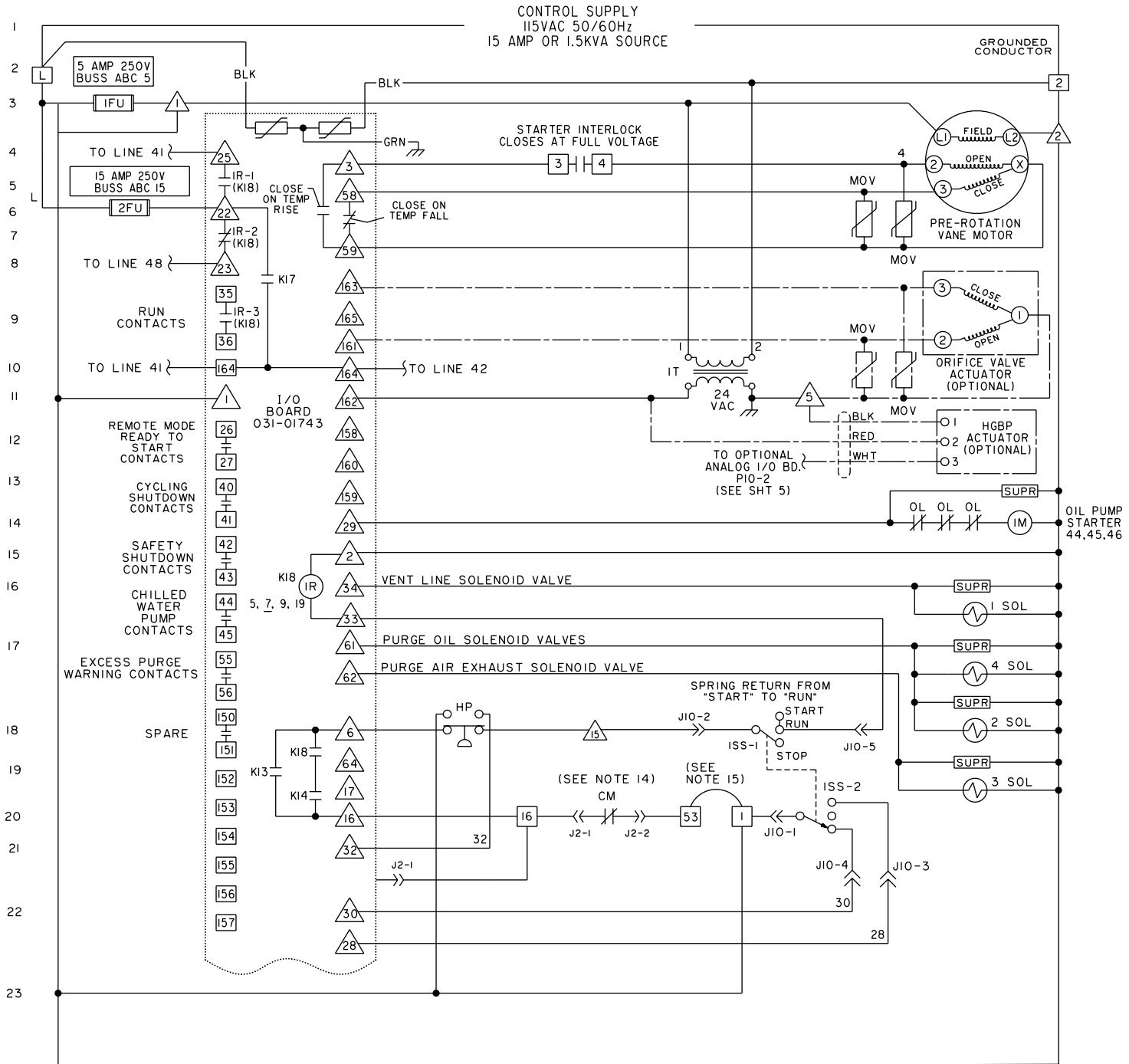
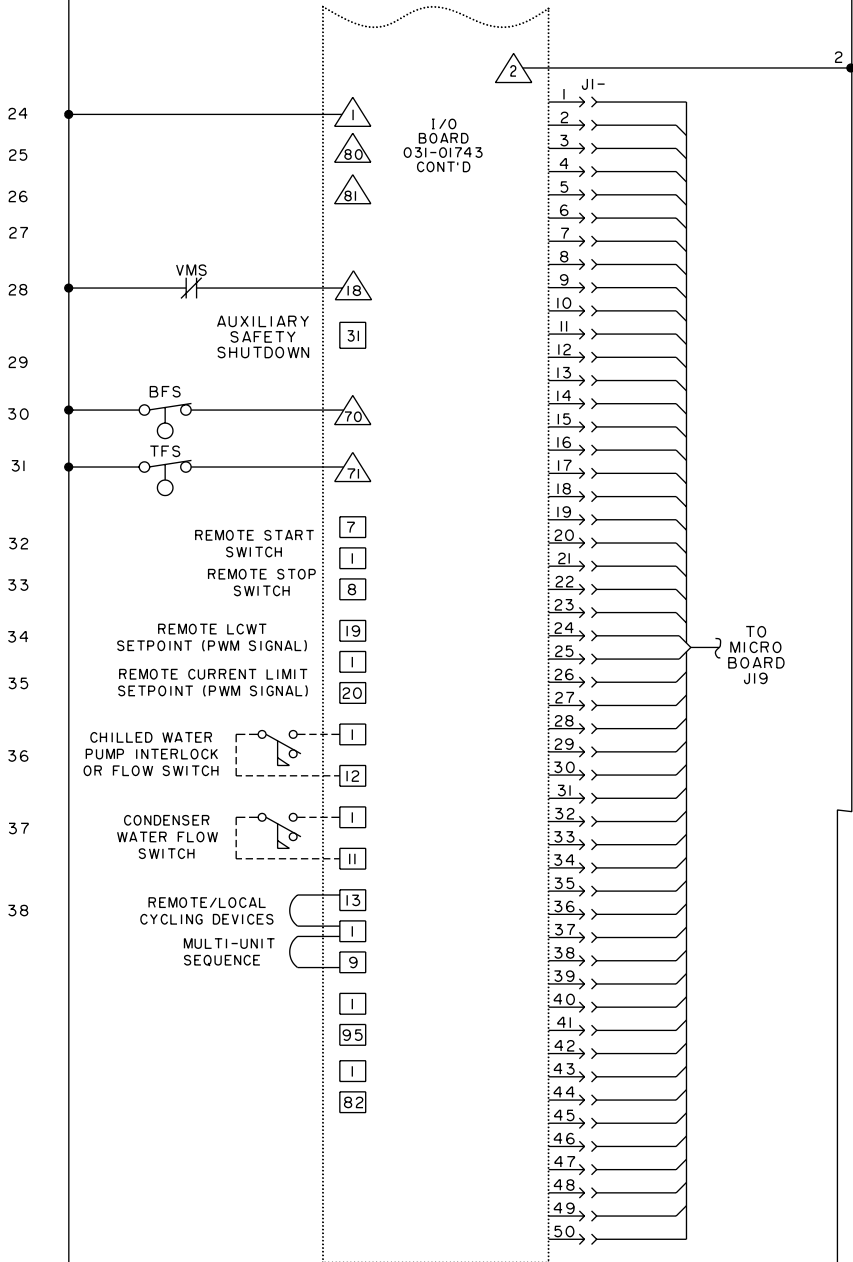
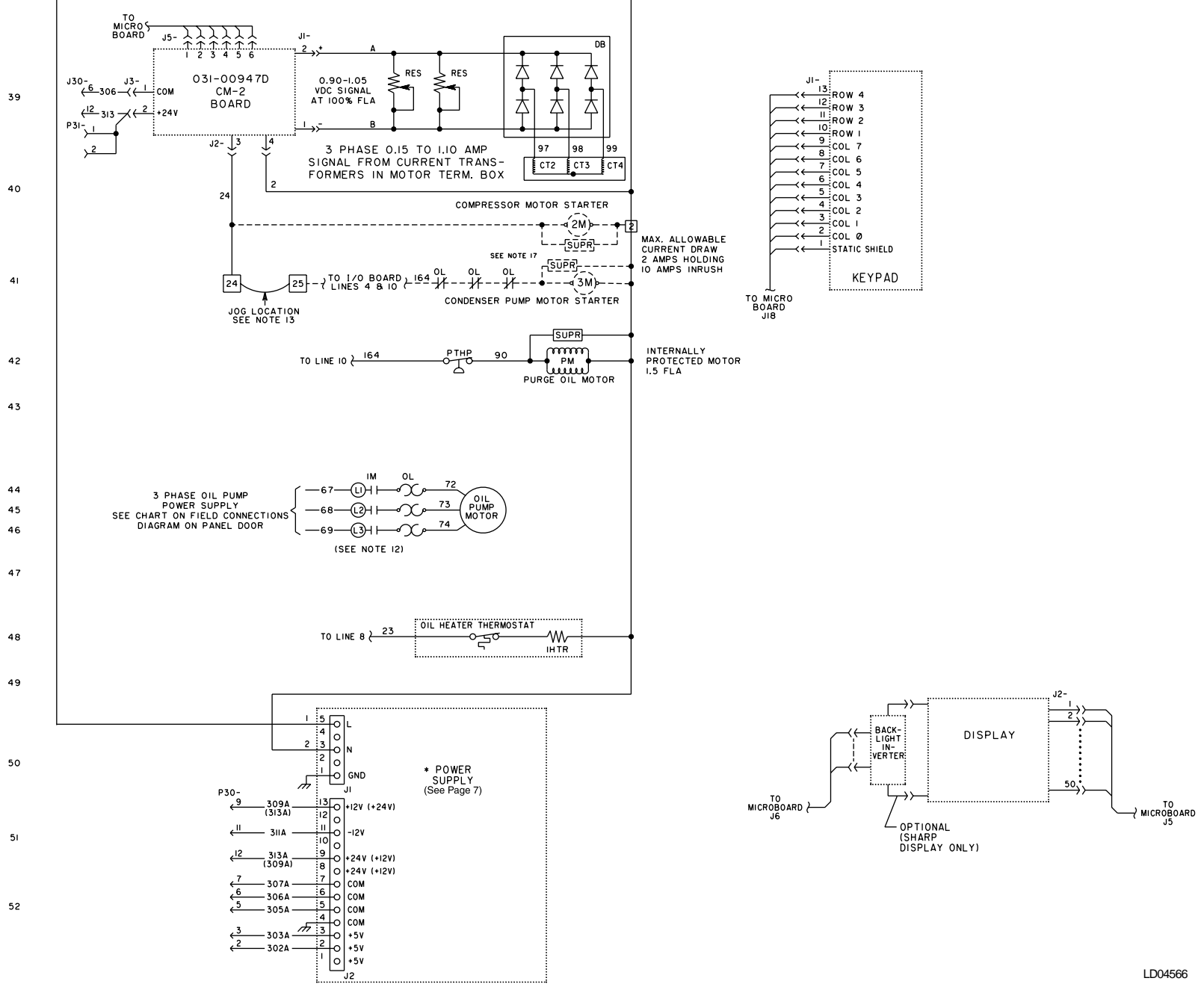


ELEMENTARY DIAGRAM

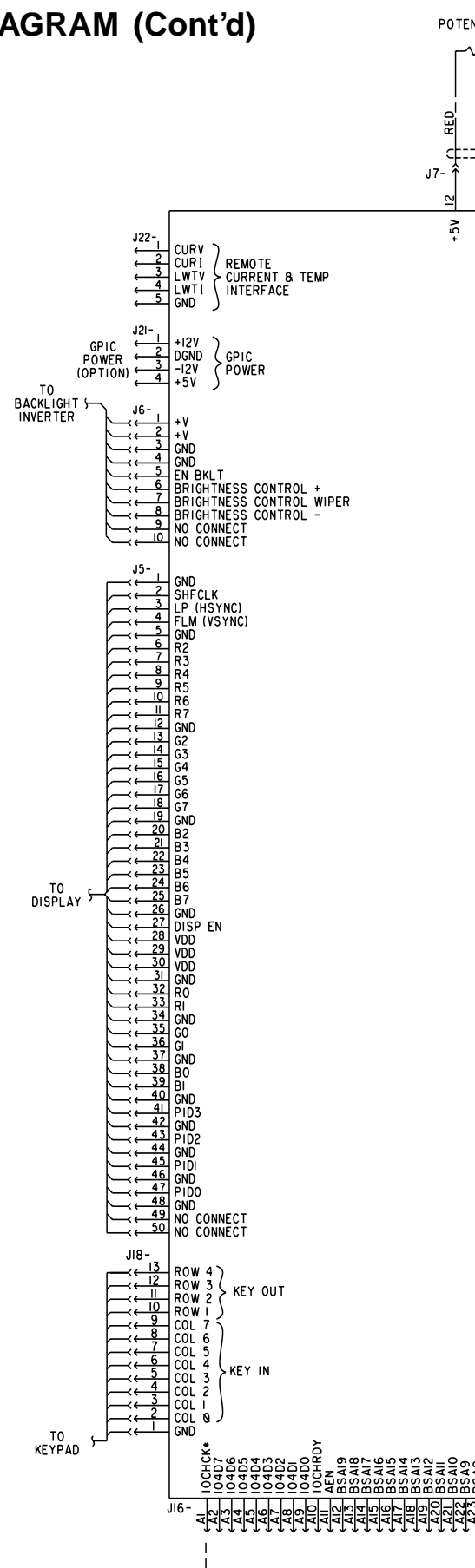


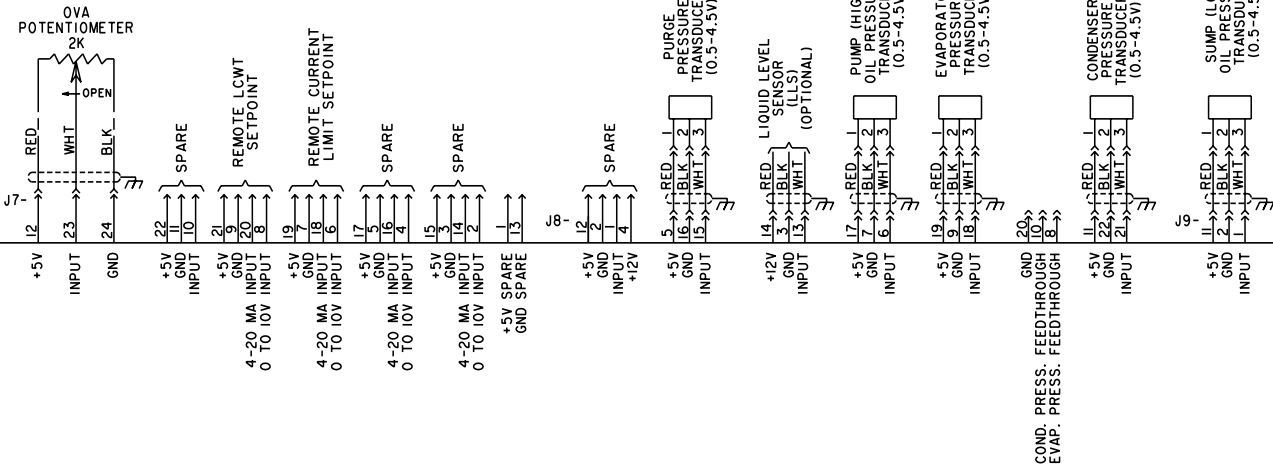




LD04566

ELEMENTARY DIAGRAM (Cont'd)



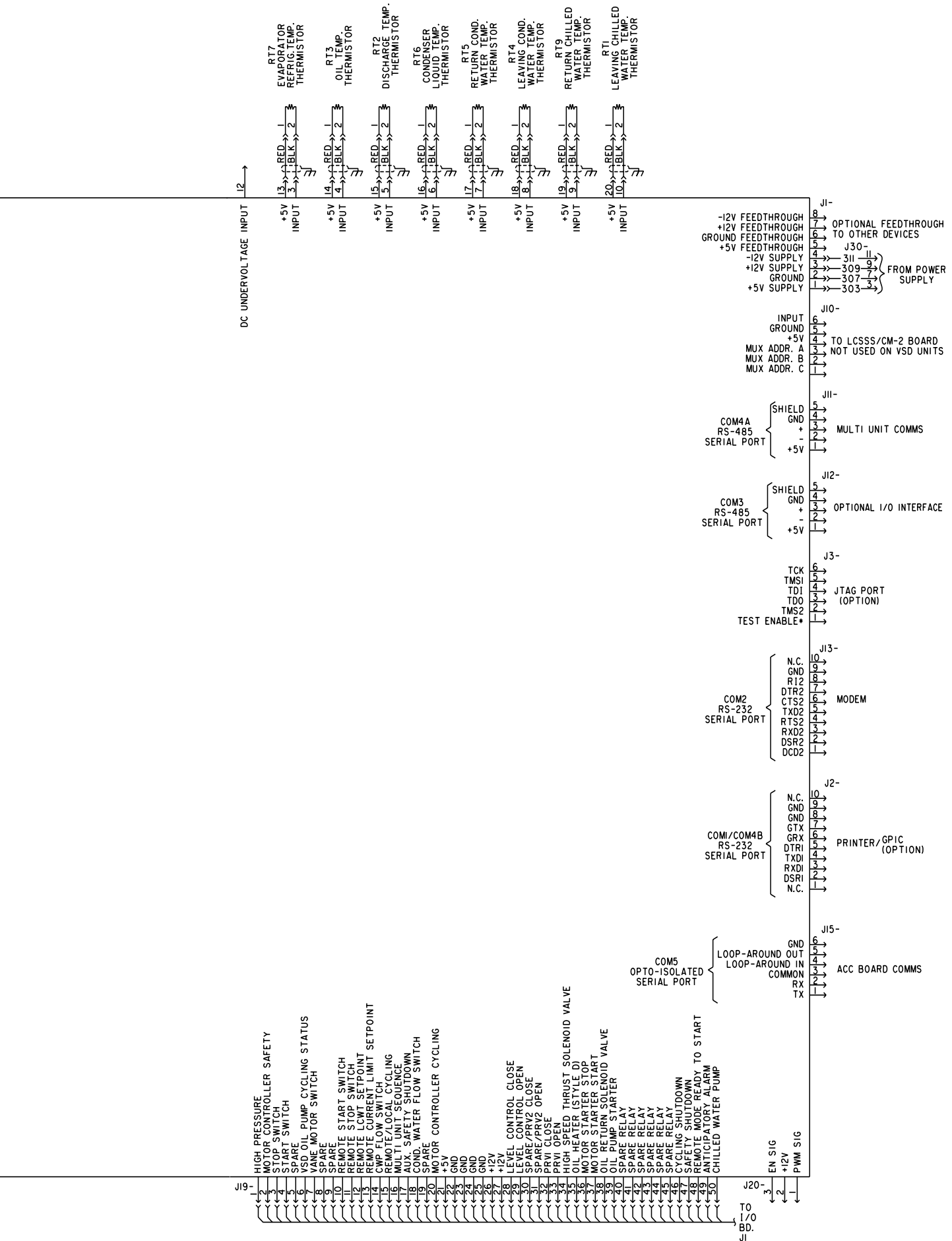


MICROBOARD
031-01730

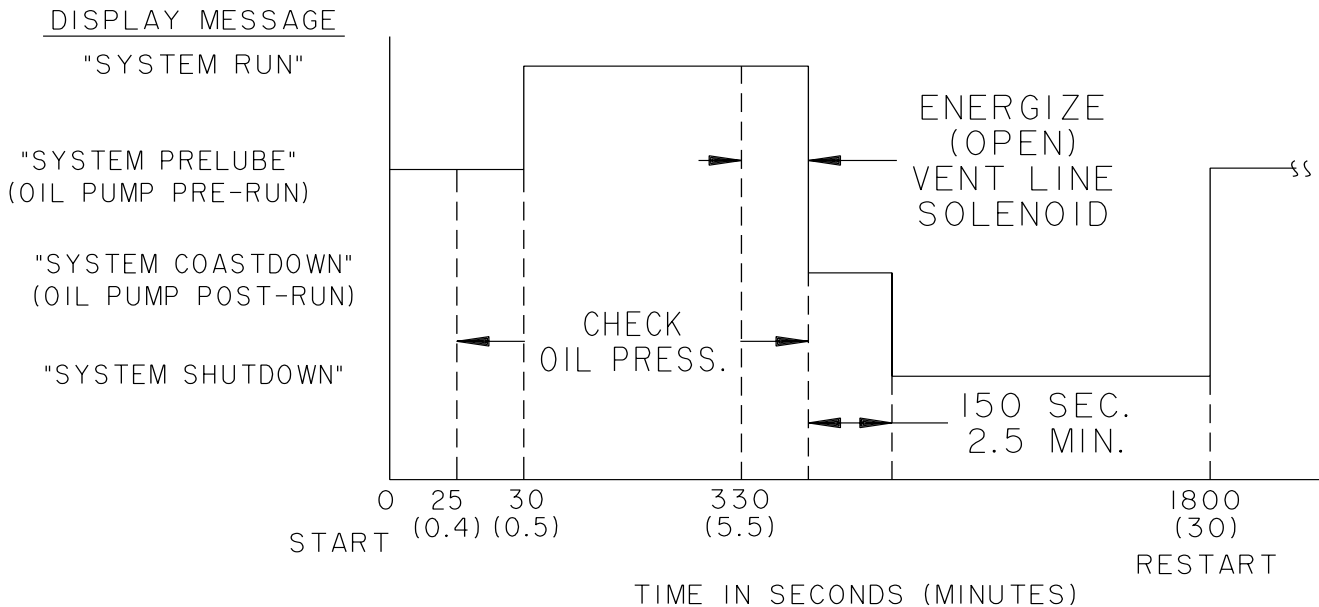
- BSA17
- BSA16
- BSA15
- BSA14
- BSA13
- BSA12
- BSA11
- BSA10
- BSA9
- BSA8
- BSA7
- BSA6
- BSA5
- BSA4
- BSA3
- BSA2
- BSA1
- BSA0
- GND
- F5TDRV
- +5V
- NO CONNECT
- DR02
- 12V
- ZWS*
- +12V
- NO CONNECT
- SMEMR*
- MEMR*
- IO*
- IO*
- DACK3*
- DR03
- DACK1*
- DR01*
- REFRESH*
- BCLK
- IR07
- IR05
- IR04
- IR03
- DACK2*
- TC
- BALE
- +5V
- OSC
- +5V
- GND
- B332

- J7
- C0
- GBHE*
- BSA25
- BSA21
- BSA20
- BSA19
- BSA18
- BSA17
- MEMR*
- MEMW*
- IO4D8
- IO4D7
- IO4D6
- IO4D5
- IO4D4
- IO4D3
- IO4D2
- IO4D1
- IO4D0
- NO CONNECT
- IOCS16*
- IOCS16*
- IOCS16*
- IR010
- IR010
- IR012
- IR013
- IR014
- IR015
- DACK0*
- DACK0*
- DACK0*
- DACK0*
- DR05
- DACK6*
- DR06
- DACK7*
- DR07
- +5V
- MASTER*
- DR8
- GND
- DR9

PC-IO4 PORT








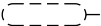
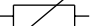
TIMING DIAGRAM



NOTES:

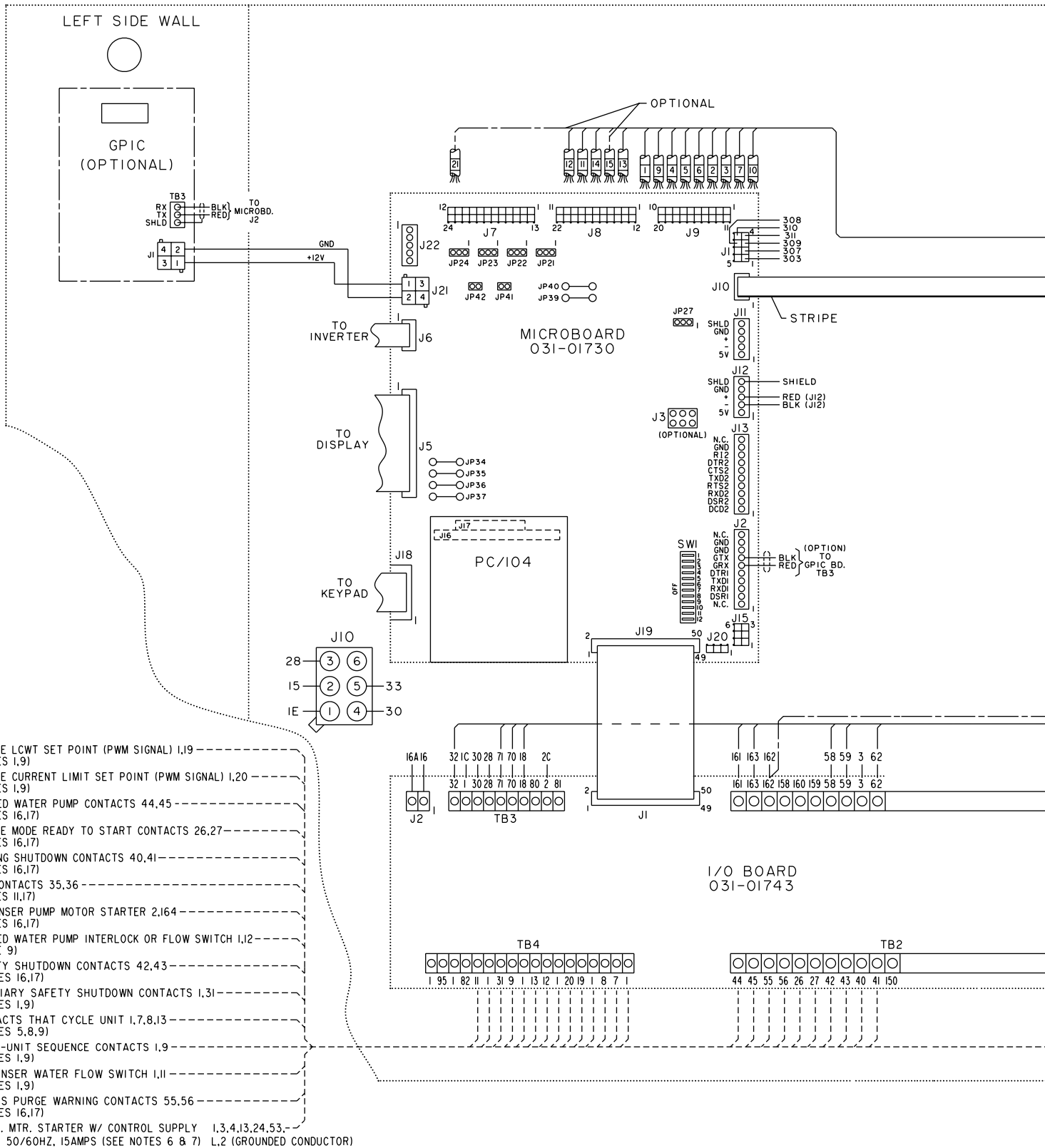
1. This wiring diagram describes the standard electronic control scheme for use with an electromechanical starter. For details of standard modifications, refer to Product Form 160.55-PW7.
2. Field wiring to be in accordance with the National Electrical Code as well as all other applicable codes and specifications. See Product Form 160.55-PW4 for field wiring connections.
3. Numbers along the left side of diagram are line identification numbers. The numbers along the right side indicate the line number location of relay contacts. An underlined contact location signifies a normally closed contact.
4. Main control panel Class 1 field wiring terminal connection points are indicated by numbers within a rectangle, i.e. 15. Main control panel factory wiring terminal connection points are indicated by numbers within a triangle, i.e. △. Component terminal markings are indicated by numbers within a circle, i.e. C1. Numbers adjacent to circuit lines are the circuit identification numbers.
5. To cycle unit on and off automatically with contacts other than those shown, install a cycling device between terminals 1 & 13 (line 38) (see note 9). If a cycling device is installed, jumper must be removed between terminals 1 & 13.
6. Compressor motor starter with starter interlock contacts (rated 0.5 to 1.0 amp @ 24 volts A.C.) must be per Form 160.46-PA5.1. Control panel shall be grounded.
7. Units installed in Canada must have a field supplied CSA approved 30 Amp disconnect switch and a 15 Amp dual element fuse mounted external to control panel for 115 volt control supply.
8. To stop unit and not permit it to start again, install a stop device between terminals 1 & 8 (Line 33) (see note 9). A remote start-stop switch may be connected to terminals 1, 7 & 8 (Lines 32 & 33) (see note 9). Remote start-stop switch (Line 32) is operative only in the "remote" operating mode.
9. Device contact rating to be 5 milliamperes @ 115 volts A.C.
10. _____
11. Contact rating is 5 Amp resistive @ 120 volts A.C. or 240 volts A.C.
12. Three phase oil pump must be properly phased L1, L2 & L3 corresponding to phase sequence A, B & C.
13. To check motor rotation on initial start-up, install momentary switch between terminals 24 & 25 (line 41). Depress start switch. After approx. 30 seconds, jog motor with momentary switch. When proper rotation is obtained, replace momentary switch with jumper. Switch must have a minimum contact rating of 2 FLA., 10 LRA at 115 Volts A.C.
14. Solid State motor overload (CM) is set to trip at 105% FLA. During momentary power interruption (power fault), contact opens for 1 second.
15. For high and low voltage units, the factory supplied jumper between 1 & 53 must be removed when electromechanical starter overloads and/or safety devices are used. For high voltage (2300-4160) UL and CSA approved units only, electromechanical compressor motor starter overloads (normally closed) must be connected between 1 & 53.
16. Contact rating is 5 Amps resistive @ 250 Volts A.C. & 30 Volts D.C., 2 Amp inductive (.4 PF) @ 250 Volts A.C. & 30 Volts D.C.
17. Each 115VAC field-connected inductive load: i.e. relay coil, motor starter coil, etc., shall have a transient suppressor wired in parallel with its coil, physically located at the coil. Spare transient suppressors and control circuit fuses are supplied in a bag attached to a cable clamp on left, inside wall of control panel.

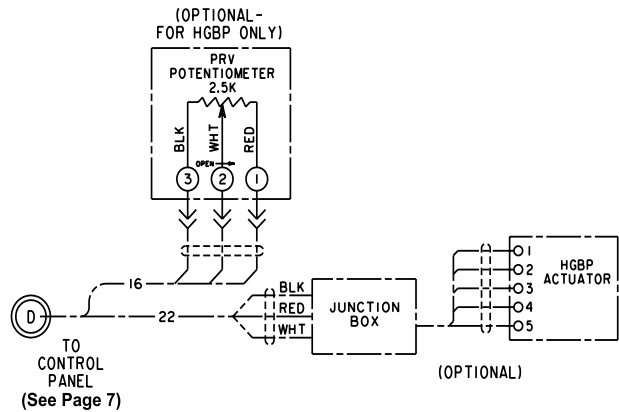
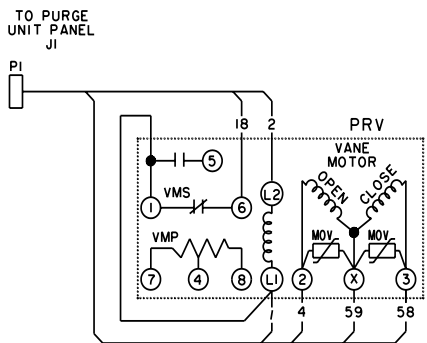
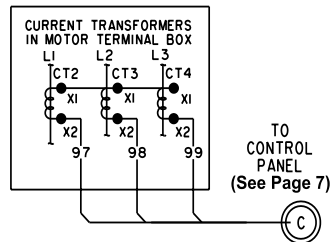
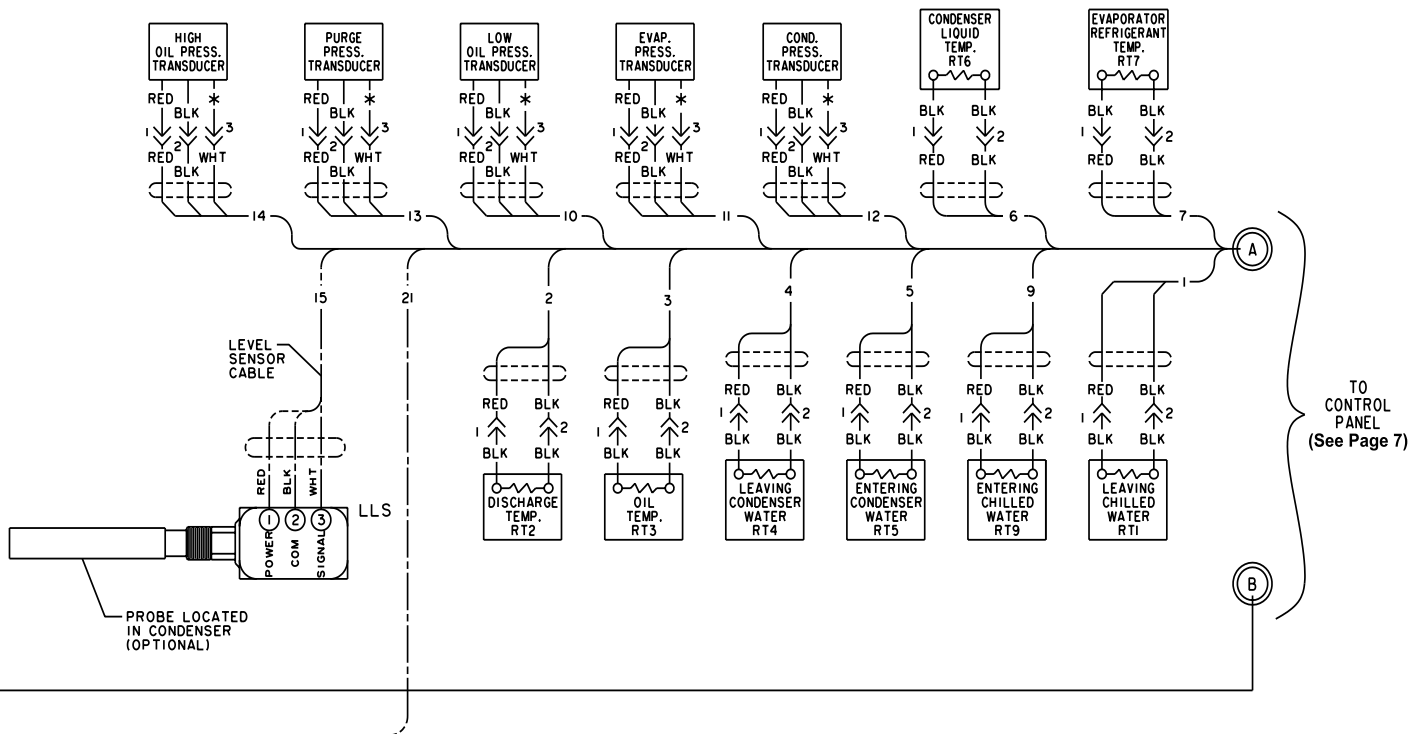
LEGEND

IHTR	THERMOSTATICALLY CONTROLLED 1000 WATT OIL HEATER
IM	3 PHASE OIL PUMP STARTER (MOUNTED IN PURGE PANEL)
2M	COMPRESSOR MOTOR STARTER
3M	CONDENSER PUMP MOTOR STARTER
IR	COMPRESSOR MOTOR/ IHTR HEATER CONTROL RELAY (KI8 - LOCATED ON I/O BD.)
ISOL	VENT LINE SOLENOID VALVE
2SOL,4SOL	PURGE OIL SOLENOID VALVES
3SOL	PURGE AIR EXHAUST SOLENOID VALVE
ISS	DPDT 3 POSITION ROCKER SWITCH
IT	CLASS 2 POWER SUPPLY TRANSFORMER
BFS	PURGE BOTTOM FLOAT SWITCH
CM	SOLID STATE OVERLOAD/POWER FAULT CONTACTS (PART OF CM-2 BOARD)
CT	CURRENT TRANSFORMER
FDTS	FAULTY DISCHARGE TEMP. SENSOR (PROVIDED BY RT1)
FLA	FULL LOAD AMPS (COMPRESSOR MOTOR)
FU	FUSE
HDT	REFRIG. HIGH DISCHARGE TEMP. (PROVIDED BY RT2)
HGBP	HOT GAS BYPASS
HOP	HIGH OIL PRESSURE (PROVIDED BY TWO TRANSDUCERS)
HOT	HIGH OIL TEMPERATURE (PROVIDED BY RT3)
HP	HIGH PRESSURE CUTOUT (MOUNTED IN PURGE PANEL)
LEP	LOW EVAPORATOR PRESSURE (PROVIDED BY EVAP. PRESS TRANSDUCER)
LLS	LIQUID LEVEL SENSOR (PROBE)
LOT	LOW OIL TEMPERATURE (PROVIDED BY RT3)
LWT	LOW WATER TEMPERATURE (PROVIDED BY RT1)
MOV	METAL OXIDE VARISTOR
OL	MOTOR STARTER OVERLOADS
OP	LOW OIL PRESSURE (PROVIDED BY TWO TRANSDUCERS)
PAES	PURGE AIR EXHAUST SOLENOID VALVE (3SOL)
PM	PURGE OIL MOTOR (MOUNTED IN PURGE PANEL)
POS	PURGE OIL SOLENOID VALVE (2SOL & 4SOL)
PTHP	PURGE TANK HIGH PRESSURE CUTOUT (MOUNTED IN PURGE PANEL)
RT1-RT9	RESISTANCE TEMPERATURE SENSING ELEMENT
RES	RESISTOR
SUPR	TRANSIENT SUPPRESSOR
TBI,TB3,TB5, TB6 (TOP)	TERMINAL BLOCK, FACTORY WIRING — 
TB2,TB4, TB6 (BOTTOM)	TERMINAL BLOCK, FIELD CONNECTION — 
TFS	PURGE TOP FLOAT SWITCH
VMP	VANE MOTOR POTENTIOMETER (LOCATED IN PRV)
VMS	VANE MOTOR SWITCH (LOCATED IN PRV)
-----	FIELD WIRING
—————	FACTORY WIRING
.....	CIRCUIT BOARD OR ENCLOSURE BOUNDARY
	JACK (J1,J2,...)
	PLUG (P1,P2,...)
	WIRE ENTRANCE HOLE IN CONTROL PANEL
-----	OPTION (WHEN SUPPLIED) BY YORK.
-----	MECHANICAL LINKAGE
	SHIELDED CABLE
	METAL OXIDE VARISTOR
KI3,KI4,KI7	RELAYS MOUNTED ON I/O BOARD - SEE OPERATOR'S MANUAL

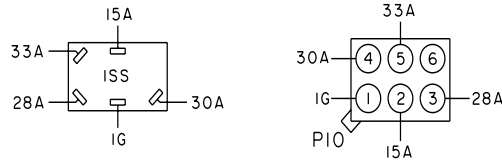
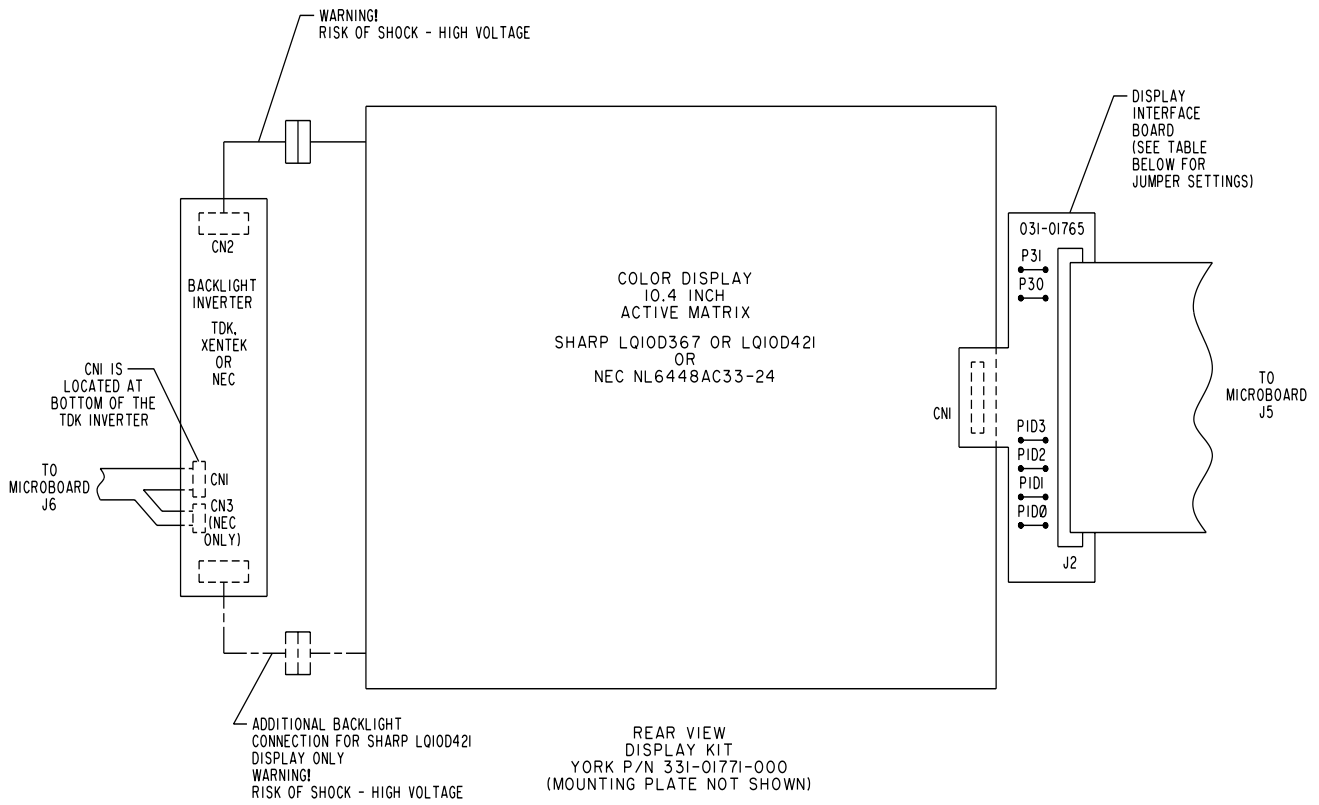
LD04573

CONNECTION DIAGRAM





INSIDE VIEW OF FRONT DOOR



DISPLAY INTERFACE BOARD JUMPER SETTINGS

DISPLAY	P30	P31	PID3	PID2	PDI	PID0
SHARP LQ10D367	IN	IN	OUT	OUT	IN	OUT
SHARP LQ10D421	IN	IN	OUT	OUT	IN	OUT
NEC	OUT	OUT	OUT	OUT	OUT	IN

LD04571

CHART 1 – OIL PUMP MOTOR AND STARTER FOR COMPRESSOR CODES B,C & E

OIL PUMP MOTOR		OIL PUMP STARTER OVERLOAD HEATERS					
VOLTS-PH-HZ	FULL LOAD AMPS	MANUFACTURER	MANUFACTURER'S PART NO.	SETTING	TRIP AMPS	DUAL ELEMENT FUSE SIZE	% DRW PROTECTION
200-3-60	3.00	CUTLER HAMMER	H2008B-3	A.0	4.4	6.25	135
208-3-60	2.90	CUTLER HAMMER	H2007B-3	B.75	3.7	6.25	126
220-3-60	2.90	CUTLER HAMMER	H2007B-3	B.75	3.7	6.25	126
230-3-60	2.90	CUTLER HAMMER	H2007B-3	B.75	3.7	6.25	126
240-3-60	3.00	CUTLER HAMMER	H2007B-3	C.0	3.8	6.25	127
440-3-60	1.45	CUTLER HAMMER	H2005B-3	B.0	1.8	3	125
460-3-60	1.45	CUTLER HAMMER	H2005B-3	B.0	1.8	3	125
480-3-60	1.45	CUTLER HAMMER	H2005B-3	B.0	1.8	3	125
550-3-60	1.30	CUTLER HAMMER	H2005B-3	B.0	1.8	2.5	140
575-3-60	1.25	CUTLER HAMMER	H2005B-3	A.5	1.7	2.5	132
600-3-60	1.23	CUTLER HAMMER	H2005B-3	A.5	1.7	2.5	135
220-3-50	3.30	CUTLER HAMMER	H2008B-3	A.50	4.5	7	135
346-3-50	2.10	CUTLER HAMMER	H2006B-3	B.50	2.9	4.5	135
380-3-50	2.20	CUTLER HAMMER	H2006B-3	B.75	3.0	4.5	138
400-3-50	2.20	CUTLER HAMMER	H2006B-3	B.75	3.0	4.5	138
415-3-50	1.85	CUTLER HAMMER	H2006B-3	A.25	2.4	4	127
440-3-50	1.70	CUTLER HAMMER	H2006B-3	A.25	2.4	3.5	138

CHART 2 – OIL PUMP MOTOR AND STARTER FOR COMPRESSOR CODES F

OIL PUMP MOTOR		OIL PUMP STARTER OVERLOAD HEATERS					
VOLTS-PH-HZ	FULL LOAD AMPS	MANUFACTURER	MANUFACTURER'S PART NO.	SETTING	TRIP AMPS	DUAL ELEMENT FUSE SIZE	% DRW PROTECTION
200-3-60	3.90	CUTLER HAMMER	H2008B-3	B.5	5.3	8	136
208-3-60	3.70	CUTLER HAMMER	H2008B-3	A.75	4.7	8	126
220-3-60	3.70	CUTLER HAMMER	H2008B-3	A.75	4.7	8	126
230-3-60	3.70	CUTLER HAMMER	H2008B-3	A.75	4.7	8	126
240-3-60	3.70	CUTLER HAMMER	H2008B-3	A.75	4.7	8	126
440-3-60	1.85	CUTLER HAMMER	H2006B-3	A.25	2.4	4	127
460-3-60	1.85	CUTLER HAMMER	H2006B-3	A.25	2.4	4	127
480-3-60	1.85	CUTLER HAMMER	H2006B-3	A.25	2.4	4	127
550-3-60	1.63	CUTLER HAMMER	H2005B-3	A.0	2.2	3	137
575-3-60	1.56	CUTLER HAMMER	H2005B-3	C.0	2.1	3	137
600-3-60	1.50	CUTLER HAMMER	H2005B-3	B.75	2.1	3	137
380-3-50	2.20	CUTLER HAMMER	H2006B-3	B.75	3.0	4.5	138
400-3-50	2.20	CUTLER HAMMER	H2006B-3	B.75	3.0	4.5	138
415-3-50	1.85	CUTLER HAMMER	H2006B-3	A.25	2.4	4	127

PRESSURE-TEMPERATURE CHART					
APPLICATION		DEVICE	UNITS	OPERATING POINT	
CHILLED WATER	BRINE			ON RISE	ON FALL
✓	✓	HDT	DEG.F/DEG.C	220/104.4	219/103.9
✓	✓	HOT	DEG.F/DEG.C	180/82.2	179/81.7
✓	✓	OP	PSID/kPa	20/137.9	15/103.4
✓	✓	PAES	PSIA/kPa	90/620.4	80/551.5
✓	✓	HP	PSIA/kPa	CUT-OUT 29.7/204.8 **	PROGRAMMABLE PER OPERATOR'S MANUAL FORM 160.55-01 * ** CUT-IN 23.7/163.4 **
✓		LEP (RII)	PSIA/kPa	CUT-IN 5.43/37.4	ALLOW PRV OPENING 5.65/39.0 INHIBIT PRV OPENING 5.55/38.3 CUT-OUT 5.42/37.4
✓		LEP (RI23)	PSIA/kPa	CUT-IN 4.41/30.4	ALLOW PRV OPENING 4.70/32.4 INHIBIT PRV OPENING 4.50/31.0 CUT-OUT 4.40/30.3
✓	✓	HOP	PSID/kPa	60/413.7	59/406.8
✓	✓	FDTS	DEG.F/DEG.C	30.0/-1.10	29.9/-1.20
✓		LWT	DEG.F/DEG.C	PROGRAMMABLE PER OPERATOR'S MANUAL FORM 160.55-01	
	✓	LWT	DEG.F/DEG.C		
✓	✓	LOT	DEG.F/DEG.C	71.0/21.7	55.0/12.8
✓	✓	P THP	PSIA/kPa	105/723	99/682 MANUAL RESET

LD04572

* Function provided by condenser transducer.

** HP threshold for imots built in WUXI. China to be as follows:

Cut-out – 29.1/200.7

Cut-in – 23.1/159.3

Inhibit Prv – 28.2/194.5

Allow Prv – 28.0/193.1



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