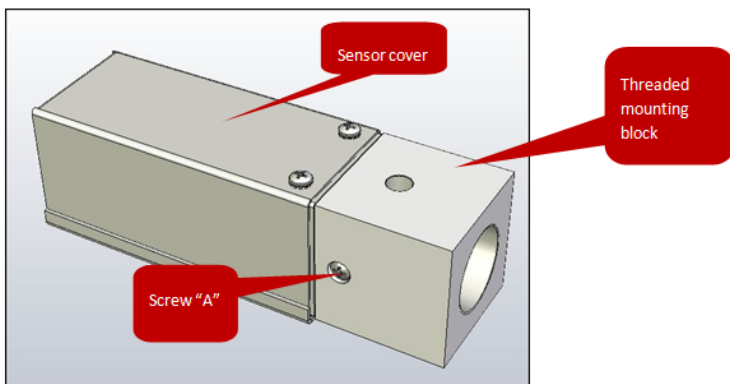
Note: It is assumed that the person conducting the testing below is familiar with the EM760 operation and typical electronic instruments used for the procedures. If you are not familiar with the EMS760 system, please read the operation manual prior to filling out this form.

## Equipment Needed:

Digital volt/current meter such as a Fluke 87, Phillips screwdriver

EMS drawing No. 2894 (PC board component layout)

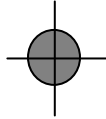
1. Serial number of the Control unit \_\_\_\_\_ Light Source \_\_\_\_\_  
Detector \_\_\_\_\_
2. Loosen the set screws on the light source and detector mounting blocks and remove sensors. Measure the distance from the surface of light source mounting block to the detector mounting block. Record here \_\_\_\_\_.



Environmental Monitor Service, Inc.  
P.O. Box 4340 Yalesville, CT 06491  
Ph. 203.935.0102 Email: [service@emsct.com](mailto:service@emsct.com)

3. Is there smoke or any obstruction in the measurement path? Yes\_\_\_\_ No\_\_\_\_ If “Yes”, a clear path must be obtained.

4. Install the light source ONLY (clean lens); check the alignment by looking through the detector mounting block at the light source. The Light Source should be centered in the opening of the Detector block as shown below. Align it, if needed.



5. Check that the light is modulating (flickering). Is it modulating? Yes\_\_\_\_ No\_\_\_\_.

6. Install the Detector (clean lens).

7. Refer to EMS drawing 2894, the Signal Processor PCB 2582, put the DVM negative lead on TP0, measure and record the lamp drive voltage at TP4 (Red) \_\_\_\_\_Vdc. This voltage should correspond with the voltage written on your monitors final test form. . Measure the DC voltages at TP1 (+15Vdc)\_\_\_\_\_ TP2 (-15Vdc) \_\_\_\_\_ TP7 (-10Vdc)\_\_\_\_\_. If your DVM is equipped with measuring frequency and duty cycle, check it at TP3. Record the frequency \_\_\_\_\_Hz. Record the Duty cycle(20.0%)\_\_\_\_\_.

8. Make sure that the Operate/Span Switch on the PC Board is in Span (up).

9. With the negative lead of your meter on TP0 and the positive lead on TP6 record the voltage reading (0.0) \_\_\_\_\_Vdc. Measure TP8 (5.0) \_\_\_\_\_Vdc.

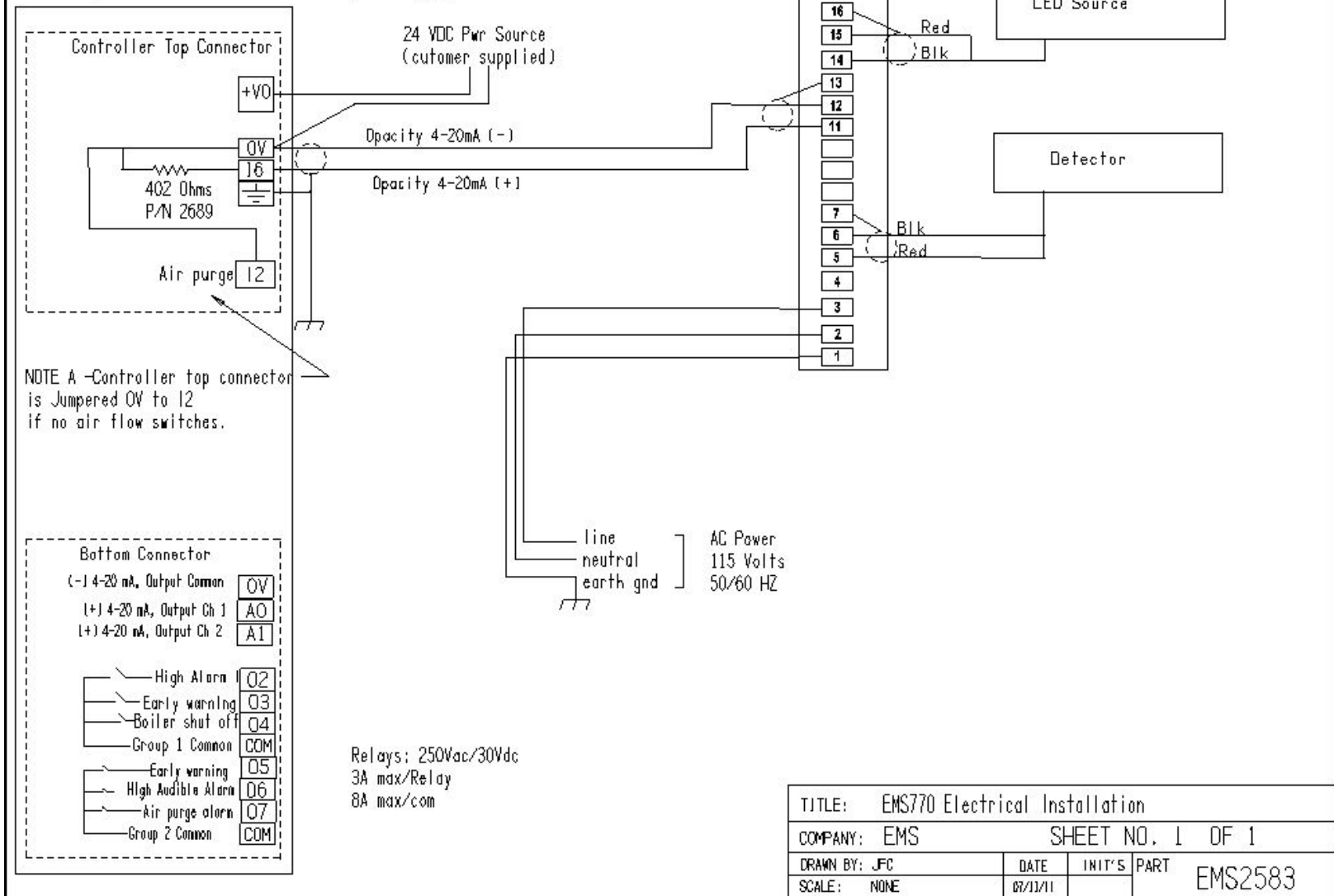
10. Make sure that the Operate/Span Switch on the PC Board is now in Operate (down).

11. With the negative lead of your meter on TP0 and the positive lead on TP6 record the voltage reading (5.0) \_\_\_\_\_Vdc. Measure TP8 (0.0) \_\_\_\_\_Vdc.
12. If voltage is used as the output, check readings on terminal strip 8(-) and 9(+). Make sure that the Operate/Span Switch on the PC Board is in Span (up) measure across terminals 8 and nine(5.0) \_\_\_\_Vdc. Move Operate /Span (down) to Operate. Measure across terminals 8 and nine(0.0) \_\_\_\_\_Vdc
13. Check 4-20 current output across terminals 11 and 12 (if a recording device is connected to terminals be sure to put meter in series) make sure the Operate/Span switch is in span (up position) (4.0ma) \_\_\_\_\_. Switch the Operate/Span switch to the down position (operate) (20ma) \_\_\_\_\_.

***Fax this sheet to EMS at 203-634-6663 or email to [service@emsct.com](mailto:service@emsct.com)***

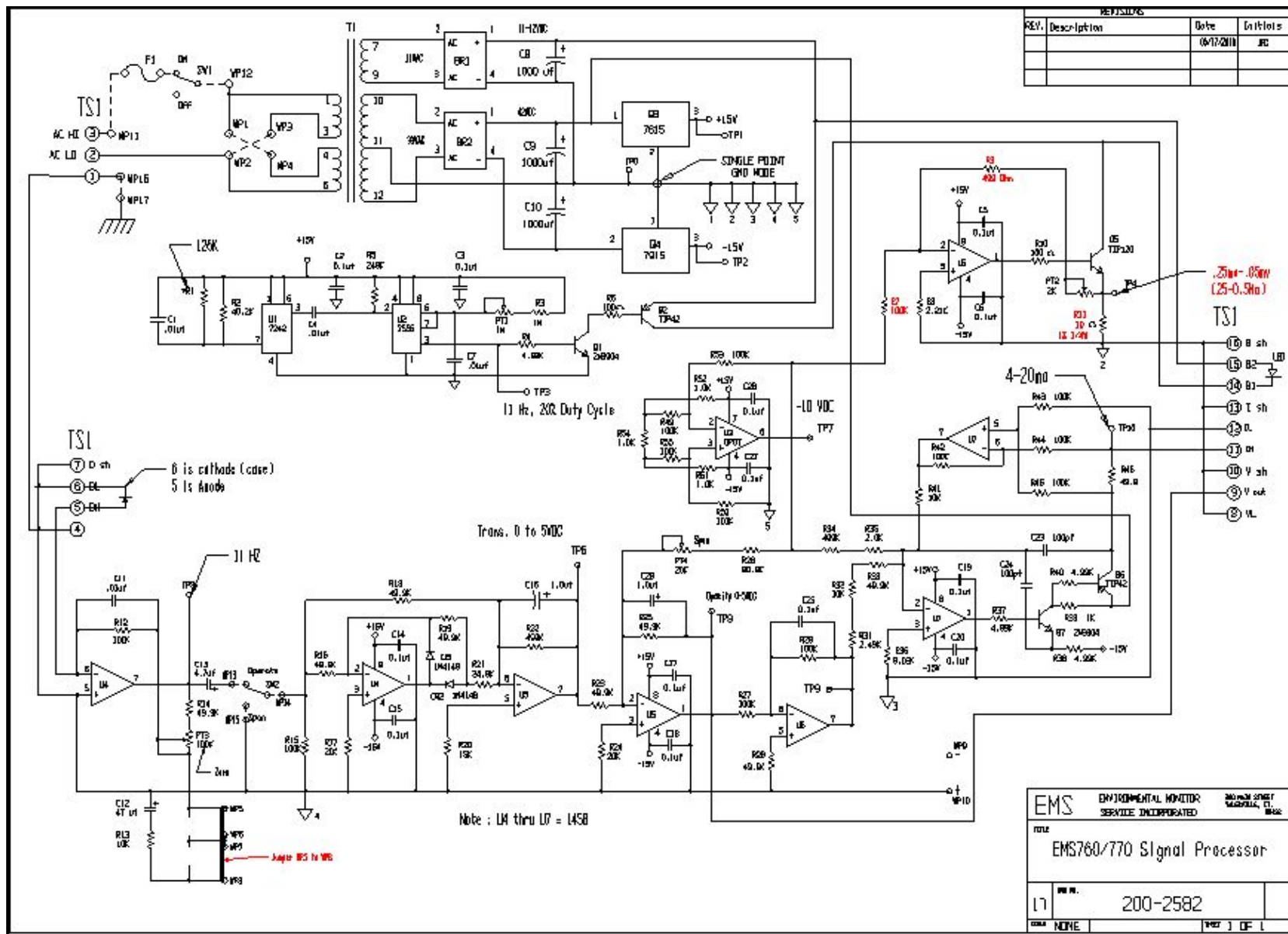
Note: Wire used to earth the power supply must not exceed 8 cm in length. If your conditions do not permit this, do not earth the power supply.

CHG	DESCRIPTION	DATE	INT'S



TITLE: EMS770 Electrical Installation			
COMPANY: EMS		SHEET NO. 1 OF 1	
DRAWN BY: JFC	DATE	INIT'S	PART
SCALE: NONE	07/11/11		EMS2583

Environmental Monitor Service, Inc.  
P.O. Box 4340 Yalesville, CT 06491  
Ph. 203.935.0102 Email: service@emsct.com



P.O. Box 4340 Yalesville, CT 06491  
 Ph. 203.935.0102 Email: service@emsct.com