Armstrong®

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EHU-600 SERIES HUMIDIFIER TROUBLESHOOTING

WARNING: ONLY AUTHORIZED PERSONNEL AND/OR LICENSED ELECTRICIANS SHOULD PROVIDE THE SERVICE IN THIS MANUAL.

No.	Problem Experienced
0.	POWER ON light not on.
1.	Unit will not fill - FILL light not on - TANK OFF light on.
2.	Unit will not fill - FILL light not on - TANK OFF light off.
3.	Unit will not fill - FILL light on - TANK OFF light off.
4.	Manual drain doesn't work.
5.	Unit doesn't drain when over current exists.
6.	Demand meter is 0% continuously, TANK OFF light is on.
7.	Demand meter reading 100% continuously or RH excessive amount above set point.
8.	With over humidity in duct high limit stat does not stop fill and turn off tank.
9.	Interlock or sail switch does not stop fill and turn off tank when activated.
10.	Unit does not respond to TANK ON/OFF switch.
11.	Unit fills and drains at the same time.
12.	Unit fills until water level 3" from top of steam generator - current draw very low - TANK FULL light may be on.
13.	TANK FULL light on, little or no water in steam generator.
14.	Fill cup overflow during fill cycle.

15. Arcing inside steam generator.

16. Unit will not load up to full capacity (low current draw).

17. Unit fill until internal contactor open or water overflows the fill cup.

18. Unit fill until main line circuit breaker or fuses open.

19. Contactor will not close (energize).

20. Secondary fuses blown.

NOTICE:

This troubleshooting guide is offered to aid in servicing the EHU-600 Series Humidifiers. It is intended for use by electricians and technical service personnel familiar with electrical and electronic equipment.

Many steps in the troubleshooting procedures require measurements of high voltages and involve working near exposed live parts. KNOW WHERE THE HIGH VOLTAGE PARTS ARE, AND KEEP HANDS AND METAL TOOLS AWAY FROM THEM.

PROBLEM #0 -- POWER ON LIGHT NOT ON

0-l Is electrical power on? All 3 phases if 3 phase unit?
Check unit to be sure voltage across each combination of terminals match the name plate voltage.

o-2 Is 24V AC between leads Xl and X3 of power transformer?
If not 24V AC, check resistance of the power transformer per TABLE C.

o-3 Is 24V AC between wire #17/39 and #19/35?
If not 24V AC, check fuses Fl and F2.

o-4 Is 24V AC between terminal #17 and #19 of the main PC board receptacle?
If not 24V AC, perform continuity test #17 and #19. If reading indicate continuity then replace main PC board.

o-5 Is DISPLAY board plugged into the socket of the main PC board?
Check to be sure DISPLAY board is plugged in and no pins are damaged.

0-6 If no pin is damaged, replace DISPLAY board.

PROBLEM #l -- UNIT WILL NOT FILL - FILL LIGHT NOT ON - TANK OFF LIGHT ON

l-l Push TANK ON/OFF switch.
If FILL light turns on, unit fills and TANK OFF light turns off, indicate that unit has been turned off manually.

l-2 If demand meter has no more than two lights on (more than 40%)? Remove the sensing element from the sensor controller.
Demand meter reading should go to 100% (five lights on), TANK OFF light off and unit fills. If demand goes to 100% and unit doesn't fill, proceed problem #2. If demand doesn't go to lOO%, proceed problem #6

l-3 Is 24V AC between leads Xl and X3 of power transformer?
If not 24V AC, check resistance of the power transformer per TABLE C.

l-4 Is 24V AC between wire #17/39 and #19/35?
If not 24V AC, check fuses Fl and F2.

l-5 Is DISPLAY board plugged into the socket of the main board?

Check to be sure DISPLAY board is plugged in and no pins are damaged.

l-6 Do Diagnostic Test.

If Diagnostic Test can not be initiated, conduct continuity test #15, 16 and TANK ON/OFF switch. If all the continuity tests are good, turn the power off and on. If unit remain the same, replace main PC board.

l-7 Is the interlock (or sail switch) circuit closed?

a. Jumper terminal #2 and 24 then wait for approx. 15 seconds. If TANK OFF light turns off, FILL light turns on and unit fills, interlock or sail switch may be defective or wiring to interlock switch may be open.

b. Perform continuity tests 2 and 24.

l-8 Is the high limit stat circuit closed?

a. Jumper terminal #3 and 23 then wait approx. 15 seconds. If TANK OFF light turns off and unit fills, high limit switch may be defective or wiring to high limit stat may be open.

b. Perform continuity tests 3 and 23. If open circuit, repair.

PROBLEM #2 -- UNIT WILL NOT FILL - FILL LIGHT NOT ON
- TANK OFF LIGHT OFF - POWER LIGHT **ON**

2-l Is DISPLAY board plugged into the socket of the main PC board?

Check to be sure DISPLAY board is plugged in and no pins are damaged.

2-2 Is TANK FULL light on?

If TANK FULL light is on, unit will not fill.

2-3 Is the amperage of the unit satisfy the demand?

Put an amp probe on the controlling leg which is the lead passing through the current transformer. If the amperage matches up with the demand then unit will not fill. For example, a unit is set up for 14.9 amp, demand is 70% and 100% capacity then

14.9amp X .7 X 1 = 10.4 amp

If the amperage is between 10.4 amp and

9.3 (10.4X.9)amp then unit will not fill.

NOTICE: With 100% demand,
unit will start at 40% capacity for 25 minutes.
then jump to 60% for 15 minutes
then jump to 80% for 15 minutes
then jump to 100% for as long as demand is 100%. The time required for this is step up procedure can be reduced by grounding the test pin (TP1) when power apply to the unit.

PROBLEM #3 -- UNIT WILL NOT FILL - FILL LIGHT ON
- TANK OFF LIGHT OFF

3-l Is the water supply to unit turned on?
Be sure water is being supplied to unit.

3-2 Is 24V AC between leads Xl and X3 of power transformer?
If not 24V AC, check resistance of the power transformer per TABLE C.

3-3 Is 24V AC between wire #17/39 and #19/35?
If not 24V AC, check fuse F1 and F2.

3-4 Is fill valve coil resistance proper - see TABLE C? (POWER OFF)
If fill valve coil resistance not proper, replace valve.

3-5 Is the fill valve inlet screen clear?
If water pressure is OK and valve can be heard to operate but no water goes through, screen may be plugged. Clean the screen or replace the valve.

3-6 Remove #38/39 and #12 from fill valve. Perform continuity tests 12, 38 and 39. (POWER OFF)
If open circuit, repair; if not, replace main PC board.

PROBLEM #4 -- MANUAL DRAIN DOESN'T WORK

4-l Is 24V AC between leads X1 and X3 of power transformer?
If not 24V AC, Check resistance of power transformer per TABLE C.

4-2 Is 24V AC between wire #17/39 and #19/35?
If not 24V AC, check fuses F1 and F2.

4-3 Is drain valve coil resistance about 10 ohms. (POWER OFF)

If drain valve resistance not proper, replace drain valve.

4-4 Remove lead #10/37 and #36 from manual drain switch, conduct continuity test with switch depressed. (POWER OFF)

If reading doesn't indicate continuity, replace manual drain switch.

4-5 Perform contunity tests 35, 36, 37, 38 and 39.
If open circuit, repair.

4-6 Are drain line and screen in bottom of steam generator open?

If they are stopped up, clean before proceeding.

PROBLEM #5 -- UNIT DOESN'T DRAIN WHEN OVER CURRENT EXISTS

5-l Depress manual drain switch. Does unit drain?
If it doesn't drain, see Problem #4 - Manual Drain Doesn't work.

5-2 With power on and unit operating normally, measure AC millivolt across output terminal of current transformer.
Voltage should be **about** 16 millivolts per amp of primary circuit current (measured on lead Tl of **steam** generator). If not check coil resistance of current transformer and replace if necessary.

5-3 With power off, perform continuity tests from #4 to pin 4 of edgecard connector, #20 to pin 20 of edgecard connector, T1 of **steam** generator to contactor and Cl of contactor to terminal block.
If open circuits are detected, repair. If not, replace main PC board.

PROBLEM #6 -- DEMAND METER IS 0% CONTINUOUSLY - TANK OFF LIGHT IS **ON**

6-l Is electrical power on? All 3 phases if 3 phase unit?
Check unit to be sure voltage across each combination of terminals match the name plate voltage.

6-2 Is 24V AC between leads Xl and X3 of power transformer?
If not 24V AC, check resistance of the power transformer per TABLE C.

6-3 Is 24V AC between wlre #17/39 and #19/35?
If not 24V AC, check fuses F1 and F2.

6-4 Is DISPLAY board plugged into the socket of the main PC board?
Check to be sure DISPLAY board is plugged in and no pins are damaged.

6-5 Are all the lights working?
Perform Diagnostic test to be sure all the lights are working. If not replace the DISPLAY board.

6-6 Is jumper wire on humidistat PC board attached to proper pin?
Be sure jumper wire is attached to pin.

6-7 Is the Humidistat Signal Selector Plug set at proper pin? or properly?
If the Humidistat Signal Selector Plug doesn't set properly, correct it.

6-8 Are #22, #6 and #7 at low voltage terminal block wired to #25, #26 and #27 on humidistat? (if Armstrong Stat)
Check to be sure; disconnect humidistat before conducting contunity tests 90, 91 and 92.

6-9 Check DC voltage between #22 and 6 at low voltage terminal block.
If reading is below 1.8 volt DC, demand meter should be reading 0%, humidistat is not calling for humidity.

6-10 Remove sensing element from humidistat and check DC voltage between #22 and 6 at low voltage terminal block. Reading should be in excess of 5 volts DC and demand meter should read 100%.

(A) If they do, check room RH at humidistat with accurate indicator. If room RH is below set point, sensing element may be defective (not a probable failure). With sensor in place, try placing jumer wire on humidistat PC board at higher pin setting to see if demand meter reading will increase before replacing sensing element.

(B) If reading is in excess of 5 volts DC, but demand meter does not read lOO%, proceed with step 6-11.

(Cl If reading is not 5 volts DC or greater, proceed with step 6-12.

6-11 Sensing element should be removed from humidistat for step 6-8. Read DC voltage on lead #25 and #26 at main PC board receptacle #6 and #22.

If no voltage conduct continuity tests 6 and 22. (POWER OFF) If reading is in excess of 5 volts DC, replace control PCB.

6-12 Check AC voltage between leads #25 and #27 at humidstat.

If reading is 10-12 volts AC, replace humidistat. If not, proceed.

6-13 Check AC voltage between receptacle #7 and #22 at control PCB.

If reading is 10-12 volts AC, conduct continuity tests #90 and #92. (POWER OFF).

PROBLEM #7 -- DEMAND METER READING 100% CONTINUOUSLY OR RH EXCESSIVE AMOUNT ABOVE SET POINT

7-l Are leads #22, 6, 7 at low voltage terminal block wired to #25, 26, 27 at humidstat?

Check to be sure, do not cross connect, disconnect humidstat before conducting continuity tests 90, 91 and 92.

7-2 Is sensing element plugged into humidstat PC Board?

Check to be sure.

7-3 Check DC voltage at control PCB receptacle between #6 and 22.

(A) If voltage drops quickly and meter reading goes to 0, conduct continuity test #6.

(B) If reading is 4 volts DC or more, conduct contunity test #22.

(C) Check room RH at sensor controller with accurate indicator. If room RH is above set point, sensing element and/or sensor controller PC Board may be defective. Try placing the jumper wire pin setting to see if demand meter reading will decrease before replacing sensor controller.

PROBLEM #8 -- WITH OVER HUMIDITY IN DUCT HIGH LIMIT STAT DOES NOT STOP FILL AND TURN OFF TANK

8-1 Is #3 jumpered to #23 at low voltage terminal block?

Check to be sure.

8-2 Check to see if flll is interrupted and TANK OFF light on when #3 and #23 are opened at hlgh limit stat.
This test must be conducted when fill is on.
If fill stops when #3 and #23 are opened, high limit stat is malfunctioned.

8-3 Check to see if fill is interrupted and TANK OFF light on when #3 and #23 are opened at low voltage terminal block.
Check the wire connect to #3 and #23 may short-circuited if the fill is interrupted. (POWER OFF)

8-4 Remove wires from terminal #3 and #23, the voltage between terminal #3 and #23 should be more than 1.5V DC.
If no 1.5V DC, check to be sure wire #3 and #23 are not short-circuited; otherwise, replace main PCB.

PROBLEM #9 -- INTERLOCK OR SAIL SWITCH DOES NOT STOP FILL AND TURN OFF TANK WHEN ACTIVATED

9-l Is #2 jumpered to #24 at low voltage terminal block?
Check to be sure.

9-2 Check to see if fill is interrupted and TANK OFF light on when #2 and #24 are opened at interlock or sail switch.
This test must be conducted when fill is on.
If fill stops when #2 and #24 are opened, interlock or sail switch is malfunctioned.

9-3 Check to see if fill is interrupted and TANK OFF llght on when #2 and #24 are opened at low voltage terminal block.
Check the wire connect to #2 and #24 may short-circuited if the fill is interrupted. (POWER OFF)

9-4 Remove wires from terminal #2 and #24, the voltage between terminal #2 and #24 should be more than 1.5V DC.
If no 1.5V DC, check to be sure wire #2 and #24 are not short-circuited; otherwise, replace main PCB.

PROBLEM #10 - UNIT DOES NOT RESPOND TO TANK ON/OFF SWITCH

10-l Remove wire #15 and #16 from TANK ON/OFF switch, conduct continuity test with switch depressed. (POWER OFF)
If reading doesn't indicate continuity, replace TANK ON/OFF switch.

10-2 Perform continuity test #15 and #16.
If open circuit, repair.

10-3 If reset power to the unit and unit back to normal operation, unit may have a Radio Frequency Interference (RF1) problem.
If unit doesn't back to normal operation, replace main PC board.

PROBLEM #ll - UNIT FILLS AND DRAINS AT THE SAME TIME

11-l If reset power to the unit at the main power disconnect and unit return to normal operation, unit may have a Radio Frequency Interference (RF1) problem.
If unit doesn't go back to normal operation, replace main PC board.

PROBLEM #12 - UNIT FILLS UNTIL WATER LEVELS 3" FROM TOP OF STEAM GENERATOR - CURRENT DRAW VERY LOW - TANK FULL LIGHT MAY BE ON.

12-1 Is electrical power on? All 3 phases if 3 phase unit?
Check to be sure voltage across each combination of terminals match the name plate voltage.

12-2 Water may be exceptionally mineral free and have low conductivity.
Check water hardness and conductivity; consult factory for futher help.

12-3 Are the electrodes corroded or covered with mineral build-up?
If electrodes are corroded away, replace a new set. If electrodes are covered with "lime", clean or replace them.

PROBLEM #13 - TANK FULL LIGHT ON, LITTLE OR NO WATER IN STEAM GENERATOR

13-l Remove high water probe lead from connection on steam generator.
If TANK light turns off in 8 seconds and unit fills, steam generator need cleaning. A salt bridg(electrically conductive) between electrodes and high water probe will complete circuit and cause this problem. Clean top of generator very thoroughly.

13-2 If TANK llght doesn't turn off after step 13-1, then disconnect lead #14 from #34 and disconnect lead #l from #33.

TANK light should turn off in 8 seconds. If so, replace high water isolator. Otherwise, replace main PC board.

PROBLEM #14 - FILL CUP OVERFLOW DURING FILL CYCLE

14-1 Is power across all 3 phases contactor leads, and 3 phases energized?

Check to be sure voltage across each combination of terminals match the name plate voltage.

14-2 Is fill line to tank blocked?

This is a clear plastic line and can be checked visually. Clean if required. Inside of fill cup must be clear also.

14-3 Is tank adaptor or screen in steam generator blocked?

Remove tank and clean if necessary.

14-4 Is tank full of water - if so see problem #17. If not, fill is obstructed or fill line may not be air venting out the fill cup.

14-5 Is duct pressure too high? (5" water guage maximum)

Reduce duct pressure. Refer to factory for further help.

PROBLEM #15 - ARCING INSIDE STEAM GENERATOR

15-l Check water supply to unit.

Unit should be operated on potable water, not brackish or contaminated water.

15-2 Do Diagnostic Test. Check if drain valve will cycle when DRAIN light cycles.

If drain valve will not cycle, go to problem #5

PROBLEM #16 - UNIT WILL NOT LOAD UP TO FULL CAPACITY (LOW CURRENT DRAW)

16-l Is demand meter reading lOO%?

If not, humidistat is not calling for unit's full capacity.

16-2 Is unit at 100% capacity?
If unit is not at 100% capacity, unit will not load up to full capaicty. Unit should load up to full capacity if demand is set to 100% and run more than 1 hour. Refer to problem #2-3.

16-3 Is the TANK FULL light on?
The high water circuit can limit unit's output. See applicable sections - Problem #12

16-4 Is the unit receiving sufficient water supply? Observe water flow into fill cup when fill valve is open.
If no water flowing or flowing at very low rate into fill cup; check external water supply to unit, check for blocked fill valve inlet screen, and check blocked flow washer in fill valve.

16-5 Is the PCB equipped with the proper MCM?
This could be limiting unit's output. See Table for proper MCM for particular voltage and phase.

16-6 TURN POWER OFF. Remove leads #4 and #20 from current transformer. Check resistance of current transformer coil per TABLE C.
If not, replace current transformer.

16-7 If humidifier is 3 phase unit, are all 3 phases energized?
Check at the unit to be sure.

16-8 If the above steps have not solved problem, replace main PC board.

PROBLEM #17 - UNIT FILL UNTIL INTERNAL CONTACTOR OPEN OR WATER OVERFLOWS THE FILL CUP

17-l If unit is a 3 phase model, are all 3 phases energized?
Check at the unit to be sure. Check across each combination of terminals.

17-2 If water is overflowing fill cup, check electrical leads and connectors at steam generator.
Lead mark "T1" must be connected to steam generator terminal marked "T1" to allow high water probe circuit to function.

17-3 If water is overflowing fill cup and water level is at the top or the generator and TANK light is not on, check high water isolator circuit.

a. Disconnect lead #14 from #34 and disconnect lead #1 from #33. Connect lead #1 and #14. TANK light should come on and fill should stop in 8 seconds.

b. If not, perform contunity test #1 and #14. If contunity is not indicated, repair; otherwise, repalce main PC board.

c. If step a and b above turn out to be good then connect lead #14 to #34, connect #1 to #33 and disconnect high water probe lead from the tank and jumper to N, L1, L2, or L3. TANK light should come on after 4 seconds and fill should stop. If not, replace high water isolator circuit.

17-4 Is humidifier drawing more than 110% of nominal rating?
Unit can draw up to 110% of nominal current during normal operation. If current is exceeding this value, proceed.

17-5 TURN POWER OFF. With lead #4 and #20 removed from current transformer, measure the resistance of current transformer coil per TABLE C.
If not, replace current transformer.

PROBLEM #18 - UNIT FILLS UNTIL MAIN LINE CIRCUIT BREAKERS OR FUSES OPEN.

18-1 If unit is 3 phase model, are all 3 phases energized?
Check at unit to be sure. Check across combination of terminals.

18-2 Is the circuit breaker or fuse the size recommended on the unit nameplate?
Do not select the circuit breaker or fuse according to the "nominal" amp rating of the unit. Use "recommended" size as marked.

18-3 Is the MCM number correct?
Compare the rated current according to the MCM, and nameplate nominal current. If it is different, replace proper MCM.

18-4 Does the unit drain when overcurrent exists?
Measure primary current. If it is 110% or more or maximum current rating and unit doesn't drain, see Problem #14 -- Unit Doesn't Drain When Overcurrent Exists.

18-5 Is power across both sides of contactor?
Check voltage at top contactor leads. Check contactor for overheating.

18-6 Does the contactor open when power is turned off?
Turn power off and observe mechanical action of contactor. Check conti-nuity across contactor power terminals (should be open circuit). If contacts are closed, replace contactor.

PROBLEM #19 - CONTACTOR WILL NOT CLOSE (ENERGIZED)

19-1 Is electrical power on? All 3 phases if 3 phase unit?
Check to be sure voltage across each combination of terminals match the name plate voltage.

19-2 Is 24V AC between leads Xl and X3 of power transformer?
If not 24V AC, check resistance of the power transformer per TABLE C.

19-3 Is 24V AC between wire #17/39 and #19/35?
If not 24V AC, check fuses F1 and F2.

19-4 Do Diagnostic Test.
a. Check high limit stat. To be sure it is close.
b. Check interlock or sail switch. To be sure it is close.
c. Check demand. To be sure demand exceed 40%.

PROBLEM #20 -- SECONDARY FUSES BLOW

20-1 Check the drain valve coil resistance per TABLE C.
This is the most common cause of blown fuses. If the coil resistance is low, replace the valve and fuse. Also, find out if there is any reason for the drain valve operates frequently and/or for long times, there is a problem in the control system and/or the main control PCB.

20-2 Check the contactor coil resistance per TABLE C.
If the coil resistance is low, replace the contactor.

TABLE A

DIAGNOSTIC TEST

1. Turn off water supply. Turn on power to the unit.

2. Push and hold the TANK ON/OFF switch until the FILL light start blinking (approx. 15 seconds).

3. First Pass (test output circuits)

   a. FILL light and valve should turn on and off twice.

   b. DRAIN light and valve should turn on and off twice.

   c. TANK FULL light should turn on and off twice.

   d. TANK OFF light should turn off and on and CONTACTOR should turn on and off twice.

   e. Demand meter should cycle up and down twice.

4. TANK FULL light will start blinking.

5. Second Pass (test input circuits)

   a. If DRAIN light is off, indicate the interlock (or sail switch) circuit need to be checked.

   b. If TANK OFF light is off, indicate the high limit circuit need to be checked.

   c. If TANK FULL light is off and in accompany with TANK OFF light off, indicate the water in the tank has reached the high water probe.(TANK FULL light off in accompany with TANK OFF light on doesn't exist.)

   d. Demand meter should indicate the actual demand.

6. Push TANK ON/OFF switch and leave Diagnostic test.

TABLE B

CONTINUITY TESTS AND WIRE ROUTING

1. Turn power off at fuse box or circuit breaker for all continuity tests.
2. Remove main PC board.
3. If open circuit is detected, repair or replace component in question.

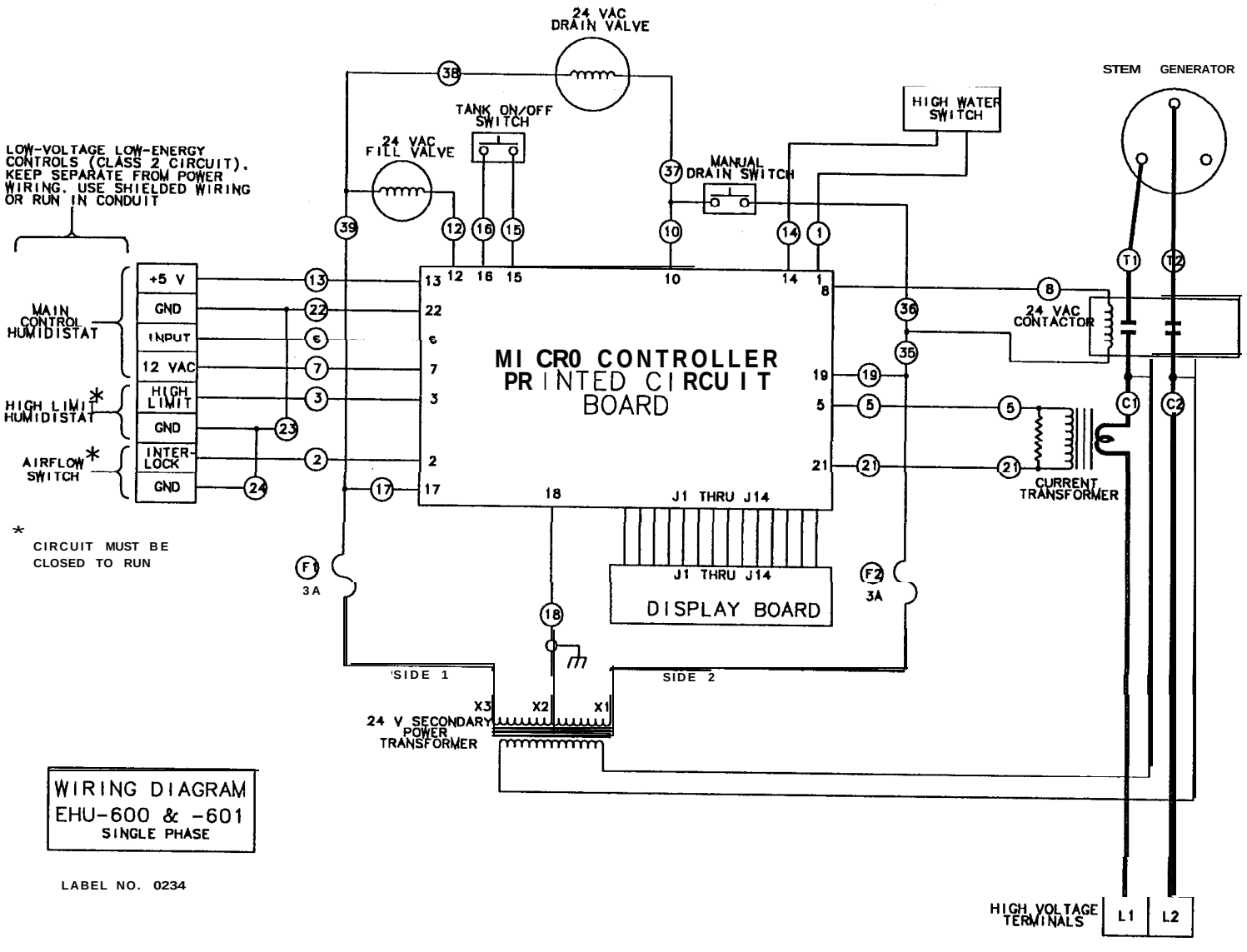
Test NO.	Lead No.	From	To
Cl	Cl	Terminal block	Contactor
c2	c2	Terminal block	Contactor
c3	c3	Terminal block	Contactor
T1	T1	Contactor	Steam generator
T2	T2	Contactor	Steam generator
T3	T3	Contactor	Steam generator
1	1	Pin 1 of main PCB	Isolator lead #33
2	2	Pin 2 of main PCB	L.V. term. block, interlock, #2
3	3	Pin 3 of main PCB	L.V. term. block, high limit, #3
4	4	Pin 4 of main PCB	Current transformer
5	5	Pin 5 of main PCB	Current transformer
6	6	Pin 6 of main PCB	L.V. term. block, INPUT, #6
7	7	Pin 7 of main PCB	L.V. term. block, 12 VAC, #7
8	8	Pin 8 of main PCB	Contactor
10	10	Pin 10 of main PCB	Manual drain switch
12	12	Pin 12 of main PCB	Fill valve
13	13	Pin 13 of main PCB	L.V. term. block, 5 VDC, #13
14	14	Pin 14 of main PCB	Isolator lead #34
15	15	Pin 15 of main PCB	Tank ON/OFF switch
16	16	Pin 16 of main PCB	Tank ON/OFF switch
17	17	Pin 17 of main PCB	X3 of power transformer
18	18	Pin 18 of main PCB	X2 of power transformer
19	19	Pin 19 of main PCB	Xl of power transformer
20	20	Pin 20 of main PCB	Current transformer
21	21	Pin 21 of main PCB	Current transformer
22	22	Pin 22 of main PCB	L.V. term. block GND, #22
23	23	L.V. term. block #23	L.V. term. block GND, #22
24	24	L.V. term. block #24	L.V. term. block GND, #22

Test No.	Lead No.	From	To
35	35	Contactor	Pin 19 of main PCB
36	36	Manual drain switch	Contactor
37	37	Drain valve	Manual drain switch
38	38	Drain valve	Fill valve
39	39	Fill valve	X3 of power transformer
90	(25)	L.V. term. block #22	Controlling stat
91	(26)	L.V. term. block #6	Controlling stat
92	(27)	L.V. term. block #7	Controlling stat
93	(3)	L.V. term. block #3	High limit stat
94	(23)	L.V. term. block #23	High limit stat
95	(2)	L.V. term. block #2	Sail switch/interlock
96	(24)	L.V. term. block #24	Sail switch/interlock

TABLE C
RESISTANCE VALUES OF COMPONENTS

COMPONENT	VOLTAGE	RESISTANCE
Fill Valve	24 VAC	11 Ω (18Ω on new style pink solenoid)
Drain Valve	24 VAC	10 a
Contactor Coil	24 VAC	7-9 Ω
Current Transformer	Output is 16 times the amp in the tank in mVAC	55 Ω across two l/4" spades 177Ω from l/4"-l/8" spade
Power Transformer	120 VAC	13.6 Ω across Hl-H2 15.1 Ω across H3-H4
	208 VAC	22 Ω across Hl-H2
	240 VAC	29 Ω across Hl-H2
	277 VAC	40 Ω across Hl-H2
	380 VAC	77 Ω across Hl-H2
	480 VAC	125 Ω across Hl-H2
	600 VAC	194 Ω across Hl-H2
Power Transformer (secondary)	All Voltages	0.6 Ω across X1-X3 0.4 Q across X1-X2

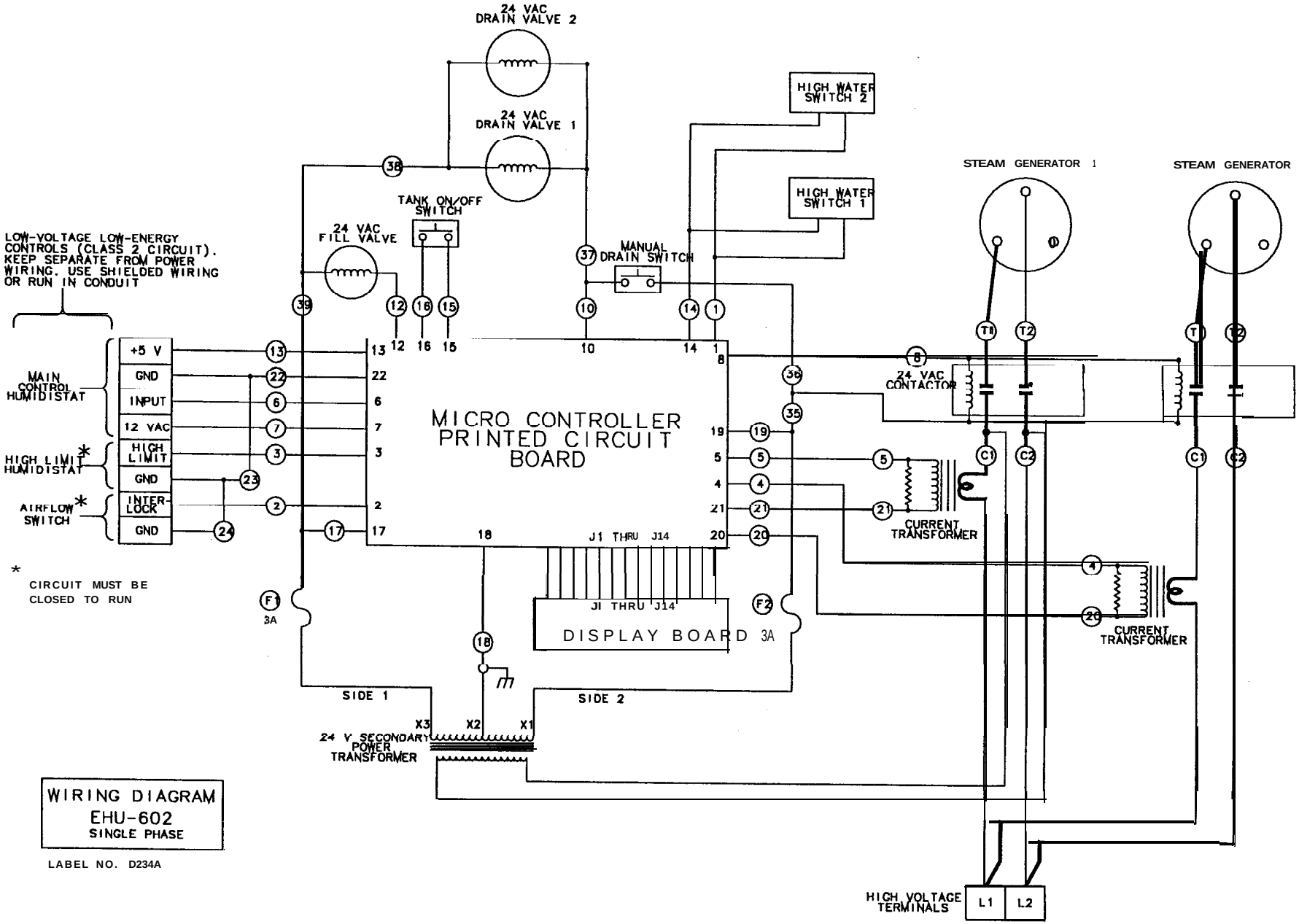
Note: All measurements should be made with the main power off and the wires to the component being tested disconnected.



* CIRCUIT MUST BE CLOSED TO RUN

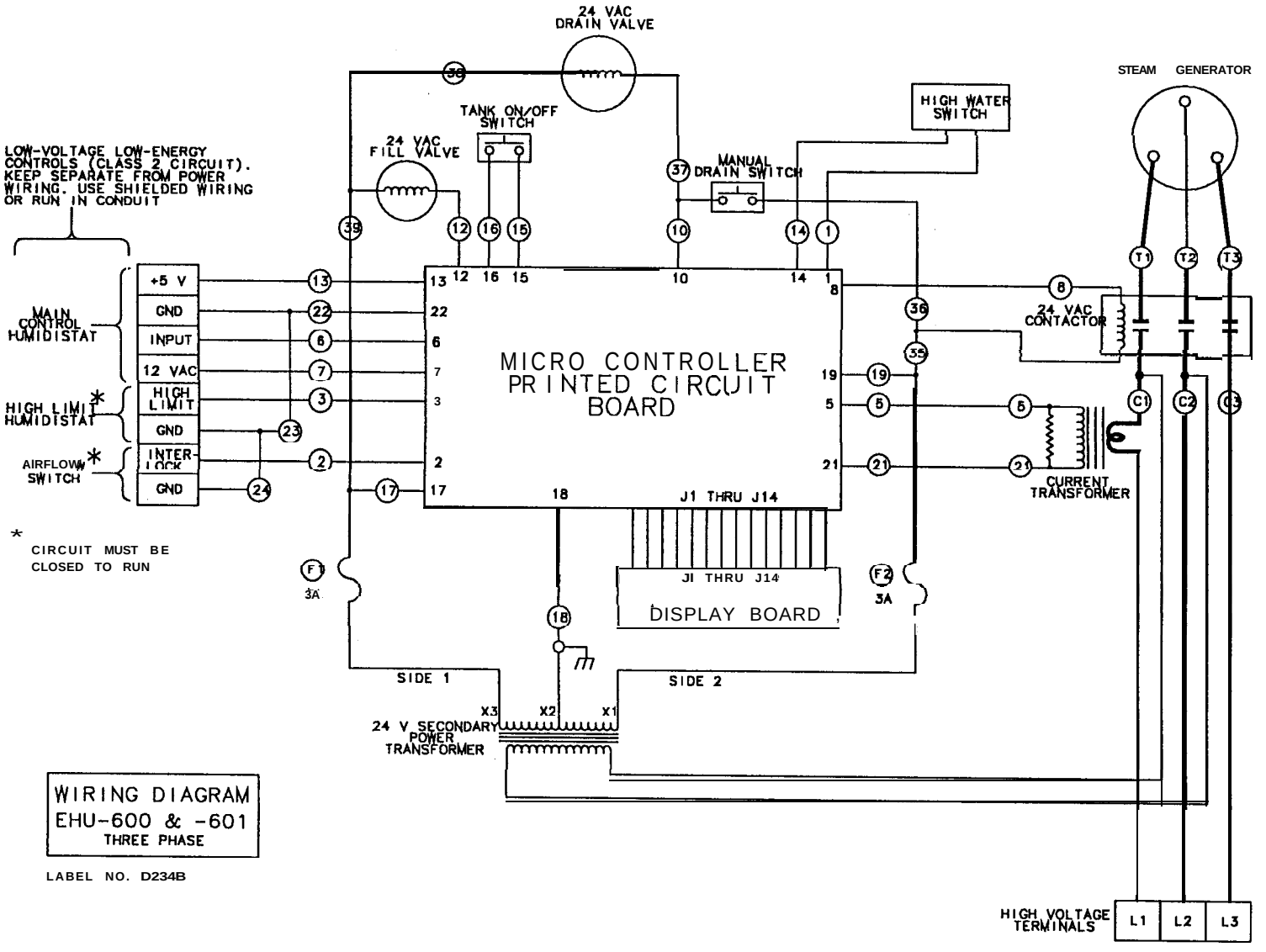
WIRING DIAGRAM
EHU-600 & -601
SINGLE PHASE

LABEL NO. 0234



WIRING DIAGRAM
EHU-602
SINGLE PHASE

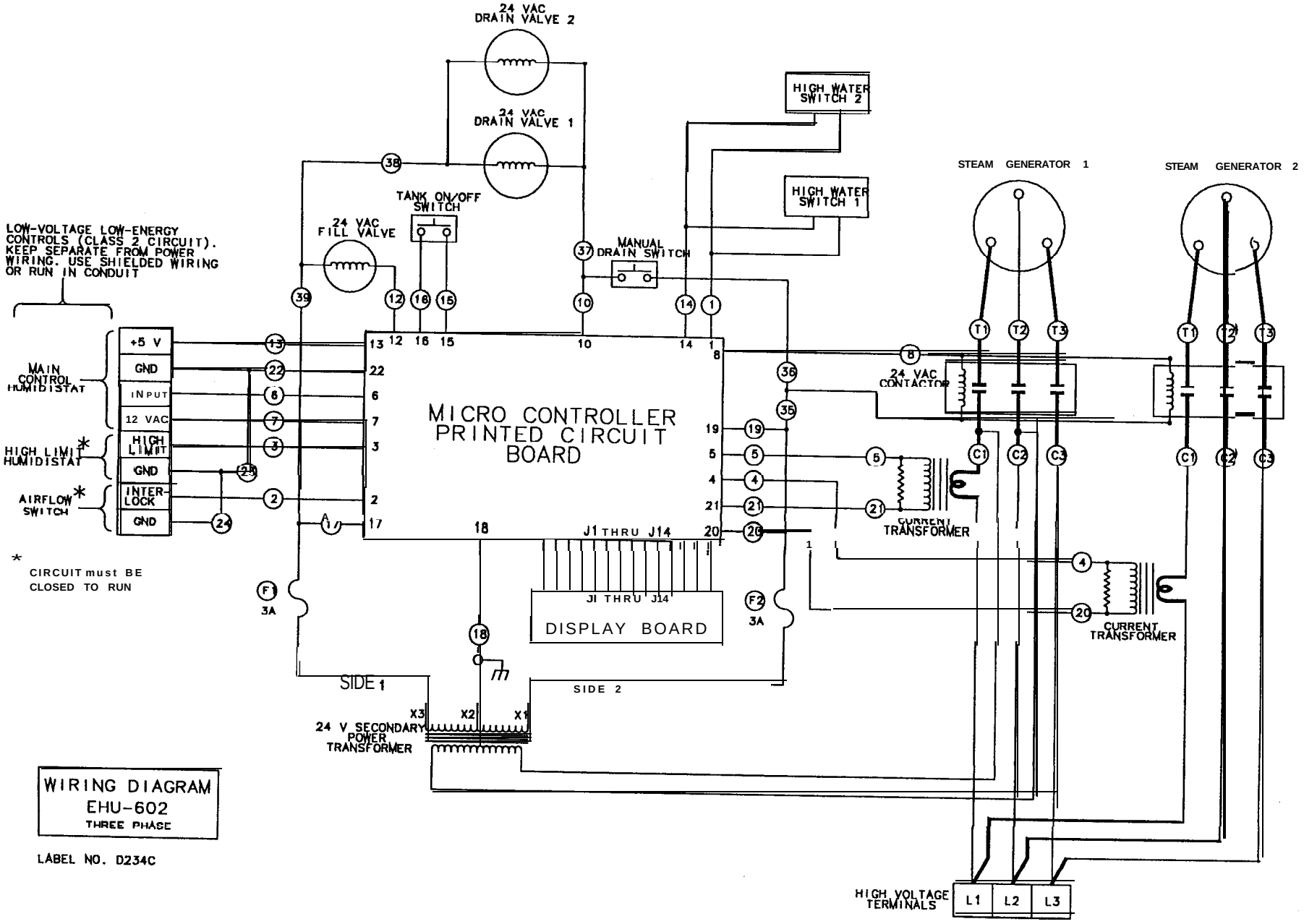
LABEL NO. D234A



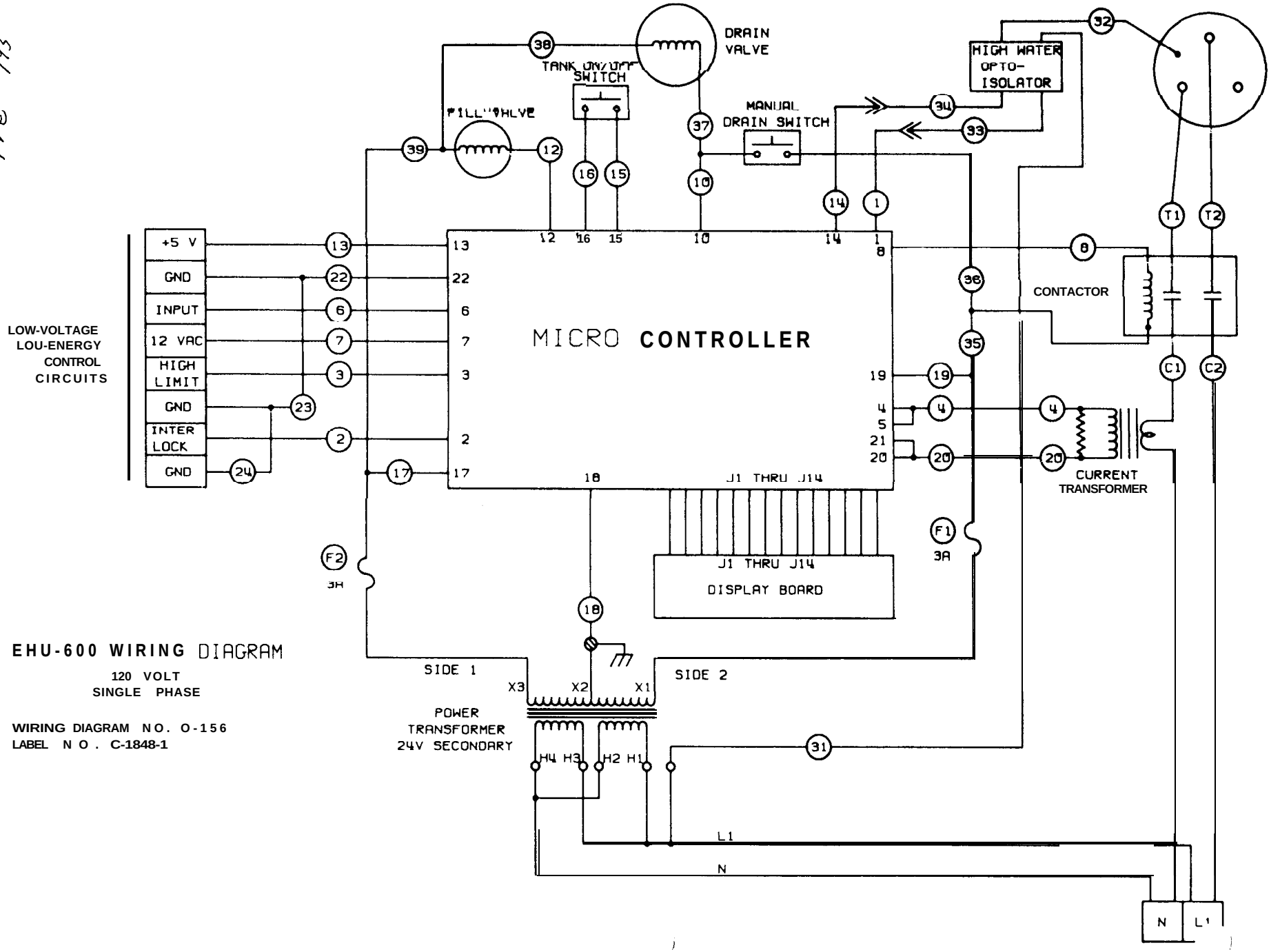
* CIRCUIT MUST BE CLOSED TO RUN

WIRING DIAGRAM
EHU-600 & -601
THREE PHASE

LABEL NO. D234B


24 VAC DRAIN VALVE 2
24 VAC DRAIN VALVE 1
HIGH WATER SWITCH 2
HIGH WATER SWITCH 1
STEAM GENERATOR 1
STEAM GENERATOR 2
TANK ON/OFF SWITCH
24 VAC FILL VALVE
MANUAL DRAIN SWITCH
LOW-VOLTAGE LOW-ENERGY CONTROLS (CLASS 2 CIRCUIT). KEEP SEPARATE FROM POWER WIRING. USE SHIELDED WIRING OR RUN IN CONDUIT
MAIN CONTROL HUMIDISTAT
+5 V
GND
INPUT
12 VAC
HIGH LIMIT
GND
INTER-LOCK
GND
HIGH LIMIT HUMIDISTAT *
AIRFLOW SWITCH *
* CIRCUIT must BE CLOSED TO RUN
MICRO CONTROLLER PRINTED CIRCUIT BOARD
J1 THRU J14
DISPLAY BOARD
24 VAC CONTACTOR
CURRENT TRANSFORMER
CURRENT TRANSFORMER
F1 3A
F2 3A
SIDE 1
SIDE 2
24 V SECONDARY POWER TRANSFORMER
X3
X2
X1
HIGH VOLTAGE TERMINALS
L1
L2
L3
WIRING DIAGRAM
EHU-602
THREE PHASE
LABEL NO. D234C

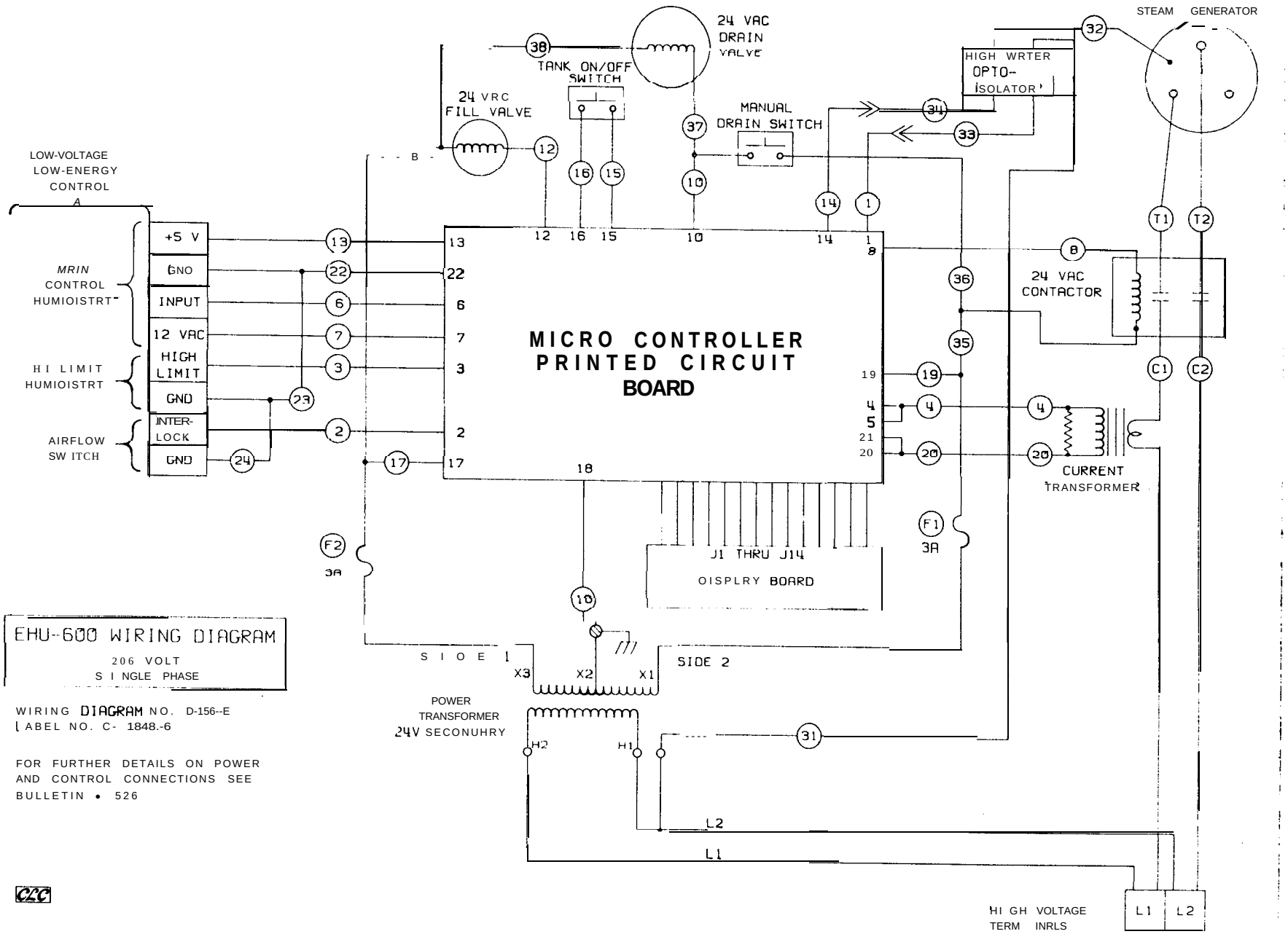
Pre 2/93



EHU-600 WIRING DIAGRAM

120 VOLT
SINGLE PHASE

WIRING DIAGRAM NO. O-156
LABEL NO. C-1848-1

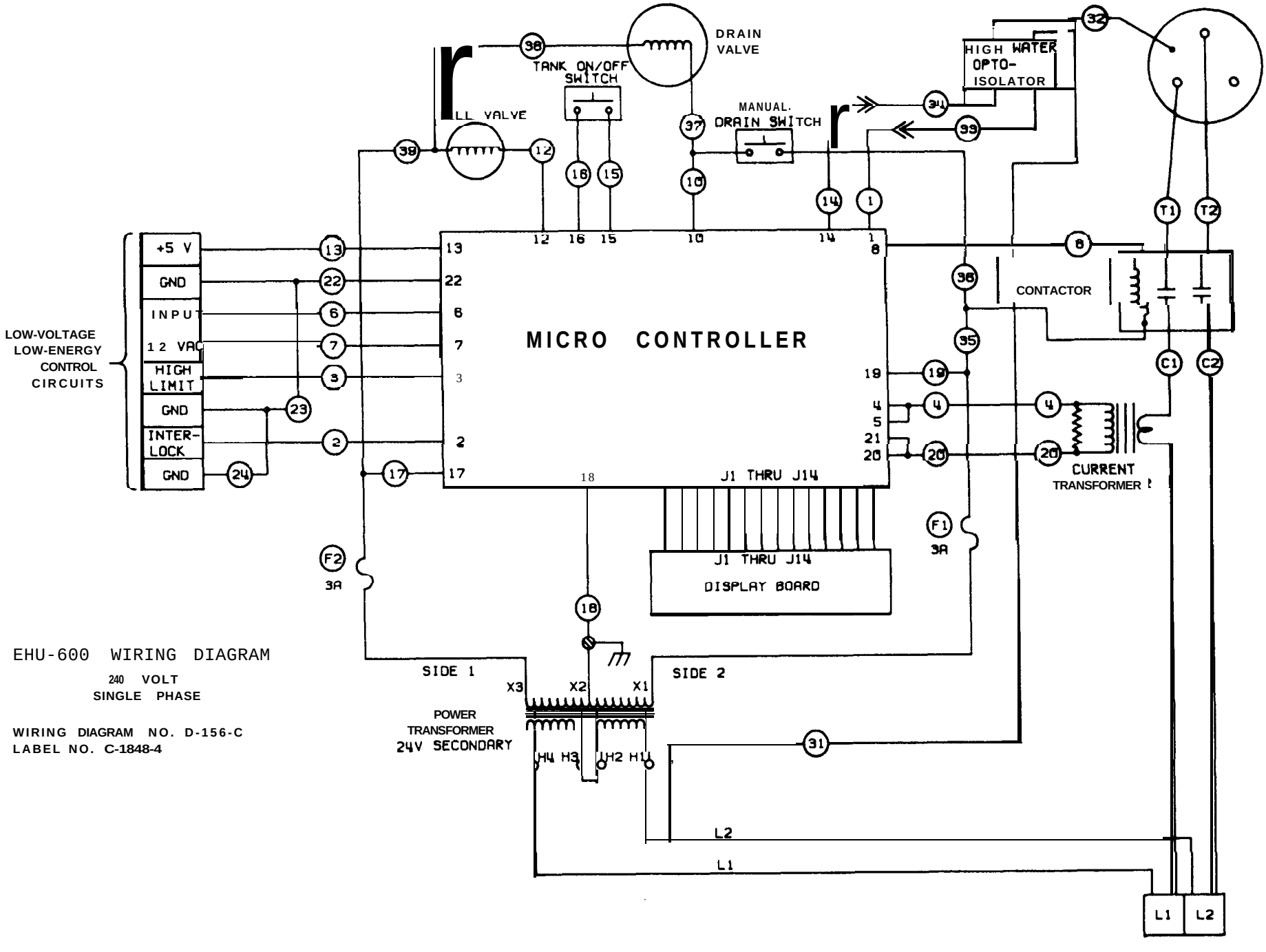


EHU-600 WIRING DIAGRAM

206 VOLT
S I NGLE PHASE

WIRING DIAGRAM NO. D-156--E
LABEL NO. C- 1848.-6

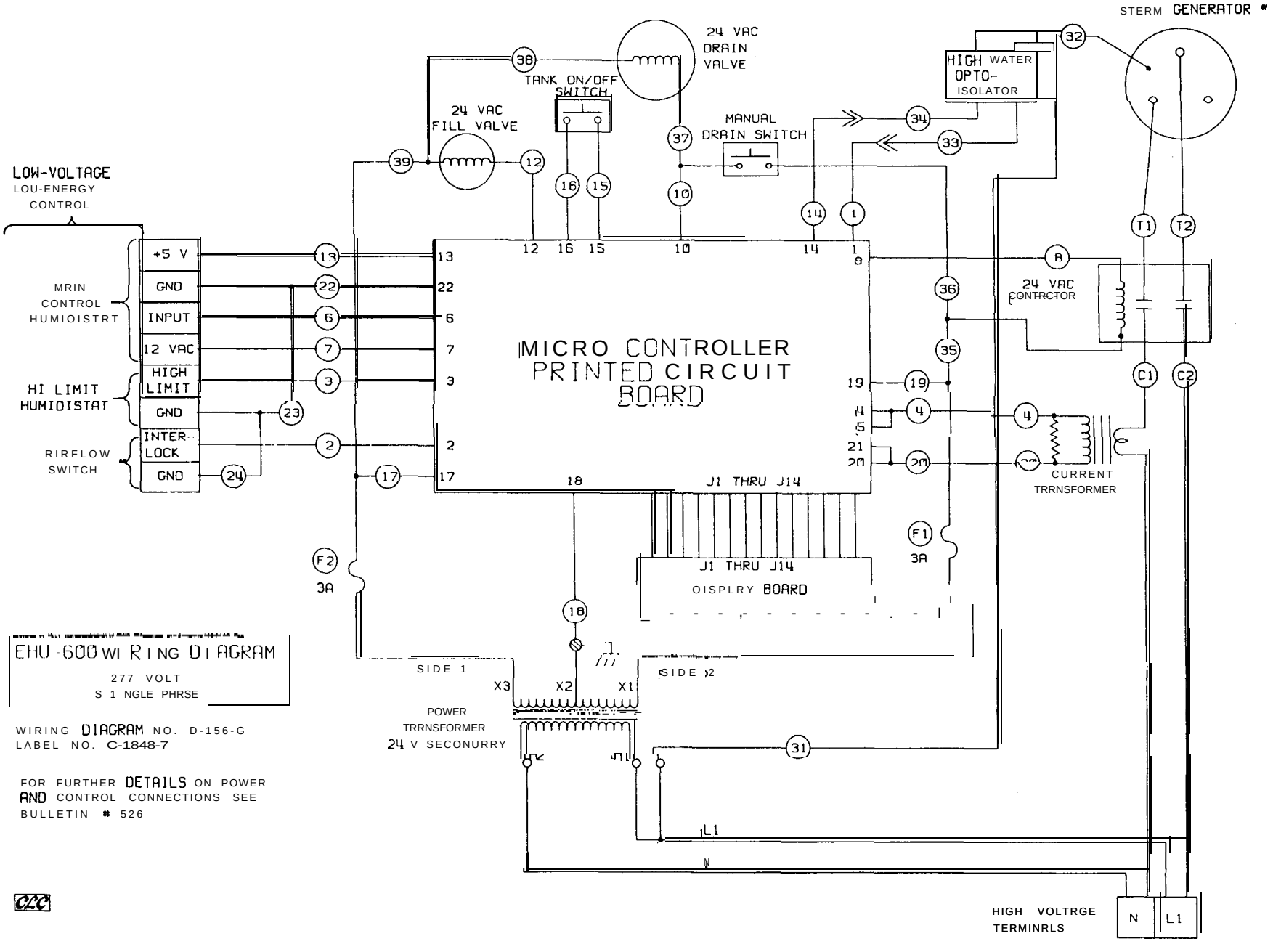
FOR FURTHER DETAILS ON POWER AND CONTROL CONNECTIONS SEE BULLETIN • 526



EHU-600 WIRING DIAGRAM

240 VOLT
SINGLE PHASE

WIRING DIAGRAM NO. D-156-C
LABEL NO. C-1848-4



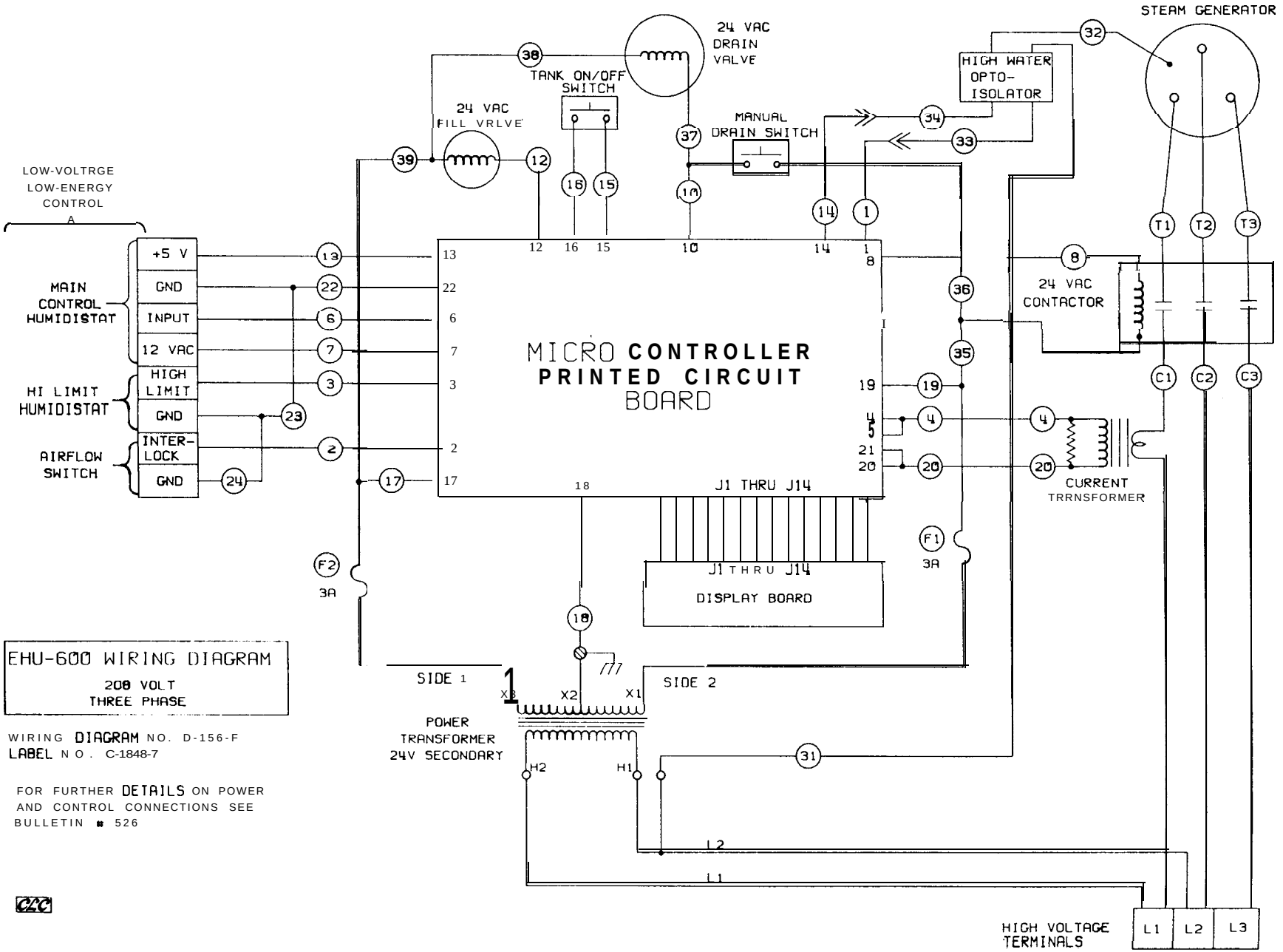
EHU-600 WI R ING DI AGRAM

277 VOLT
S 1 NGLE PHRSE

WIRING DIAGRAM NO. D-156-G
LABEL NO. C-1848-7

FOR FURTHER DETAILS ON POWER AND CONTROL CONNECTIONS SEE BULLETIN * 526

CLC

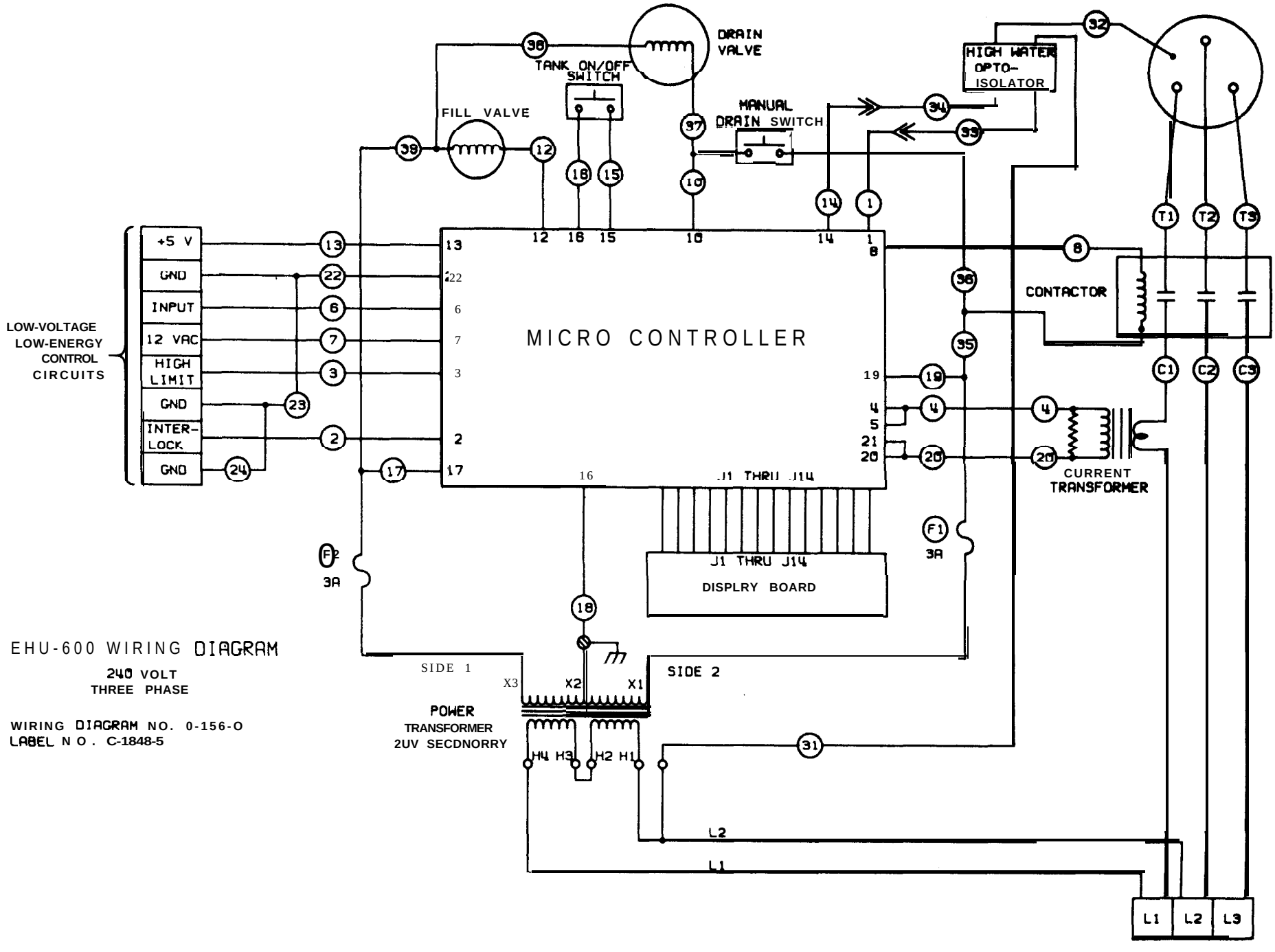


EHU-600 WIRING DIAGRAM

208 VOLT
THREE PHASE

WIRING DIAGRAM NO. D-156-F
LABEL NO. C-1848-7

FOR FURTHER DETAILS ON POWER AND CONTROL CONNECTIONS SEE BULLETIN # 526



EHU-600 WIRING DIAGRAM

240 VOLT
THREE PHASE

WIRING DIAGRAM NO. 0-156-O
LABEL N O . C-1848-5

FIGURE 1
ELECTRICAL COMPONENT IDENTIFICATION