



PRODUCT DRAWING

YORK INTERNATIONAL CORPORATION
P.O. Box 1592, York, PA 17405

Supersedes: Nothing

FORM 160.65-PA2.1 (1189)
(1 OF 8)

**CODEPAK ROTARY SCREW LIQUID CHILLERS
WIRING DIAGRAM, MICROCOMPUTER CONTROL CENTER
WITH REMOTE ELECTRO-MECHANICAL STARTER
MODEL YS NN NN S7**

CONTRACTOR _____
ORDER NO. _____
YORK CONTRACT NO. _____
YORK ORDER NO. _____

PURCHASER _____
JOB NAME _____
LOCATION _____
ENGINEER _____

REFERENCE DATE _____

APPROVAL DATE _____

CONSTRUCTION DATE _____

JOB DATA:

CODEPAK MODEL NO. YS _____

NO. OF UNITS _____

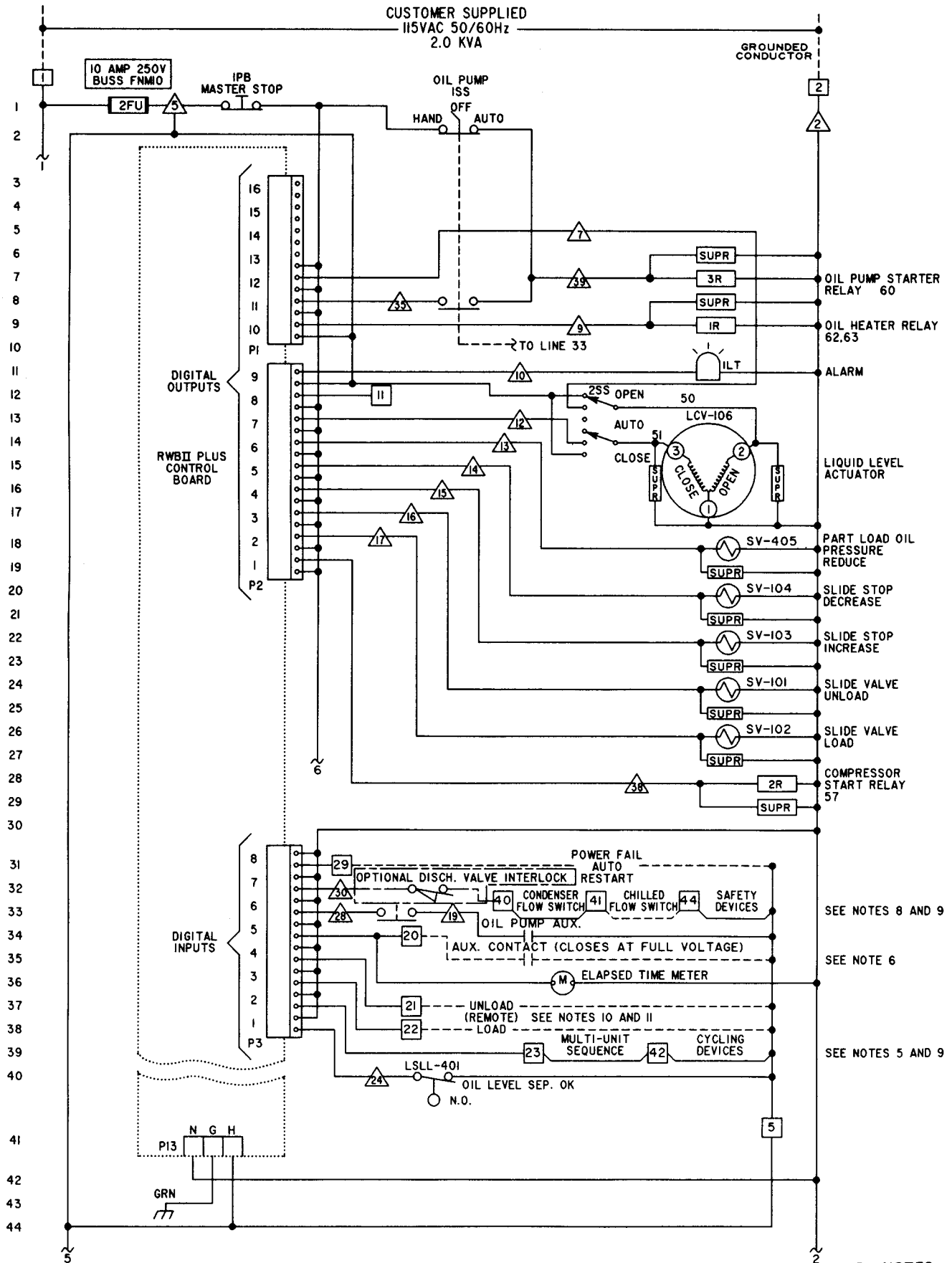
COMPRESSOR MOTOR _____ VOLTS, 3-PHASE, _____ HZ

OIL PUMP MOTOR _____ VOLTS, 3-PHASE, _____ HZ, _____ FLA

Remarks:

ELEMENTARY DIAGRAM

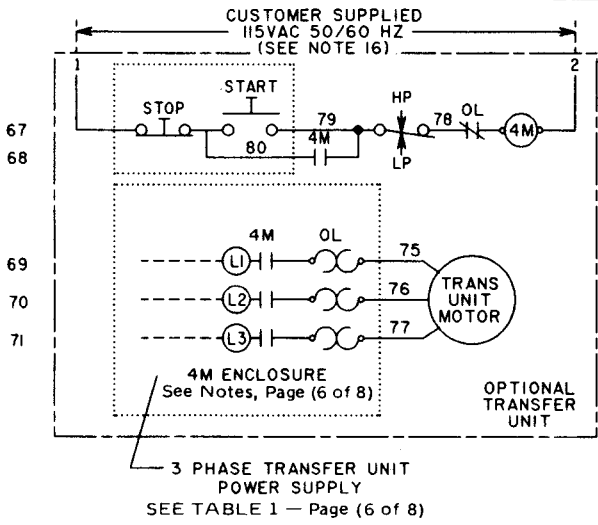
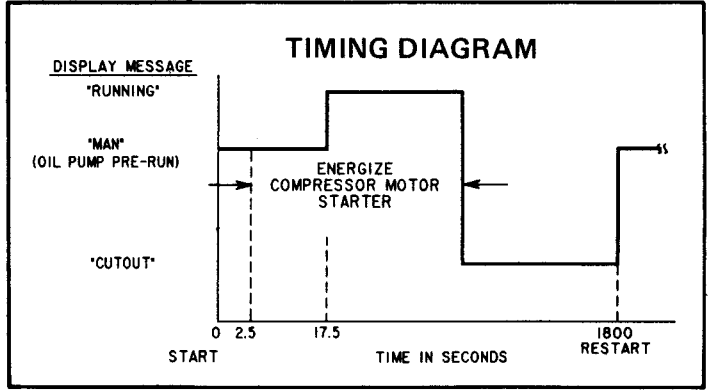
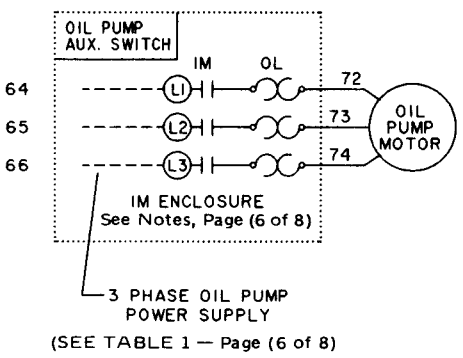
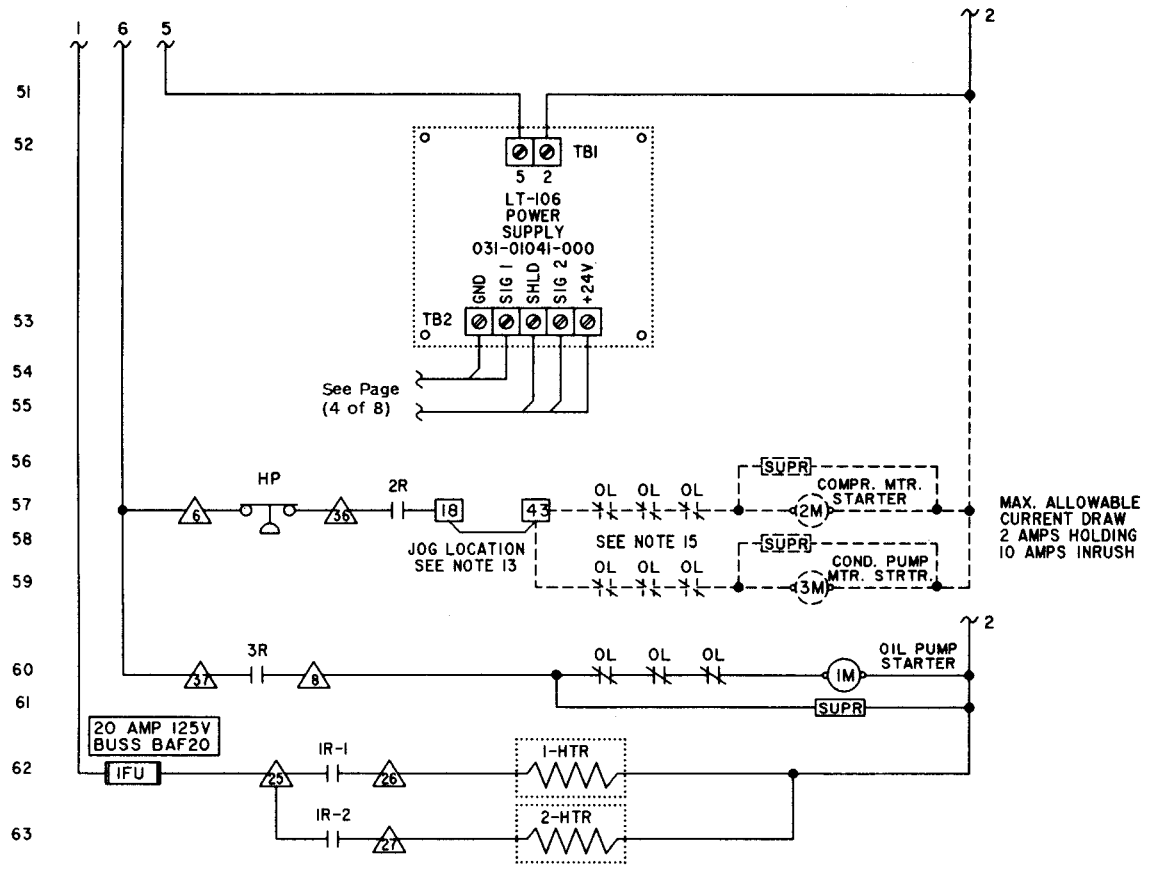
REF. - 035-08625D, Rev. A



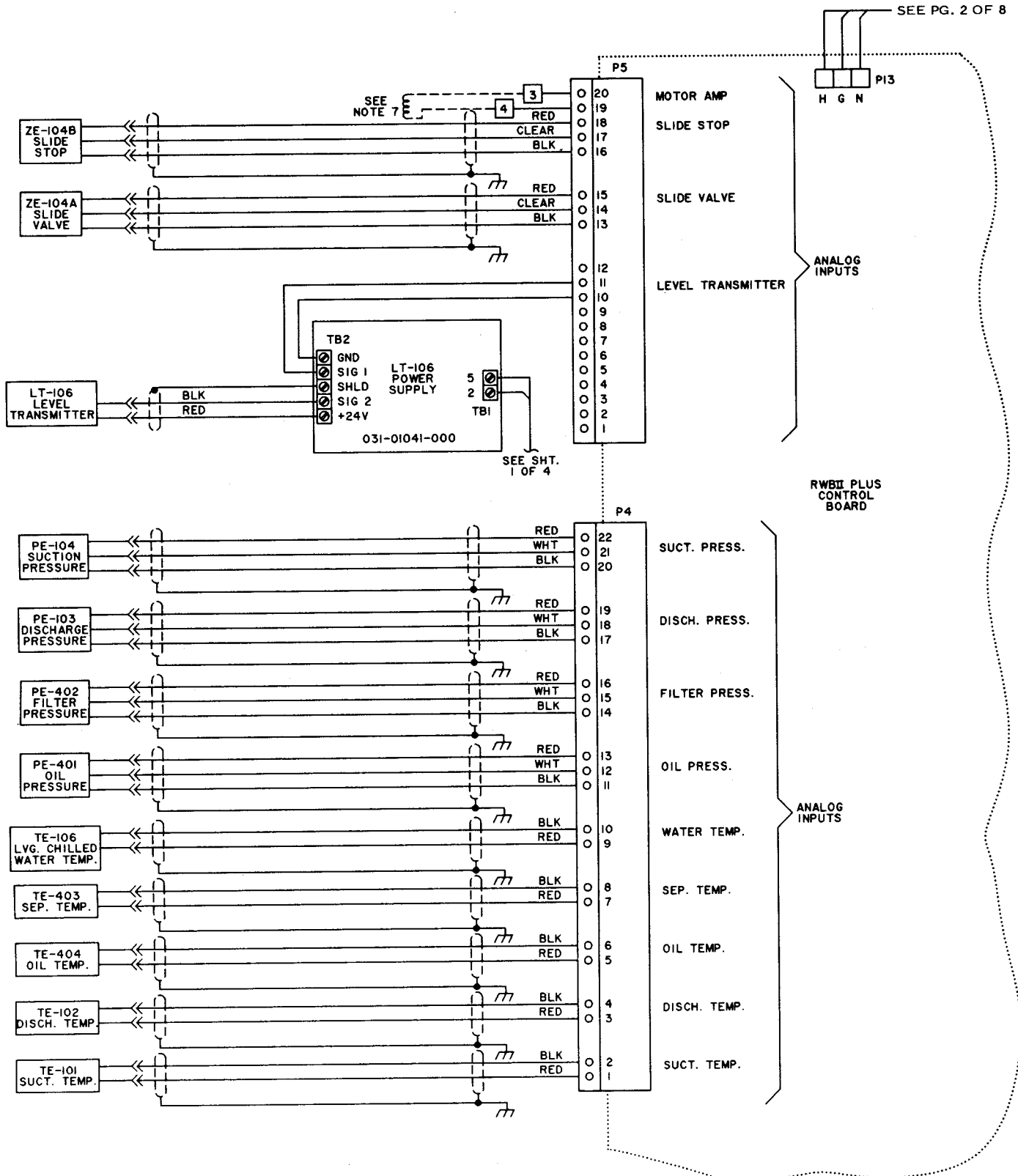
CONT'D. ON PAGES 3 & 4

See NOTES -
Page (6 of 8)





ELEMENTARY DIAGRAM (CONT'D.)



ELEMENTARY DIAGRAM (CONT'D.)



LEGEND

- IHTR 500 WATT OIL HEATER
- 2HTR 500 WATT OIL HEATER
- ILT ALARM LIGHT
- IM 3 PHASE OIL PUMP STARTER W/AUX. SWITCH
- 2M COMPRESSOR MOTOR STARTER
- 3M CONDENSER PUMP MOTOR STARTER
- 4M TRANSFER UNIT MOTOR STARTER
- IPB MASTER STOP PUSHBUTTON SWITCH
- IR OIL HEATER RELAY
- 2R COMPRESSOR START RELAY
- 3R OIL PUMP STARTER RELAY
- FU FUSE
- ISS HAND/OFF/AUTO OIL PUMP SWITCH
- HCP HIGH CONDENSER PRESSURE (PROVIDED BY PE-103)
- HDT REFRIG. HIGH DISCHARGE TEMP. (PROVIDED BY TE-102)
- HP HIGH PRESSURE CUTOUT
- LCV LIQUID LEVEL ACTUATOR
- LEP LOW EVAPORATOR PRESSURE (PROVIDED BY PE-104)
- LOP LOW OIL PRESSURE (PROVIDED BY PE-401)
- LOT LOW OIL TEMPERATURE (PROVIDED BY TE-403)
- LP/HP COMBINATION LOW PRESSURE-HIGH PRESSURE CUTOUT
- LSLL LIQUID LEVEL FLOAT SWITCH
- LT LIQUID LEVEL TRANSMITTER
- LWT LOW WATER TEMPERATURE (PROVIDED BY TE-106)
- OL MOTOR STARTER OVERLOADS
- PB STA PUSHBUTTON STATION
- PE PRESSURE TRANSDUCER
- SV SOLENOID VALVE
- TE TEMPERATURE TRANSMITTER PROBE
- ZE POSITION SENSOR
- SUPR TRANSIENT SUPPRESSOR
-  TERMINAL BLOCK, FACTORY WIRING
-  TERMINAL BLOCK, FIELD WIRING
- 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

PRESSURE – TEMPERATURE CHART			
DEVICE	UNITS	OPERATING POINT	
		ON RISE	ON FALL
* HCP	PSIG	270	269
HDT	DEG.F/DEG.C	212/100	211/99.4
HP	PSIG	270	210
* LEP	PSIG	52.8	52.7
LOP	PSIG	(**)+1	(**)
LOT	DEG.F/DEG.C	50/10	49/9.4
* LWT	DEG.F/DEG.C	42/5.5	41/5.0

* ADJUSTABLE SETPOINTS, DEFAULT VALUES SHOWN
 (**) LOW OIL PRESSURE CUTOUT (PSIG)=(.39)(SUCTION PRESS. IN PSIG)
 +(.61)(DISCHARGE PRESS. IN PSIG)

NOTES:

1. The wiring diagram describes the standard electronic control scheme for use with an electro-mechanical starter. For details of standard modifications, refer to Product Drawing Form 160.65-PA4.1.
2. Field wiring to be in accordance with the National Electrical Code as well as all other applicable codes and specifications. See Product Drawing Form 160.65-PA3.2 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. **5**. 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 **42** & **5** (see Note 9). If a cycling device is installed, jumper must be removed between terminals **42** & **5**.
6. Compressor motor starter with starter auxiliary contact (rated 10 milliamperes, 115 volts A.C.) must be per Form 160.65-PA5.1. Control panel shall be grounded.
7. Current transformer (5 AMP secondary per York Standard R1074) (Form 160.65-PA5.1) is connected between terminals **3** and **4**.
8. To stop unit and not permit it to start again, install a stop device between terminals **44** & **5** (line 33).
9. Device contact rating to be 10 milliamperes at 115 V.A.C.
10. To remotely load the unit, install a set of contacts (see Note 9) between **22** & **5**.

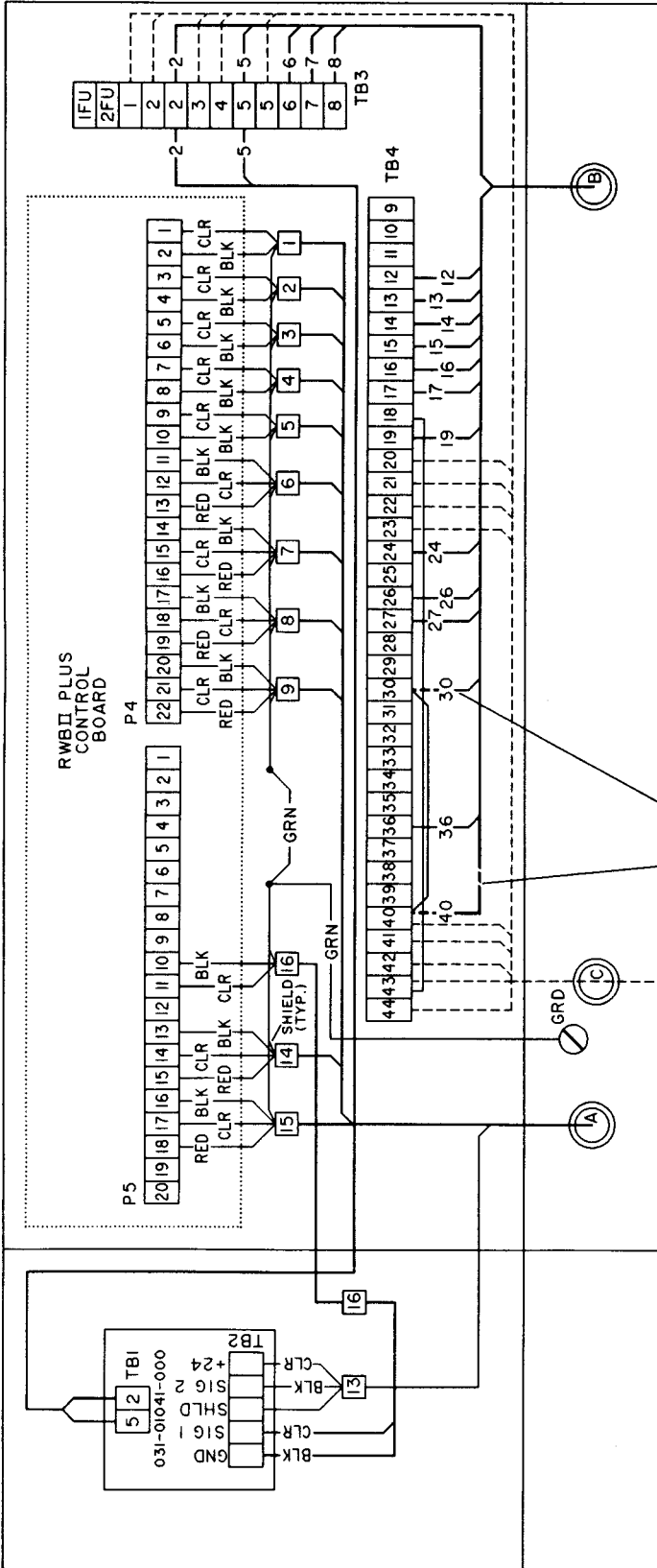
11. To remotely unload the unit, install a set of contacts (see Note 9) between **21** & **5**.
12. Three phase oil pump and optional transfer unit compressor motor must be properly phased – L1, L2 and L3 corresponding to phase sequence A, B, and C.
13. To check motor rotation on initial start-up, uncouple motor from compressor, install momentary switch between terminals **18** & **43** (line 57). Depress start switch. After approximately 5 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. Maximum allowable current draw for the sum of all loads is 2 AMPS holding and 10 AMPS inrush.
15. Each 115 V.A.C. 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 are supplied in a bag attached to the inside of the control panel.
16. Wiring to be 14 AWG minimum, transfer unit control power requirement is 115 VAC, 50/60 Hz., 1.9 AMP inrush and 0.21 AMP sealed.
17. Field wiring labels and system nameplate show minimum circuit ampacity and maximum dual element fuse size for separately fused loads. For commonly fused loads, see table below:

TABLE 1 — TRANSFER UNIT AND OIL PUMP AMPACITY/FUSE SIZE

VOLTS-PH-HZ	MIN. CIRCUIT AMPACITY	MAX. DUAL ELEMENT FUSE SIZE
380-3-60	16	20
416-3-60	16	20
460-3-60	14	20
575-3-60	15	15
346-3-50	17	20
380-3-50	16	20
415-3-50	15	20

18. See Form 160.65-NO1 for MicroComputer Control Center Operation and Maintenance Instruction.

CONNECTION DIAGRAM



OPTIONAL WIRING - IF DISCHARGE BUTTERFLY VALVE KIT IS ORDERED, REMOVE JUMPER BETWEEN TERMINALS 30 AND 40

TO COMPRESSOR MOTOR STARTER WITH CONTROL TRANSFORMER 15V, 50/60 Hz 2 KVA 1,2,3,4,5,20,43 (SEE NOTES 2,6,7,14,15)

TO CHILLED WATER PUMP INTERLOCK OR FLOW SWITCH (SEE NOTES 2,9)

TO CONDENSER PUMP MOTOR STARTER (SEE NOTES 2,14,15)

TO CONDENSER WATER PUMP INTERLOCK OR FLOW SWITCH (SEE NOTES 1,9)

TO REMOTE COMPRESSOR UNLOADING CONTACTS (SEE NOTES 1,10)

TO REMOTE COMPRESSOR UNLOADING CONTACTS (SEE NOTES 1,11)

TO MULTI-UNIT SEQUENCE CONTACTS (SEE NOTES 1,5,9)

TO CONTACTS THAT CYCLE THE UNIT (SEE NOTES 1,5,9)

TO CONTACTS THAT SHUTDOWN THE UNIT AND REQUIRE MANUAL RESTART (SEE NOTES 1,8,9)

