



# Wiring Diagrams

## DIAGRAM INDEX

### POWER SCHEMATICS

| Unit 30HXA,C | Voltage | Figure Number | Label Diagram No. 30HX |
|--------------|---------|---------------|------------------------|
| 076-186      | ALL     | 1             | 500141                 |
| 206-271      | ALL     | 2             | 500389                 |

### CONTROL SCHEMATICS

| Unit 30HXA,C | Voltage | Figure Number | Label Diagram No. 30HX |
|--------------|---------|---------------|------------------------|
| 076-186      | 24      | 3             | 500143                 |
|              | 115,230 | 4             | 500142                 |
| 206-271      | 24      | 5             | 500392                 |
|              | 115,230 | 6             | 500395                 |

### COMPONENT ARRANGEMENTS

| Unit 30HXA,C | Voltage | Figure Number | Label Diagram No. 30HX |
|--------------|---------|---------------|------------------------|
| 076-186      | ALL     | 7             | 500140                 |
| 206-271      | ALL     | 8             | 500396                 |

NOTE: For operating sequence, refer to Controls, Start-Up, Operation, Service, and Troubleshooting literature.

## LEGEND

|          |                                     |
|----------|-------------------------------------|
| ALM      | — Alarm                             |
| C        | — Contactor Compressor              |
| CB       | — Circuit Breaker                   |
| CCN      | — Carrier Comfort Network           |
| CFC      | — Condenser Fan Contactor           |
| CD WP    | — Condenser Water Pump              |
| COMM     | — Communications                    |
| COMP     | — Compressor                        |
| COND     | — Condenser                         |
| CPM      | — Compressor Protection Module      |
| CR       | — Control Relay                     |
| CT       | — Current Transformer               |
| CWFS     | — Chilled Water Flow Switch         |
| CWP      | — Chilled Water Pump                |
| CWPI     | — Chilled Water Pump Interlock      |
| DGT      | — Discharge Gas Thermistor          |
| DPT      | — Discharge Pressure Transducer     |
| DSIO EXV | — EXV Driver                        |
| ECWT     | — Entering Chilled Water Temp.      |
| EPT      | — Economizer Pressure Transducer    |
| EQUIP    | — Equipment                         |
| EXV      | — Electronic Expansion Valve        |
| FB       | — Fuse Block                        |
| FC       | — Fan Contactor                     |
| FIOP     | — Factory-Installed Option          |
| FU       | — Fuse                              |
| GND      | — Ground                            |
| HPS      | — High-Pressure Switch              |
| HSIO     | — Keyboard and Display Module       |
| HTR      | — Heater                            |
| I/O      | — Input/Output                      |
| LCWT     | — Leaving Chilled Water Temp.       |
| LDR      | — Loader                            |
| LID      | — Local Interface Device            |
| LL       | — Liquid Level                      |
| LS       | — Level Switch                      |
| MLCR     | — Minimum Load Control Relay        |
| MLC      | — Minimum Load Control              |
| NEC      | — National Electrical Code (U.S.A.) |
| OHR      | — Oil Heater Relay                  |
| OL       | — Overload                          |

|         |                               |
|---------|-------------------------------|
| OLS     | — Oil Level Switch            |
| OP      | — Oil Pump                    |
| OPC     | — Oil Pump Contactor          |
| OPT     | — Oil Pressure Transducer     |
| PL      | — Plug Assembly               |
| PRI     | — Primary                     |
| PS      | — Power Supply                |
| PSIO    | — Processor Module            |
| PWR     | — Power                       |
| RBPL    | — Relay Board Plug Assembly   |
| S       | — Shorting                    |
| SEC     | — Secondary                   |
| SN      | — Sensor (Toroid)             |
| SPT     | — Suction Pressure Transducer |
| SW      | — Switch                      |
| T       | — Thermistor                  |
| TB      | — Terminal Block              |
| TEMP    | — Temperature                 |
| TRAN    | — Transformer                 |
| XL      | — Across-The-Line Start       |
| 1M      | — Wye                         |
| 2M      | — Delta                       |
| 4IN/OUT | — Analog I/O Module           |

|                                                                                      |                            |
|--------------------------------------------------------------------------------------|----------------------------|
|    | Terminal Block Connection  |
|    | Marked Terminal            |
|    | Unmarked Terminal          |
|    | Unmarked Splice            |
|    | Marked Wire                |
|    | Marked Splice              |
|    | Factory Wiring             |
|    | Field Control Wiring       |
|    | Field Power Wiring         |
|   | Indicates Common Potential |
|  | Does Not Represent Wiring  |
|  | Accessories or Options     |

## NOTES

- Three-phase motors protected against primary single phasing conditions.
- Replacement of original wires must be with type 105° C wire or its equivalent.
- Numbers on the right side of label diagrams indicate the line location of applicable contacts. An underlined number signifies normally closed contacts; a plain number denotes normally open contacts. Line numbers are shown on the left side of the diagrams.
- Factory wiring is in accordance with National Electrical Code (NEC) (U.S.A.). Field modifications or additions must be in compliance with all applicable codes.
- Wiring for main field power supply must be rated 75° C minimum. Use copper conductors for all units. Maximum incoming wire size for each terminal block is 500 kcmil.
- Power for control circuit should be supplied from a separate source (except 380/415-v units) through a field supplied disconnect with 30 amp maximum protection for 115-v control circuits and 15 amp maximum protection for 230-v control circuit. Connect control circuit power to terminals 1 and 2 of TB4. Connect neutral side of supply to terminal 2 of TB4. Control circuit conductors for all units must be copper only. Control circuit power is factory wired for 380/415-v units.
- Terminals 13 and 14 of TB2 are for field external interlock connection for remote ON-OFF and terminals 11 and 12 of TB2 for CWP interlock and CWFS. The contacts must be rated for dry-circuit application capable of handling a 24 vac to 50 mA load. Remove jumper between 13 and 14 of TB2 if remote ON-OFF is installed.
- Separate field-supplied 115-v or 230-v power circuits:  
Terminals 4 and 5 of TB2 are for control of chilled water pump starter.  
Terminals 2 and 3 of TB2 are for alarm.  
The maximum allowable load for each of these circuits is 125 va sealed.
- Terminal 6 of TB2 is for condenser fan contactor B (HXA) or condenser water pump (HXC). Terminal 1 of TB2 is for condenser fan contactor A (HXA). The maximum allowable load for each of these circuits is 125 va inrush, 125 va sealed. Separate field-supplied power is not required.

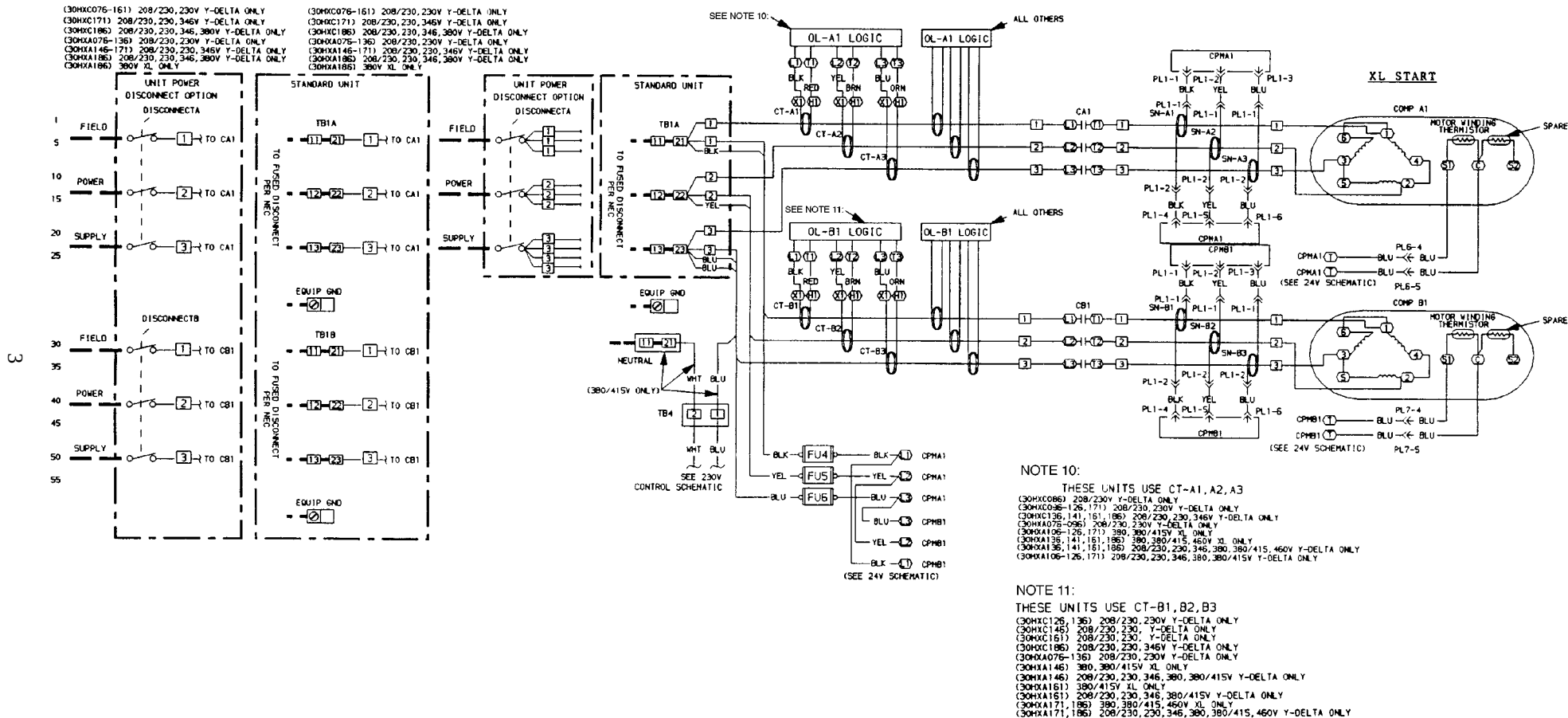


Fig. 1 — Power Wiring, 30HX076-186





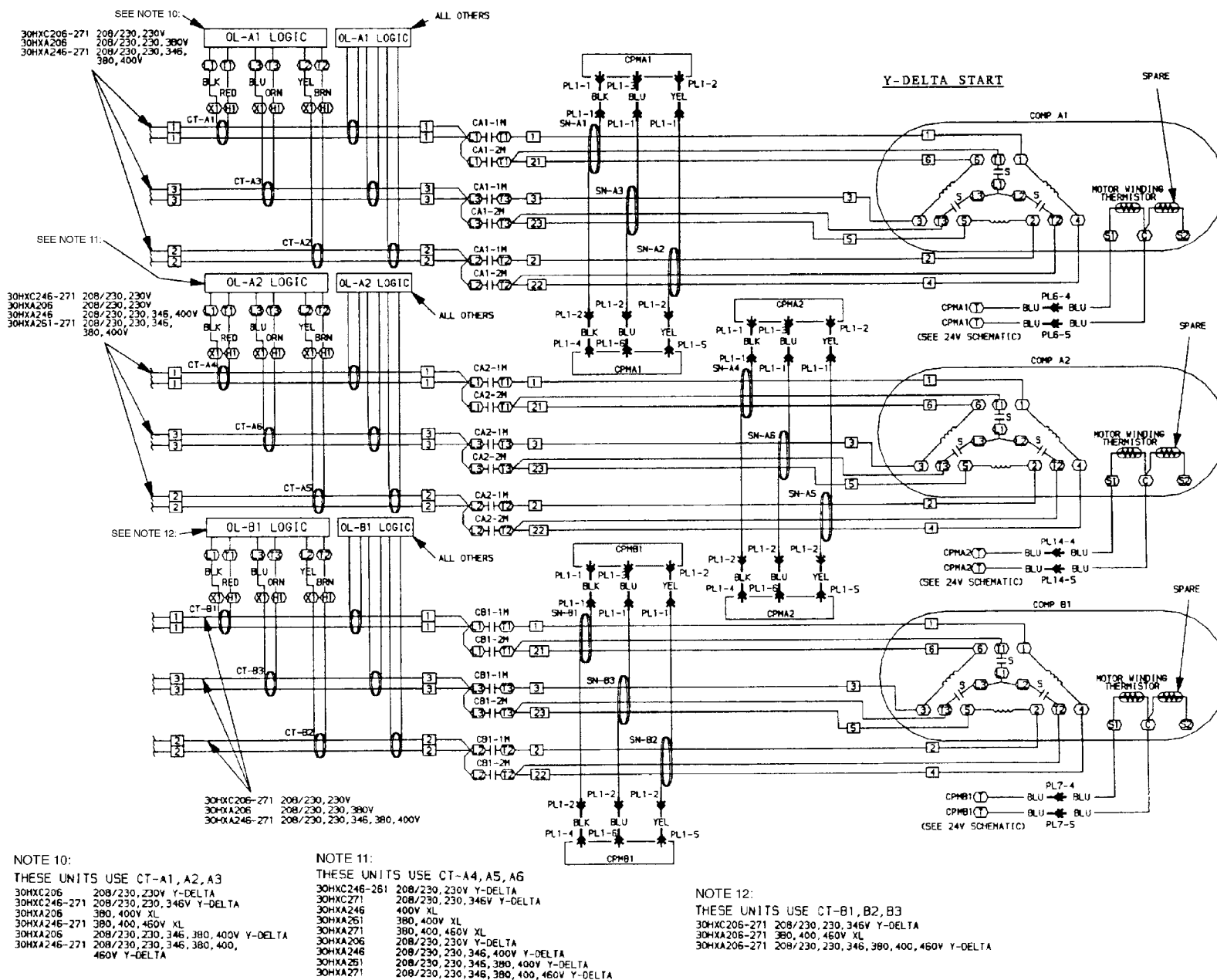
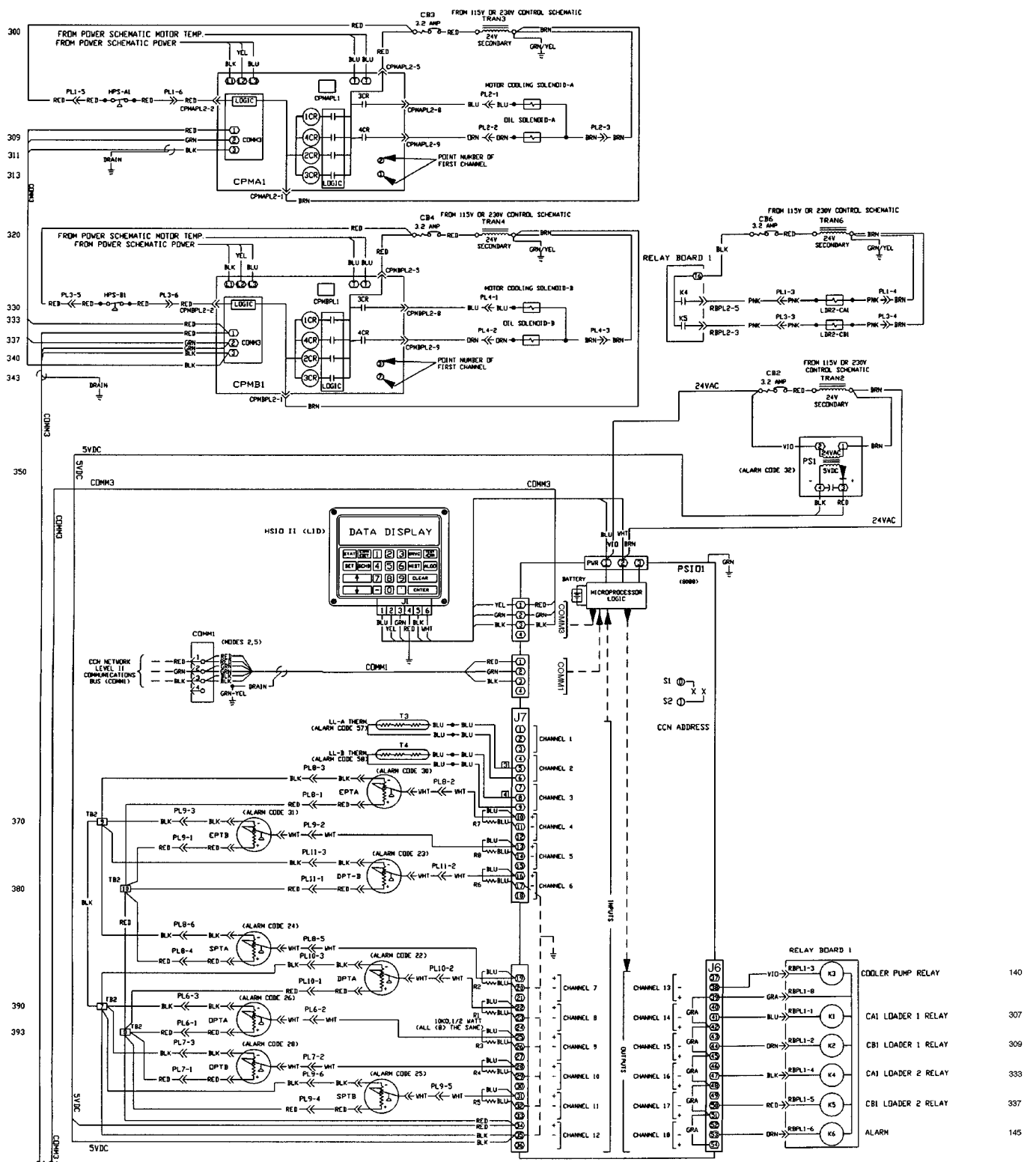


**Fig. 2 — Power Wiring, 30HX206-271 (cont)**









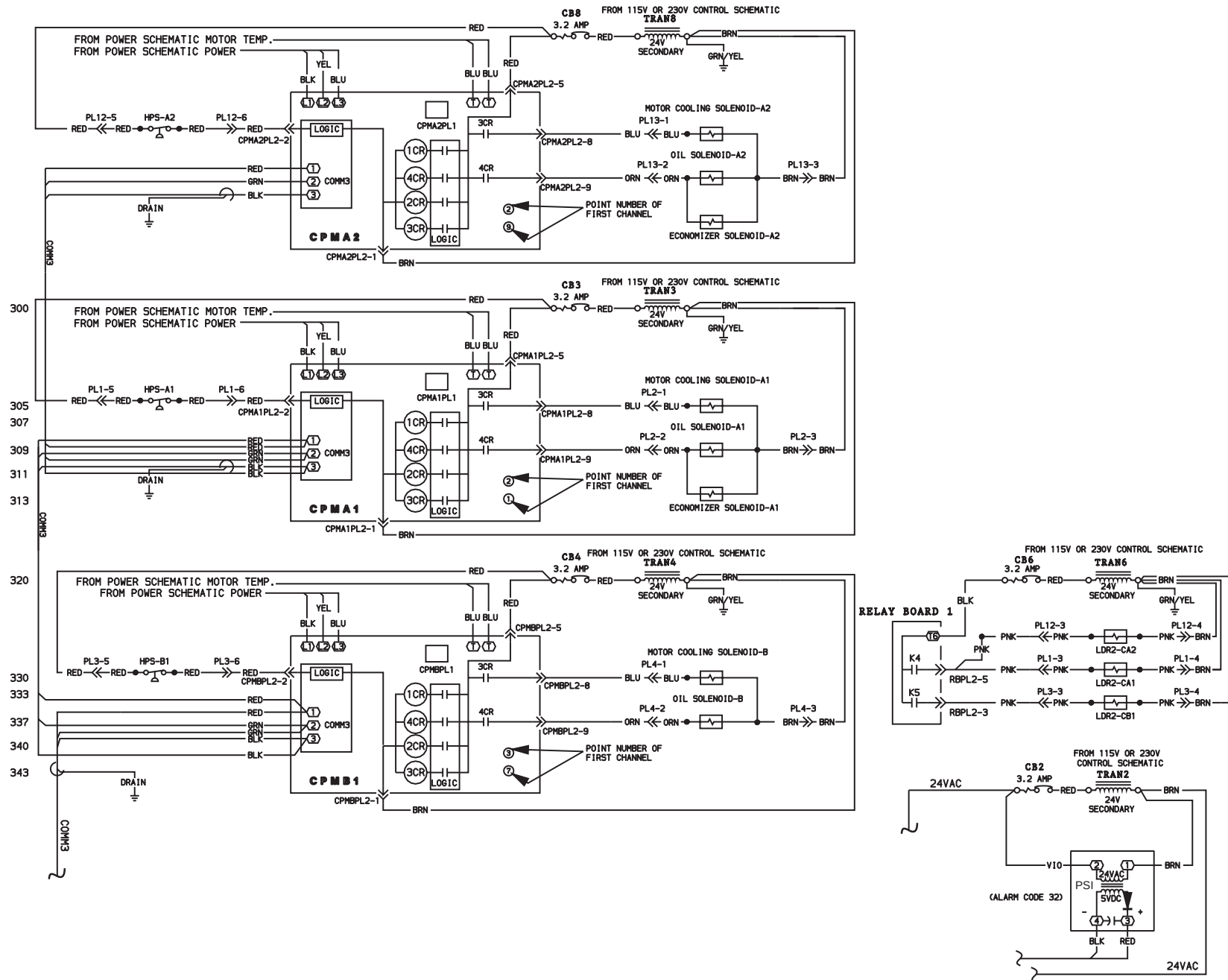


Fig. 5 — Control Wiring, 24 v, 30HX206-271

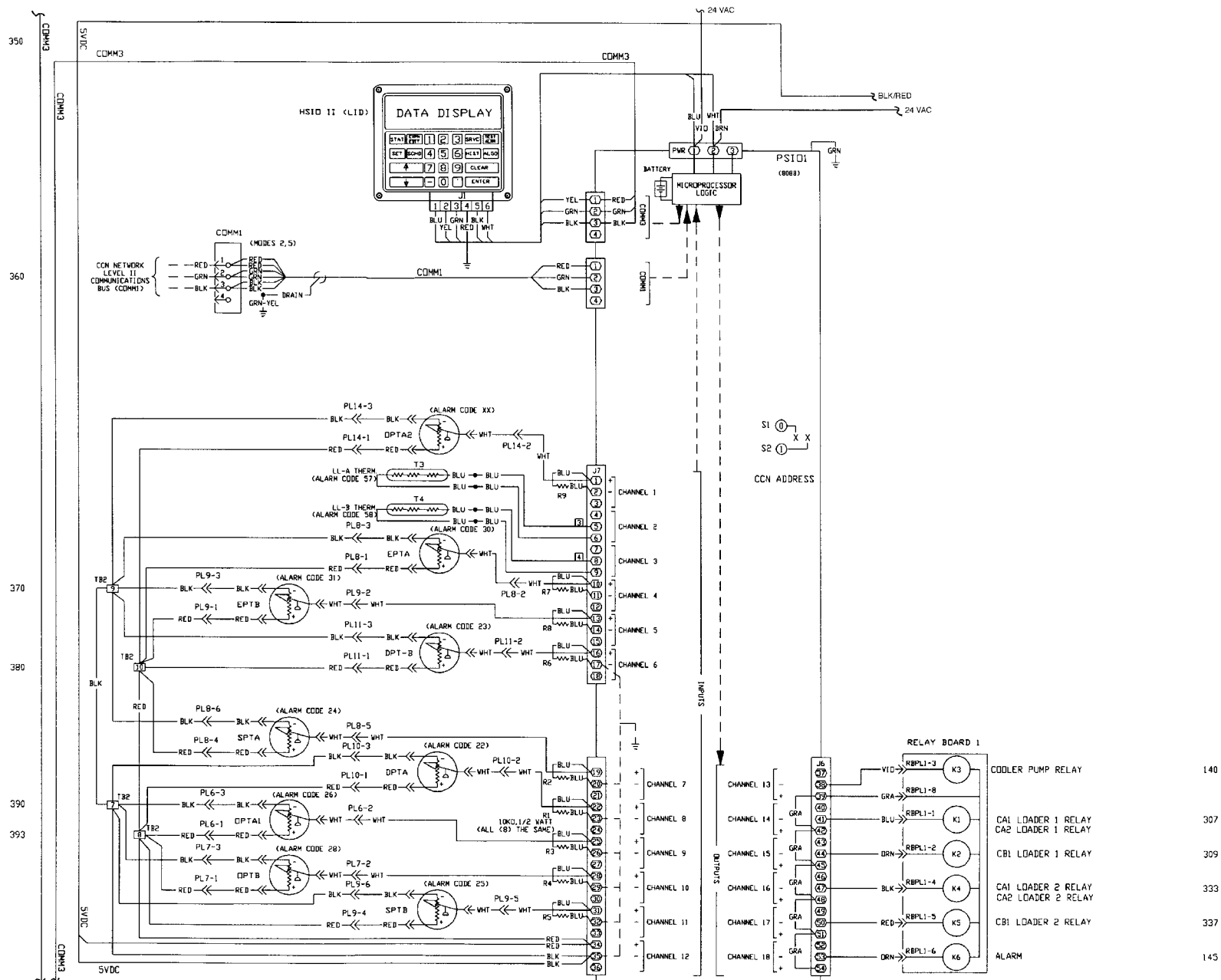


**Fig. 5 — Control Wiring, 24 v, 30HX206-271 (cont)**

**Fig. 5 — Control Wiring, 24 v, 30HX206-271 (cont)**

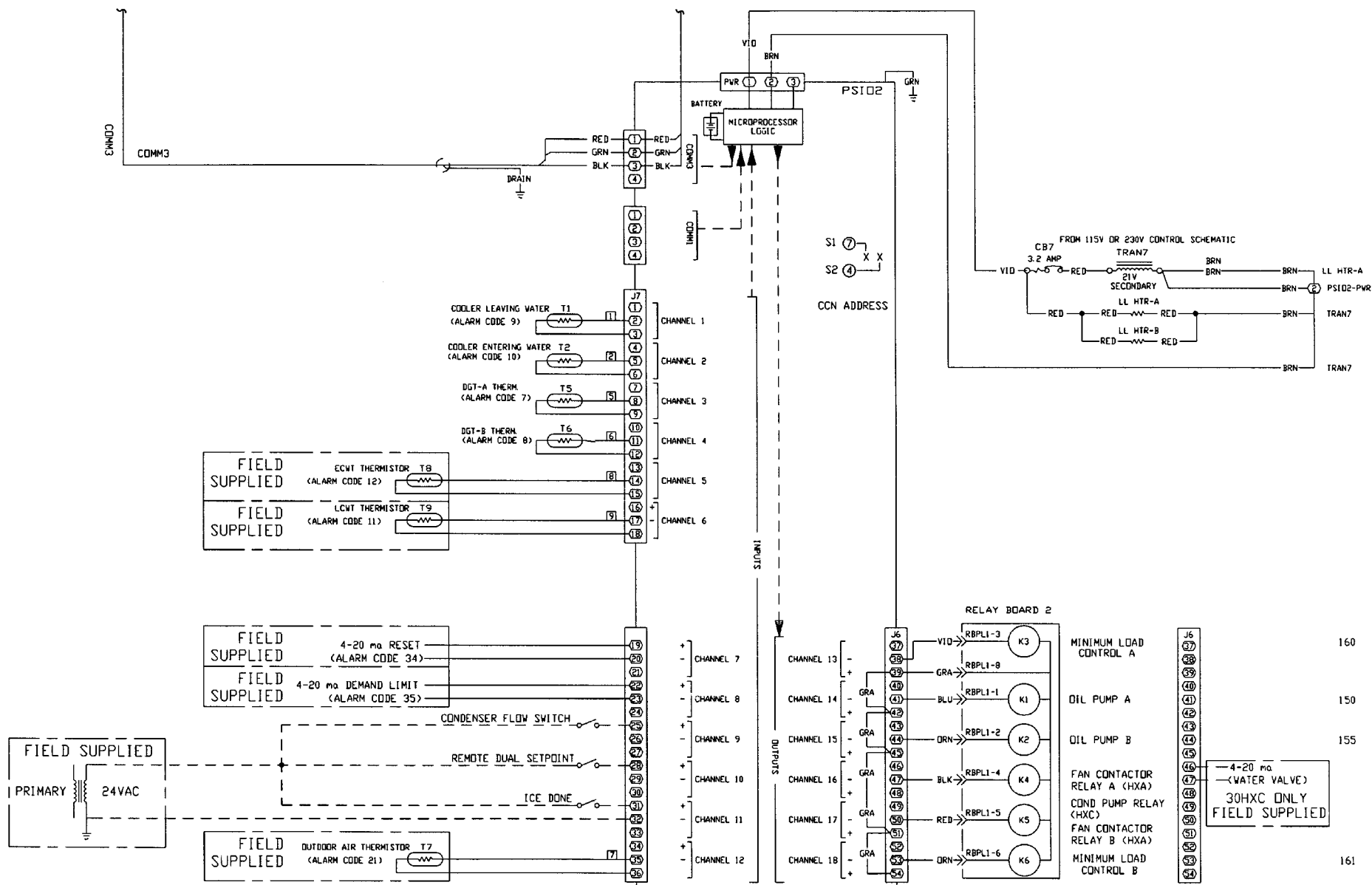
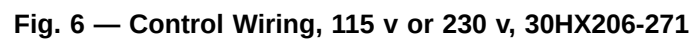


**Fig. 5 — Control Wiring, 24 v, 30HX206-271 (cont)**



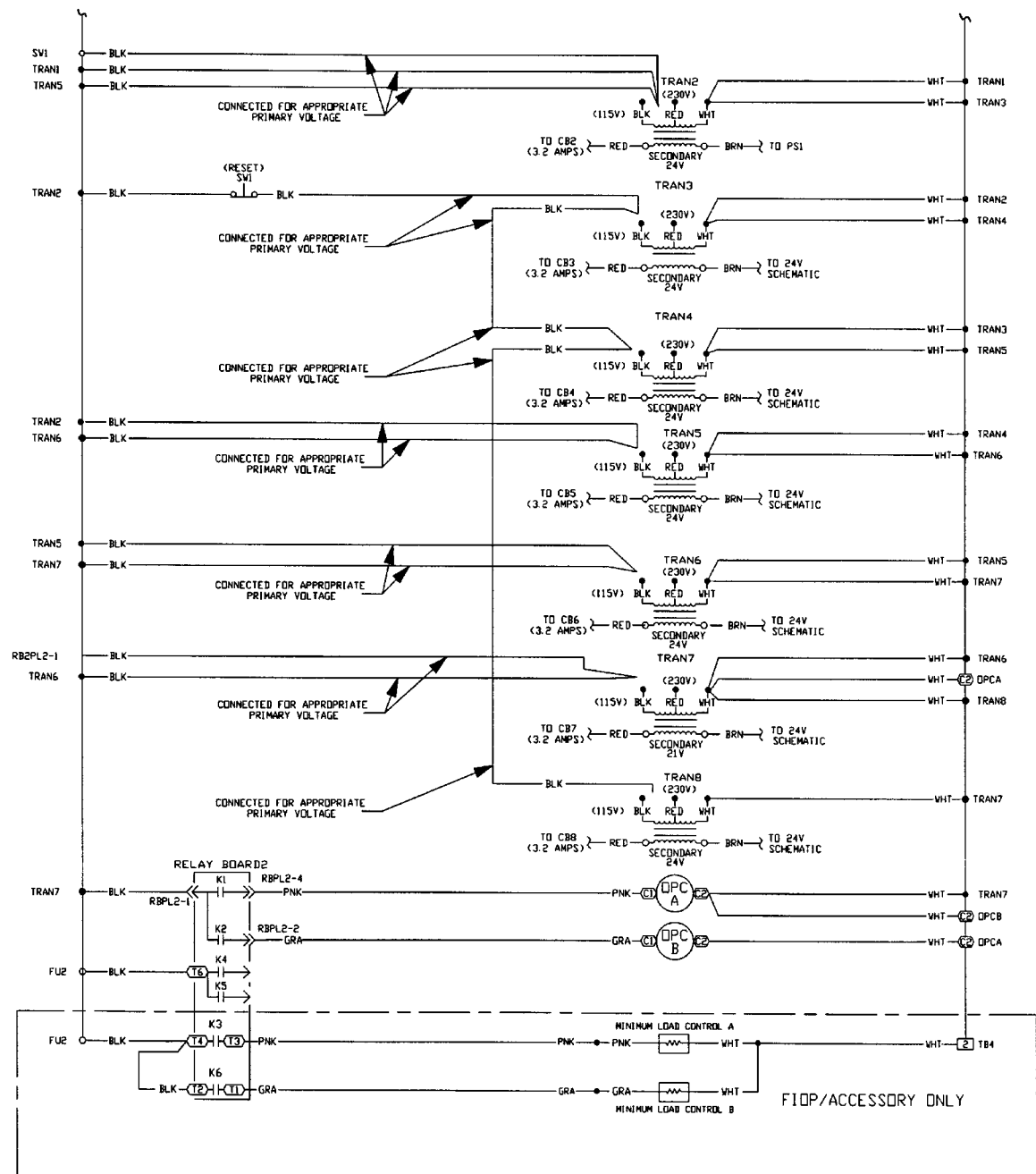
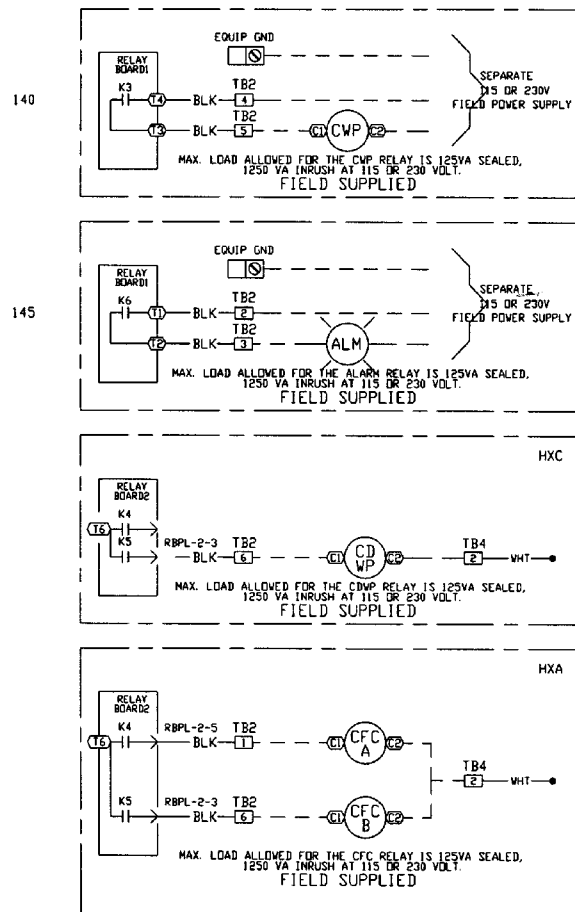


**Fig. 6 — Control Wiring, 115 v or 230 v, 30HX206-271 (cont)**

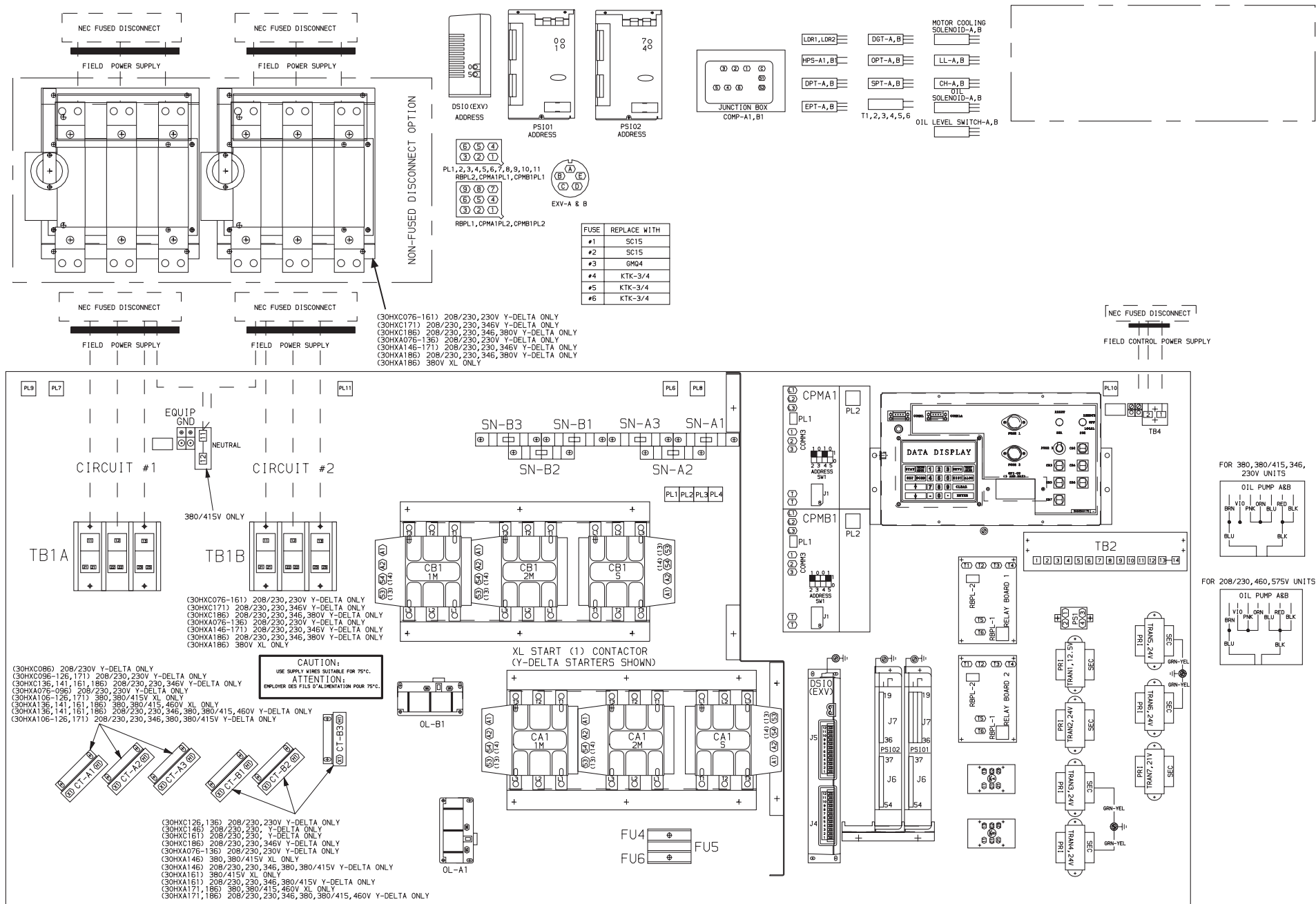


Fig. 7 — Component Arrangement, 30HX076-186

**Fig. 8 — Component Arrangement, 30HX206-271**



