1.0 RECEIVING INSPECTION

- Unpack carefully.
- Verify that all items in the kit are received and are correct as shown below.

QTY.	DESCRIPTION
1	GUAC 47 Enclosure + Lid
1	5 Pin Terminal Strip
1	Marker Strip
2	Screw 8-32 - 5/8
2	#8 Lock Washer
10 FT.	Cable or equivalent (can be customer specified)

- Inspect all instruments for damage or contaminants prior to installation.

If the above three items are satisfactory, proceed with the installation. If not, then stop and contact a customer service representative.

2.0 PRE-MODIFICATION PROCEDURE

Warning: Only qualified personnel should install this instrument. Install and follow safety procedures in accordance with the current National Electrical Code. Ensure that power is off during installation. Any instances where power is applied to the instrument will be noted in this manual. Where the instructions call for the use of electrical current, the operator assumes all responsibility for conformance to safety standards and practices.

Caution: The instrument contains electrostatic discharge (ESD) sensitive devices. Use standard ESD precautions when handling the control circuit. See below, for ESD details.

The instrument is not designed for weld-in-place applications. Never weld to process connection or a structural support.

Damage resulting from moisture penetration of the control circuit or flow element enclosure is not covered by product warranty.

2.1 Use Standard ESD Precautions

Use standard ESD precautions when opening an instrument enclosure or handling the control circuit. FCI recommends the use of the following precautions: Use a wrist band or heel strap with a 1 megohm resistor connected to ground. If the instrument is in a shop setting there should be static conductive mats on the work table and floor with a 1 megohm resistor connected to ground. Connect the instrument to ground. Apply anti-static agents to hand tools to be used on the instrument. Keep high static producing items away from the instrument such as non-ESD approved plastic, tape and packing foam.

The above precautions are minimum requirements to be used. The complete use of ESD precautions can be found in the U.S. Department Of Defense Handbook 263.

2.2 Remove Power

Remove power to the instrument. Unscrew the top from the enclosure. Power is off when the Amber (DS3) LED is off and not flashing. Remove any power from the customer interface to the instrument.

3.0 MODIFICATION PROCEDURE

3.1 Control Circuit Removal

Grasp the control circuit by the transformer and pull it out with a rocking motion from side to side.

3.2 Remove Control Circuit Terminal Socket From Enclosure

Be sure all wires connected to the terminal socket are labeled. Unscrew all of the connections to the terminal socket. Unscrew two screws holding the terminal socket in place. Remove the terminal socket. Keep the terminal socket and mounting hardware.

3.3 Install Control Circuit Terminal Socket Into Kit Enclosure

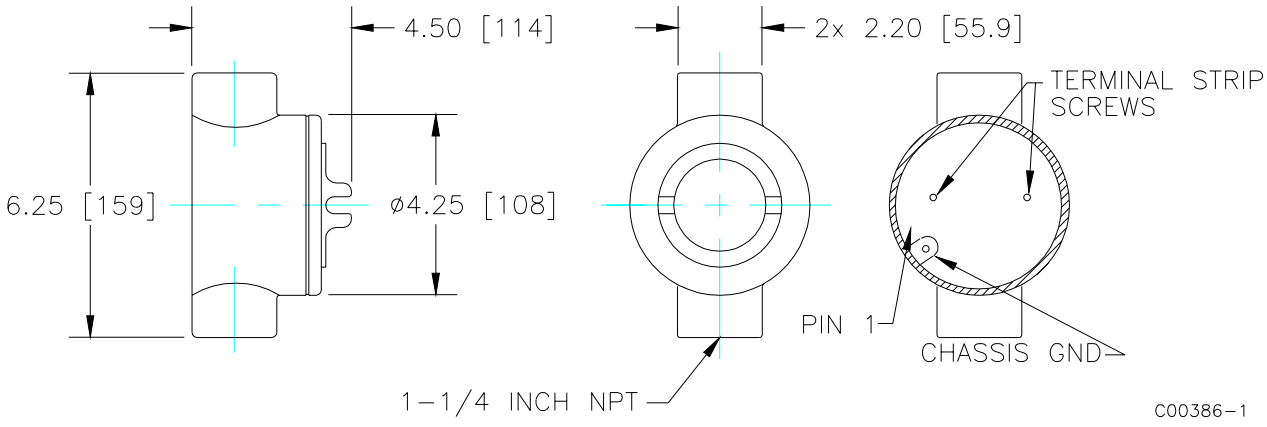
Screw the control circuit terminal socket into the new kit enclosure (GUAC 47) using the existing hardware. Pin 1 of the terminal socket is to be placed closest to the chassis ground screw. See the following figure for the screw hole configuration.

3.4 Install Kit Terminal Strip and Marker Strip Into Existing Enclosure

Screw the kit's 5 pin terminal strip and marker strip (placed underneath the terminal strip) into the existing enclosure using the kit's 8-32 - 5/8 inch screws and # 8 washers.

3.5 Conduit Routing

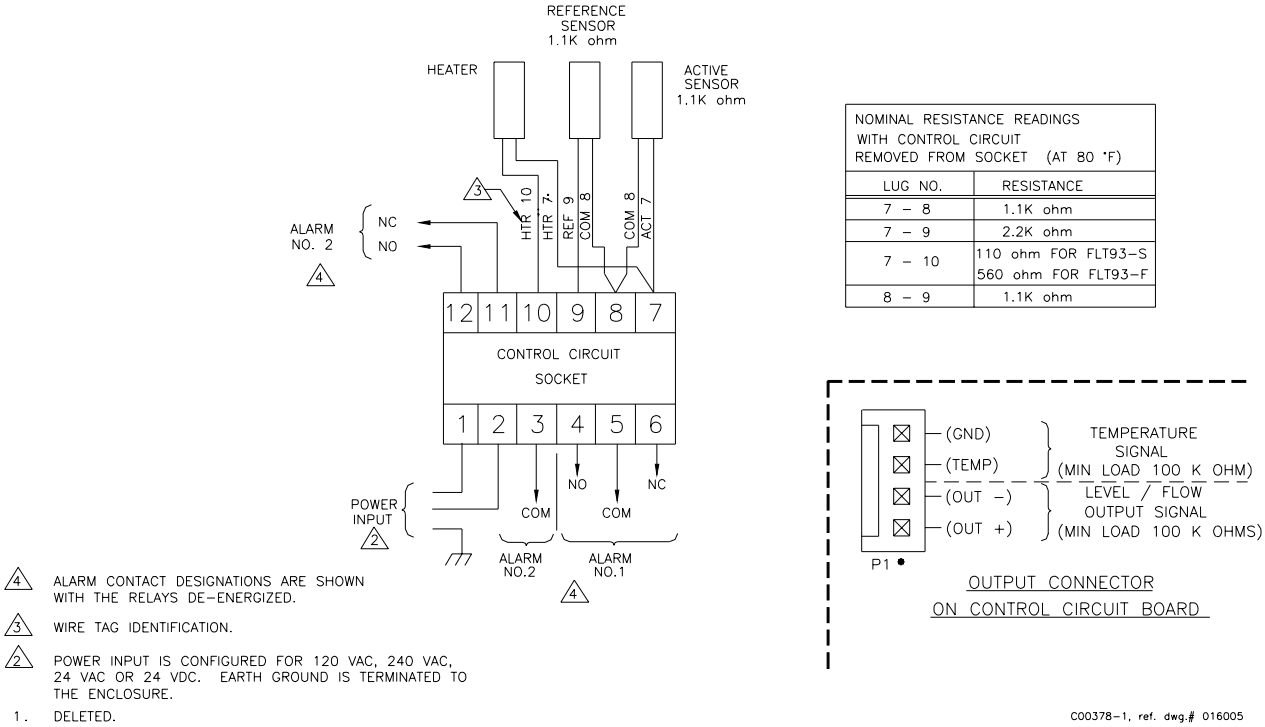
Route conduit between the old (local) enclosure and the kit (remote) enclosure. Be sure the connections are water tight. Re-route the conduit for power and customer applications to the remote enclosure. Be sure the remote enclosure is placed where there is enough room to work with enclosure. See the following figure for enclosure dimensions.



KIT ENCLOSURE AND HOLE CONFIGURATION

3.6 Wiring the Enclosures

Connect the sensing element wires to the kit's 5 pin terminal strip in the existing local enclosure. The wire labeled ACT 7 should be re-labeled as ACT 5 and be connected to terminal 5. Two wires labeled COM 8 should be re-labeled as COM 4 and be connected to terminal 4. The wire labeled REF 9 should be re-labeled as REF 3 and be connected to terminal 3. The wire labeled HTR 7 should be re-labeled as HTR 2 and be connected to terminal 2. The wire labeled HTR 10 should be re-labeled as HTR 1 and be connected to terminal 1. The following figure shows the pre-existing wiring diagram. The second figure shows the wiring diagram after the wires have been re-labeled.



NOMINAL RESISTANCE READINGS WITH CONTROL CIRCUIT REMOVED FROM SOCKET (AT 80 °F)	
LUG NO.	RESISTANCE
7 – 8	1.1K ohm
7 – 9	2.2K ohm
7 – 10	110 ohm FOR FLT93-S 560 ohm FOR FLT93-F
8 – 9	1.1K ohm

4 ALARM CONTACT DESIGNATIONS ARE SHOWN WITH THE RELAYS DE-ENERGIZED.

3 WIRE TAG IDENTIFICATION.

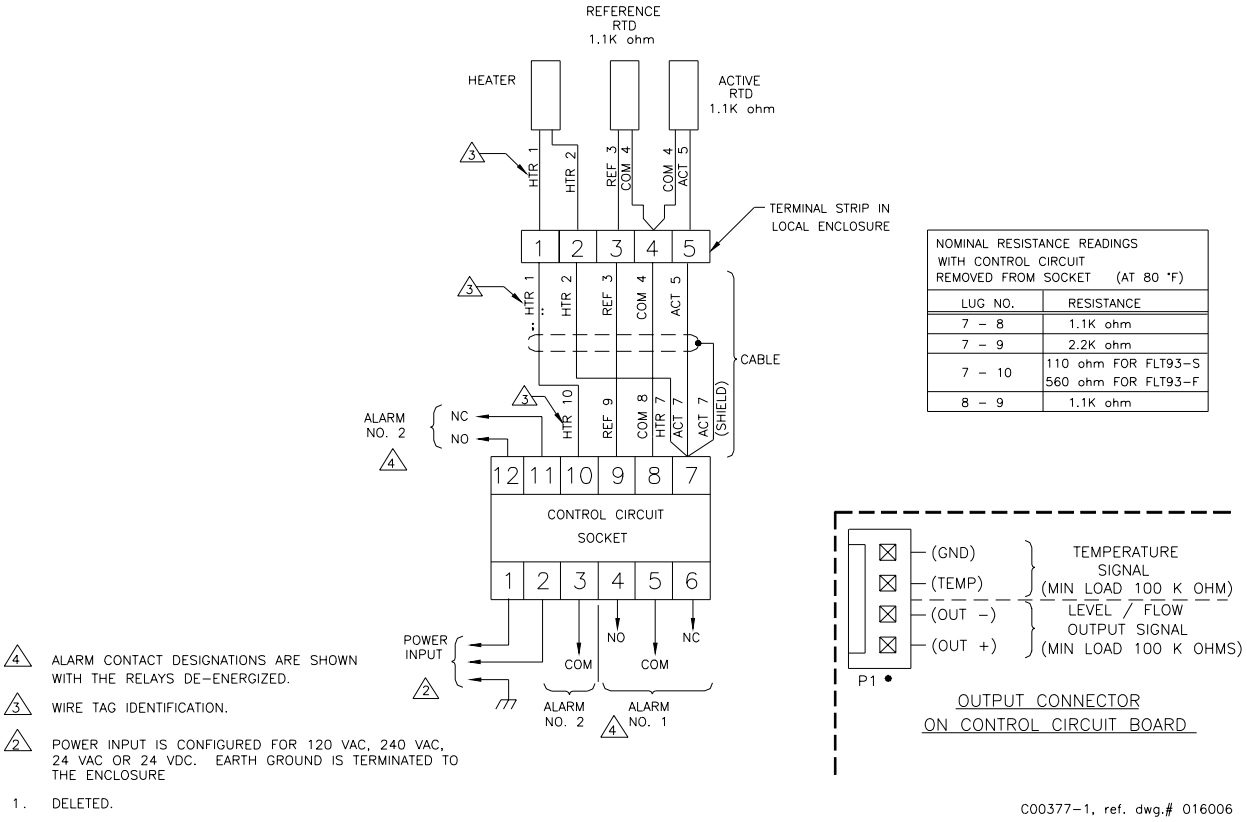
2 POWER INPUT IS CONFIGURED FOR 120 VAC, 240 VAC, 24 VAC OR 24 VDC. EARTH GROUND IS TERMINATED TO THE ENCLOSURE.

1. DELETED.

C00378-1, ref. dwg.# 016005

PRE-MODIFICATION WIRING DIAGRAM

Run the kit cable between enclosures. The shield is to be grounded inside the kit's enclosure to the chassis ground screw. Do not ground the other end of the cable shield. Wire per the following diagram.



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4 ALARM CONTACT DESIGNATIONS ARE SHOWN WITH THE RELAYS DE-ENERGIZED.

3 WIRE TAG IDENTIFICATION.

2 POWER INPUT IS CONFIGURED FOR 120 VAC, 240 VAC, 24 VAC OR 24 VDC. EARTH GROUND IS TERMINATED TO THE ENCLOSURE

1. DELETED.

C00377-1, ref. dwg.# 016006

POST MODIFICATION WIRING DIAGRAM

Re-route the customer connections and power to the kit enclosure. Connect the wiring to the terminal socket as it was connected before the modification. The previous wiring diagram also shows the connections.

3.7 Verify Installation

Verify proper installation. If there are questions refer to Installation, Operation, and Maintenance Manual Document Number 06EN003246 or FCI Customer Service.

3.8 Control Circuit Installation

Push the control circuit back into it's socket. It is keyed so it can not be installed backwards.

4.0 POST MODIFICATION PROCEDURE

4.1 Verify Operation

A) Write down where the heater wattage control jumper is located. The heater jumpers are in the area of the upper left hand side of the control circuit. J12, J13, J14, J32 or J33 are the possibilities. Remove the jumper.

B) Connect an adapter cable to connector P1 by the amber power LED.

C) Connect a digital multimeter to the adapter cable with the positive lead connected to the red wire (OUT +) and the negative lead to the blue wire (OUT -). Set the digital multimeter to volts DC.

D) Turn on the instrument power and wait fifteen minutes for the instrument to stabilize. During this time make sure that the process media is flowing or the sensing elements are submerged. Do not make the following adjustment in still gas.

E) Adjust potentiometer R13 (lower right quarter of control circuit) until the meter reads 0 volts ±5mV.

F) Turn off the instrument power and remove the meter. Re-install the heater jumper in the correct position.

4.2 Re-Check Alarm Settings

It is advisable to re-check the alarm settings by using the procedures found in the FLT Series Manual Document Number 06EN003246, Chapter 3.

4.3 Power Application

Apply power to the instrument. Verify that the Amber (DS3) LED is lit or flashing. Apply power to the customer application if applicable.

4.4 Secure Instrument

Screw the enclosure tops onto the enclosures.