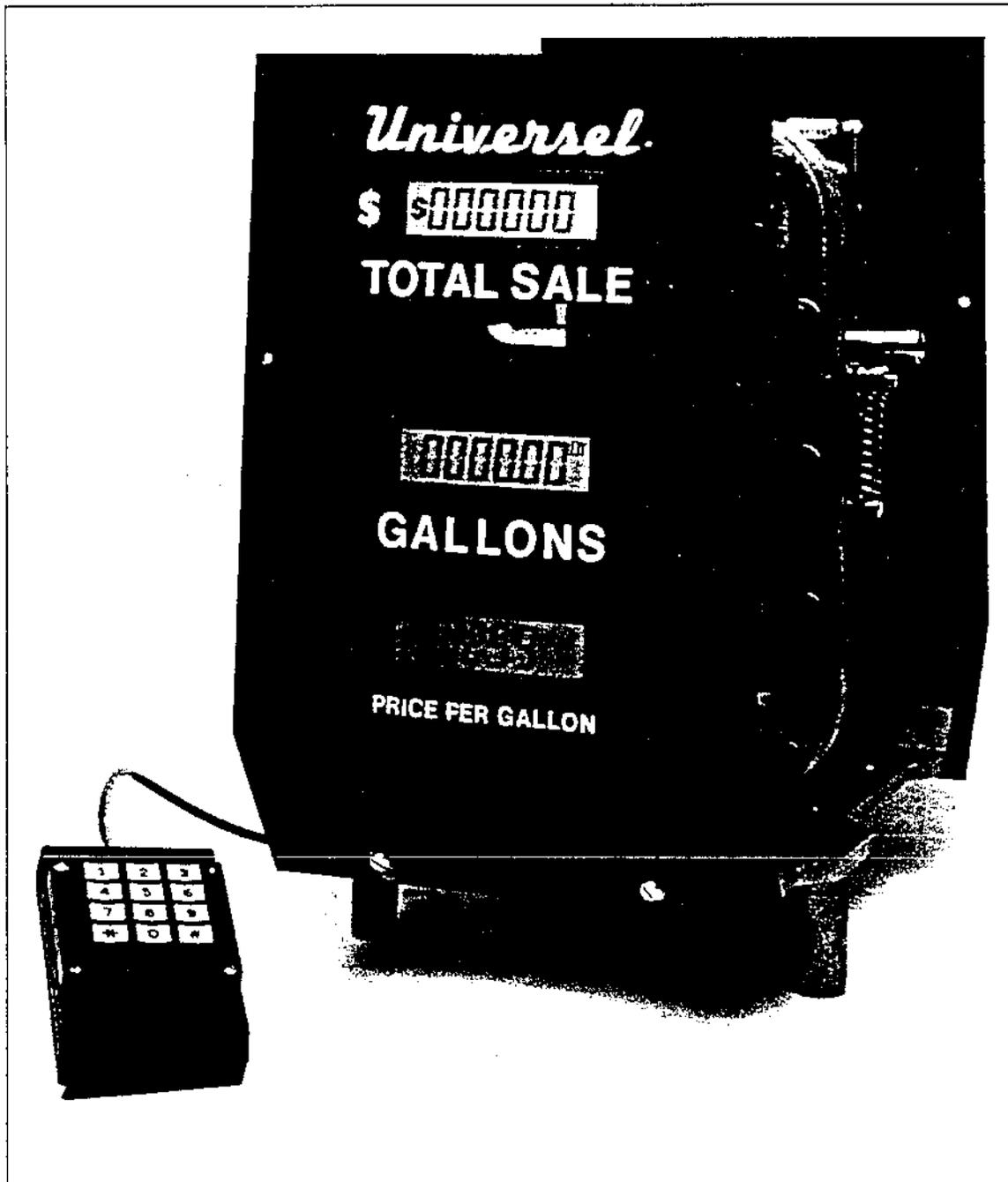


Universal[®]

MODEL 33 Electronic Pump Computer

- Retrofit Mechanical Computers • CNG



DESCRIPTION

The Universel Model 33 Retrofit Electronic Computer is an electronic computer designed to replace existing mechanical registers currently used in various fuel dispensing devices. It incorporates all the reliability and accuracy of modern electronics in a compact package that fits in mechanical dispenser housings. This allows an upgrade to electronics at a considerably lower price than a new dispenser. A hand held keyboard is provided to allow user access to read totals, make price changes, and other programming functions. A user defined security code (PIN) prevents unauthorized access to the programming functions. A power backup within the unit allows the last sale to be displayed for a minimum of 15 minutes if the AC power should fail.

The Universel Retro Computer can work by itself as a full service dispenser or be used with various Control Systems for remote control operation. The Retro is designed to allow several different applications for the unit.

INSTALLATION

[WARNING]

THERE MUST BE A GOOD EARTH GROUND CONNECTED TO THE UNIT TO PREVENT DAMAGE. THE WARRANTY COULD BE VOIDED BY IMPROPER INSTALLATION. (SEE THE WIRING DIAGRAM)

The Universel Retro Computer is designed to bolt into the existing mechanical computer location. There is a maximum of ten wires to connect depending on the configuration of the existing unit. Since the Retro Computer has a built in pulser and handle switch, there are two mechanical linkages that are required for installation. There is one linkage between the meter and the computer and one linkage between the handle and the computer. The existing linkages from the existing pump can be used. The linkages are not supplied by Universel Epsco.

The appropriate wiring diagrams are included in the rear of this manual. Make sure that you are using the correct diagram for your application.

To install the Retro, the following steps need to be accomplished in the order that they are listed.

1. Turn off all power to the unit.

[WARNING]

FAILURE TO DISCONNECT ALL POWER FROM THE UNIT COULD RESULT IN ELECTRICAL SHOCK.

2. Disconnect the control wires connecting the existing mechanical computer.
3. Mark these control wires carefully as some if not all will be required for the new RETRO.
4. Disconnect the linkage between the handle and the mechanical computer.
5. Disconnect the linkage between the meter and the mechanical computer. (Save these linkages as they will be used to hook up the RETRO.)
6. Unbolt and remove the existing mechanical computer.
7. Bolt in the RETRO.
8. Connect the ground (GREEN) wire to the unit. (SEE WIRING DIAGRAM)
9. Connect the 115 VAC (BLACK wire) and the Neutral (WHITE Wire). (See WIRING DIAGRAM)

OPTIONAL CONNECTIONS

1. For remote operation, connect the Authorize (AUTH) wire, the In Use (IU) wire, and the Valve (VLV) wires between the unit and the remote controller. (SEE WIRING DIAGRAM)

MOTOR CONTROL

There are two ways that the motor may be controlled. One is by an existing motor control and the other is by the RETRO controlling the motor. An explanation of each connection will follow.

1. If there is an existing motor control, you must simply wire the motor to this switch.
2. If you do not have a motor control switch, then you must have a Retro Model 33-P. This unit comes with a power relay to operate the pump motor. (NOTE: Semi-Automatic computers have the motor switch built into the pump while electric reset models do not.)

TESTING YOUR UNIT

1. Insure that all the wires are properly connected and that the unit is properly grounded.
2. Apply power to the unit. The LCD Displays and the backlighting should come on. (NOTE: In bright sunlight the back lighting may be hard to see. You may have to shield the unit from the sun to see it.)

3. Turn the handle on. The unit should go through lamp test. (NOTE: lamp test is when the displays will show a price that is set in at the factory.)
4. Check the hydraulics for proper operation.

PROGRAMMING THE RETRO

A hand held keyboard is included with each group of RETRO's. It is exactly like the keypad of a telephone. It must be connected to program the units. To connect the keyboard, follow the steps below.

1. Remove the bezel from the side with the totalizer.
2. Find the small round cable coming out of the lower side of the RETRO.
3. Connect the keypad to this cable.

SETTING THE PRICE NOTE

At the time before completing step 8, pressing the CLEAR [*] pushbutton will exit the price setting mode.

1. Connect the hand held keypad to the cable on the computer as outlined above.
2. Press the Special Function [#] key once.
3. Press [2], [2].
4. Press the Special Function [#] key.
5. Enter you access code. (NOTE: See the sheet marked Confidential for instructions on the security code.)
6. Press the Special Function [#] key.
7. Enter the price per Gallon/Liter. As you enter the amount it should appear on the volume (center) display.
8. Press the Special Function [#] key. The price will now be displayed on the price (bottom) display.
9. Press the Clear [*] pushbutton.

RETRIEVING THE TOTALS

Totals are displayed by use of a Most Significant Digits (MSD) and a Least Significant Digits (LSD). The MSD is displayed first and apaproximately 8 seconds later the LSD. This happens for both the money display and the gallons display.

Here is an example of how the reading will be displayed.

First Reading 1234 (MSD)
Second Reading 5678 (LSD)

The totals on this hose are 12345678. Totals for money are displayed on the money (top) display and volume on the volume (center) display. To retrieve totals press the Special Function [#] key and then enter [1],[1].

TROUBLESHOOTING GUIDE

SYMPTOM

POSSIBLE CAUSE AND REMEDY

Display off

No power. Check the 115vac.
Check the fuse.
Check the circuit breaker.

Display on, No Backlight

Unit is in power fail. Check 115vac.

Cannot change prices.

Check keypad connection
Proper access code entered.
Proper sequence used.

CONFIDENTIAL!

The Model 33 Retro Electronic Computer has a programmable four digit Security Code which must be known, and entered in a proper sequence, to perform certain functions (such as setting the price as referenced in the Model 33 Operation and Installation Manual). The Security Code operates in such a manner as a combination lock. Personnel that know the code or "combination" and the proper entry sequence will be able to gain access to the "secure" functions of the Retro.

---WARNING---

DO NOT FORGET OR LOSE THE SECURITY CODE!

Since the Retro Computer does not allow its Security Code to be displayed or recalled, and each computer may be individually programmed, it is recommended that the Security Code for each unit be recorded along with the serial number and be kept in a safe place for future reference. Losing or forgetting the Security Code is the same as losing or forgetting the "combination" to a lock. If this happens, the factory must be contacted for assistance.

---NOTE---

At any time before step 8 has been completed, pressing the Clear [*] key will exit the operation and leave the security code unchanged. Likewise, any attempt to change the code to a number with less than four digits displayed will also leave the existing code unchanged.

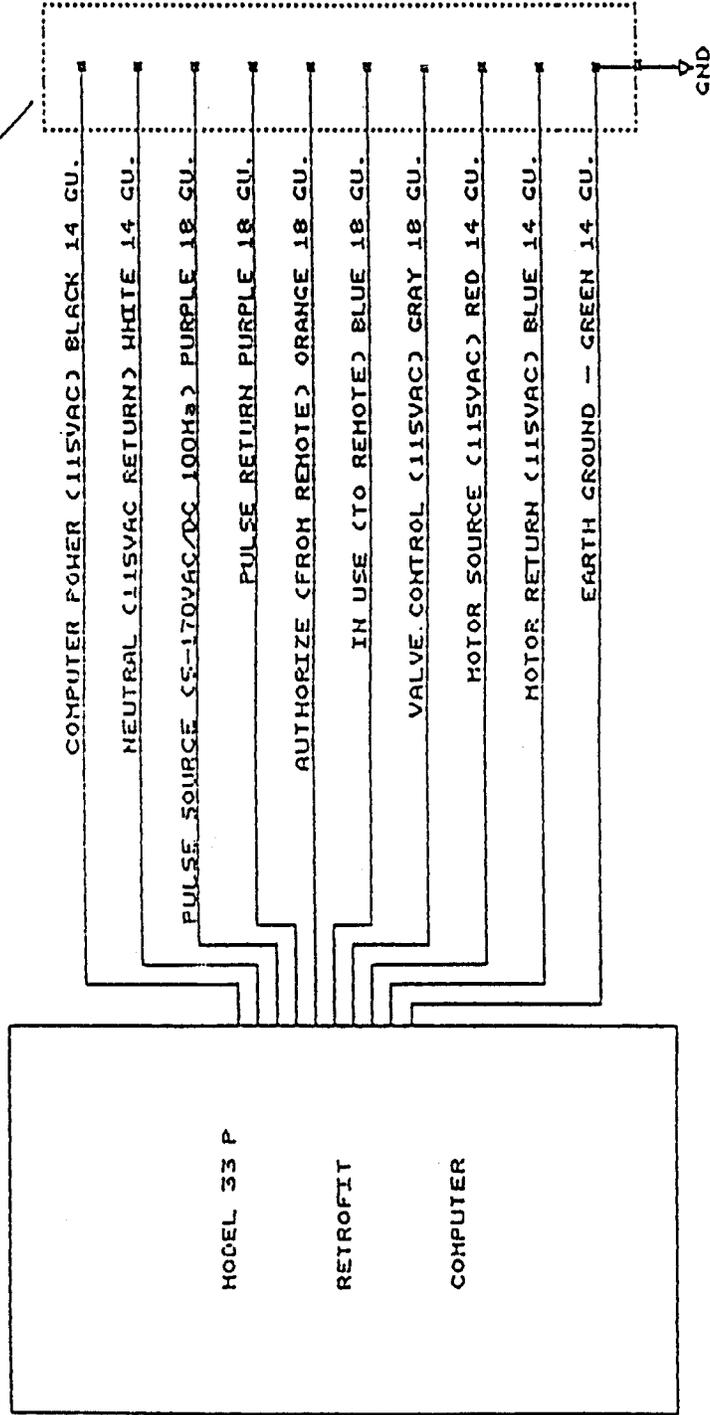
SETTING/CHANGING THE RETRO SECURITY CODE

All new Retro Computers are shipped from the factory with a programmed Security Code of 1111. This code may be changed whenever this computer is connected to the hand held keypad, to any (4) four digit number by using the following procedure:

1. Connect the hand held keypad to the Retro Computer.
2. Press the Clear [*] key once.
3. Press the Special Function [#] key.
4. Press [9],[9].
5. Enter your current access code.
6. Enter your new code. It will be displayed on the volume display. Be sure the code you see is the correct code.
7. Press the Special Function [#] key.

WARNING --- DO NOT LOSE OR FORGET THIS CODE!

DISPENSER JUNCTION BOX

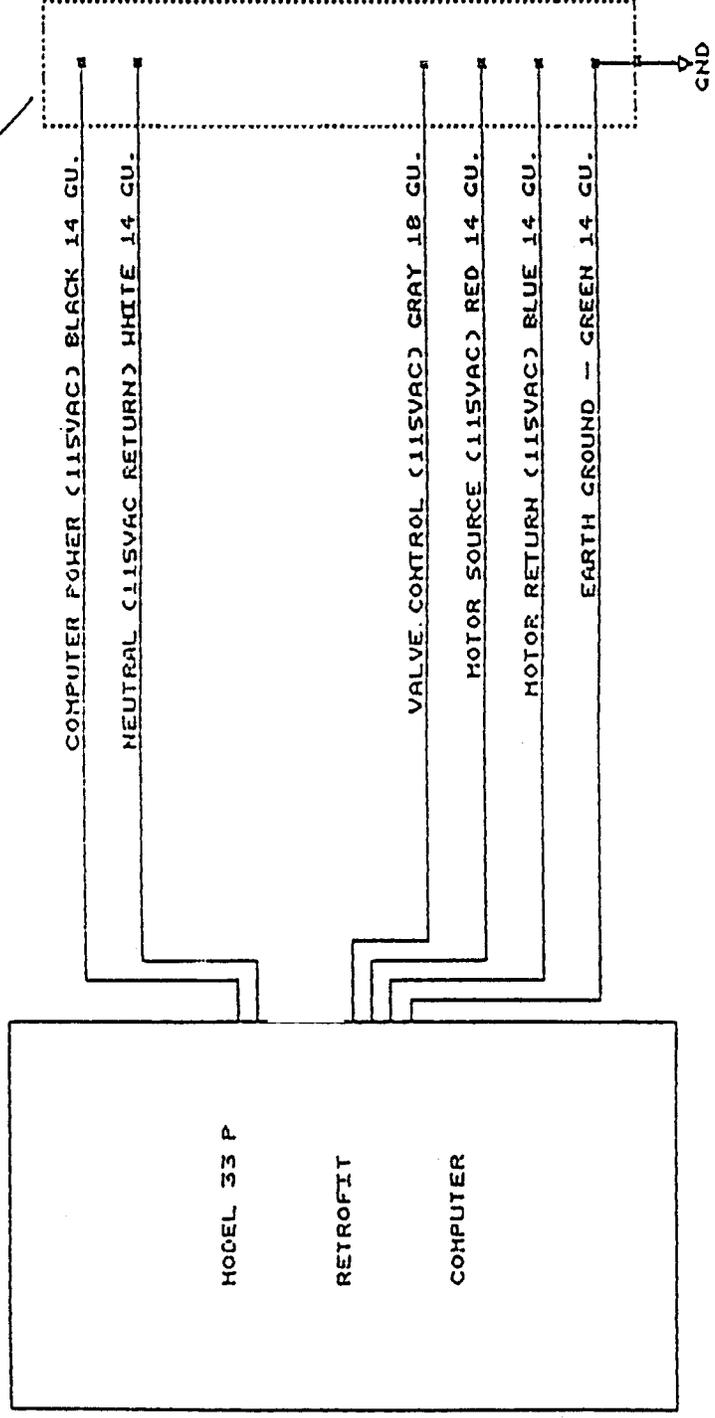


* ALL WIRING MUST CONFORM TO NFPA-70, 30, 30A AND ALL APPROPRIATE STATE AND LOCAL CODES

UNIVERSEL EPSCO, INC. ATLANTA GA. USA

Title	FIELD WIRING MODEL 33P - REMOTE CONTROL
Size	Document Number
REV	01
Date	August 11, 1992 Sheet 1 of 1

DISPENSER JUNCTION BOX



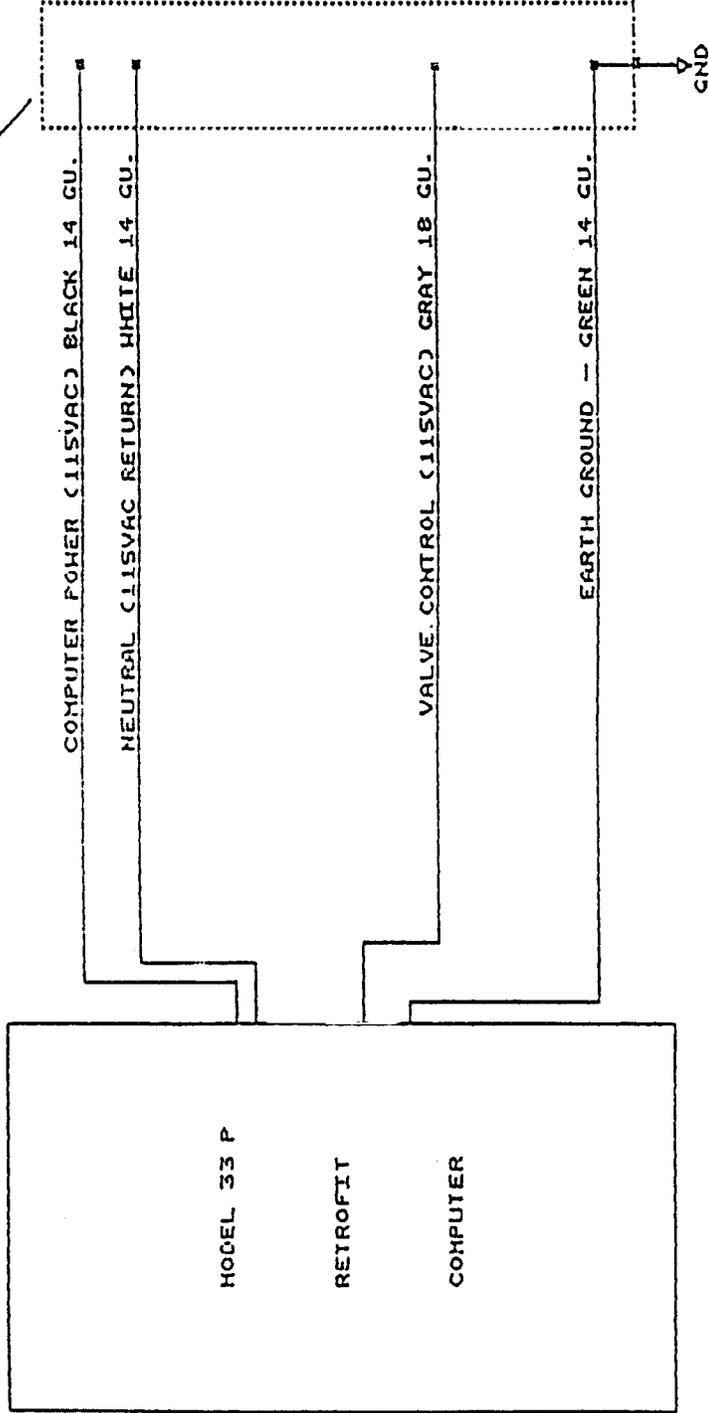
MODEL 33 P
 RETROFIT
 COMPUTER

(REPLACEMENT FOR UNITS WITH ELECTRIC RESET)

* ALL WIRING MUST CONFORM TO NFPA-70, 30, 30A AND ALL APPROPRIATE STATE AND LOCAL CODES

UNIVERSEL EPSCO, INC. ATLANTA GA. USA	
Title	FIELD WIRING MODEL 33P - STAND ALONE
Size	Document Number A2
REV	
Date:	August 11, 1992 Sheet 1 of 1

DISPENSER JUNCTION BOX

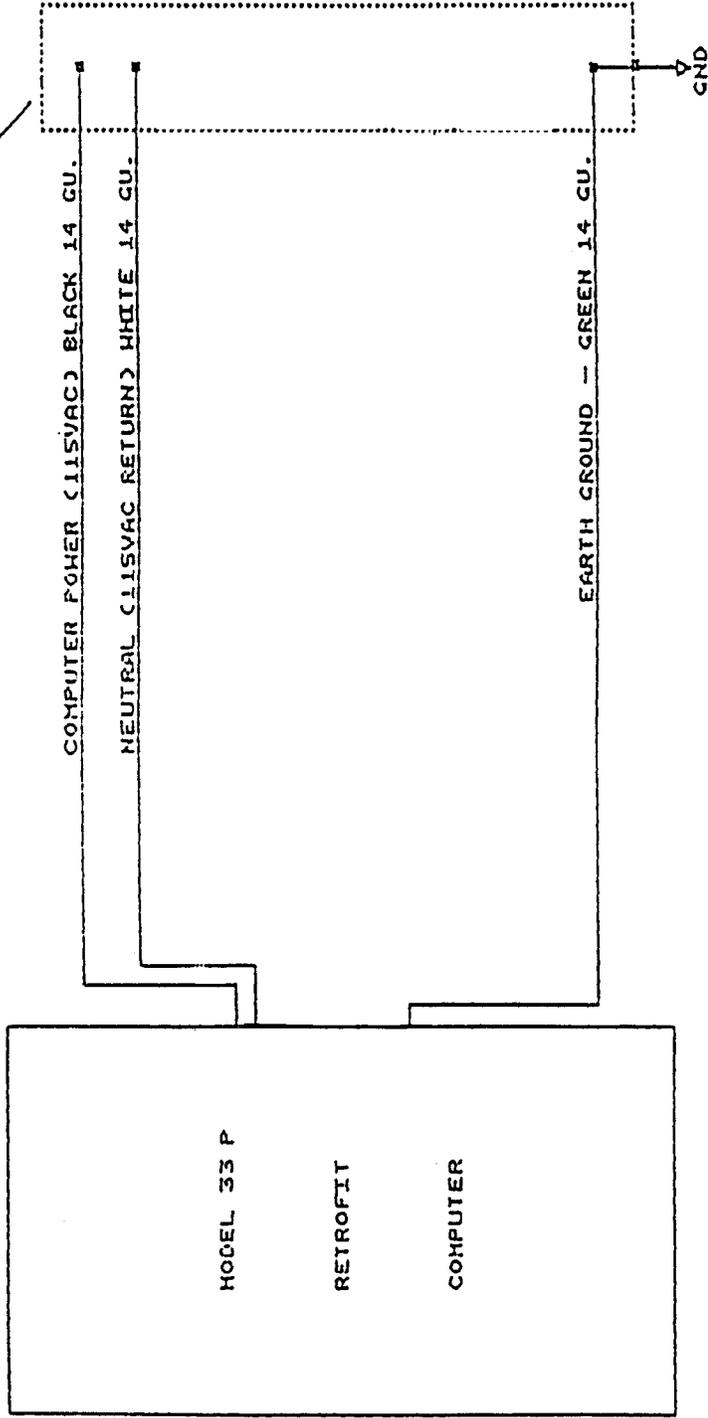


(WIRING FOR DISPENSERS WITH MOTOR SWITCH AND REMOTE PUMP)

* ALL WIRING MUST CONFORM TO NFPA-70, 30, 30A AND ALL APPROPRIATE STATE AND LOCAL CODES

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Title	FIELD WIRING MODEL 33 - STAND ALONE
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DISPENSER JUNCTION BOX



(WIRING FOR SELF CONTAINED DISPENSERS WITH MOTOR SWITCH)

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Title	FIELD WIRING MODEL 33 - STAND ALONE
Size	Document Number A4
REV	
Date:	August 11, 1992 Sheet 1 of 1