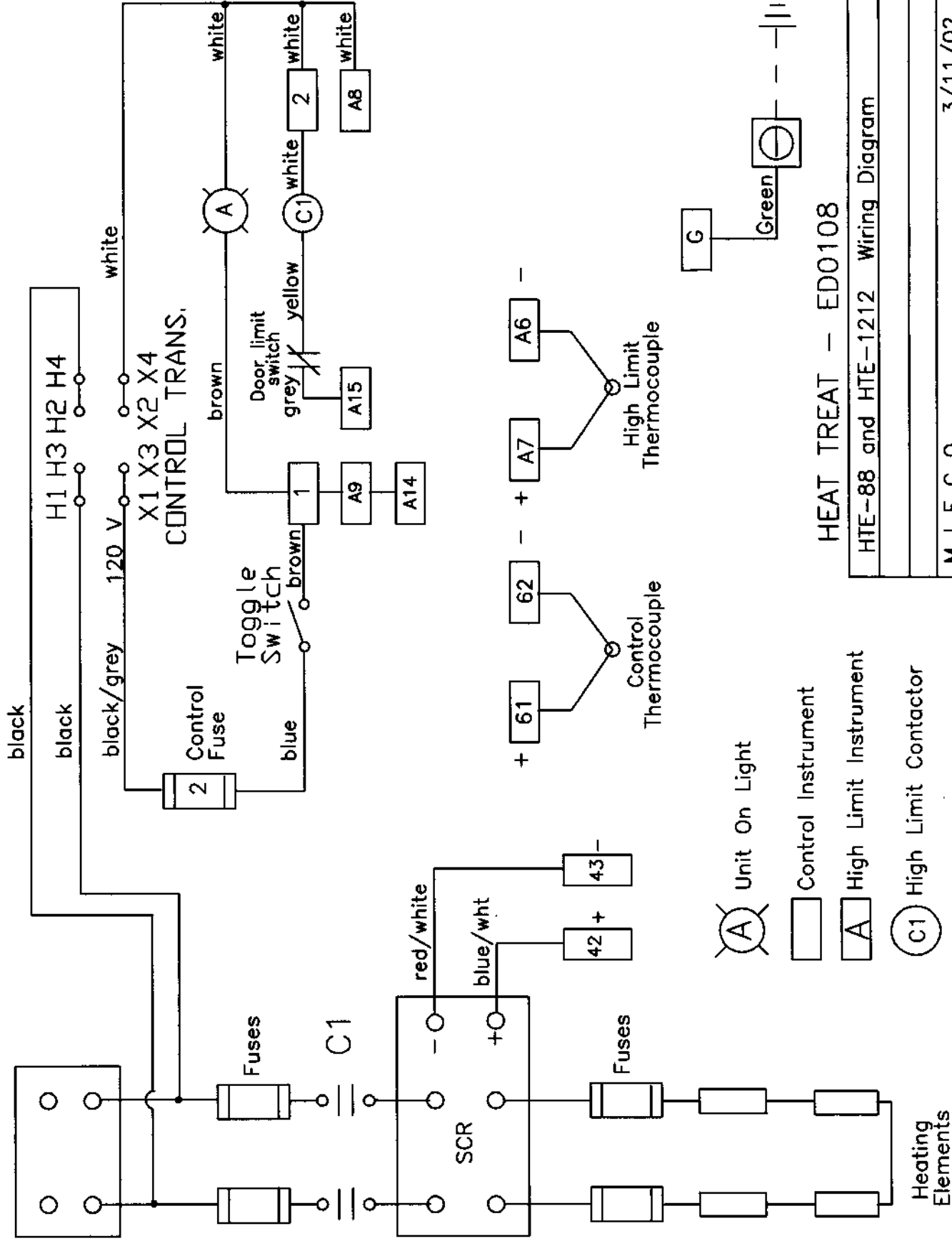


HTE-88 and HTE-1212

with Watlow F4 controller and Series 97 High Limit



HEAT TREAT - ED0108

HTE-88 and HTE-1212 Wiring Diagram

M I F C O

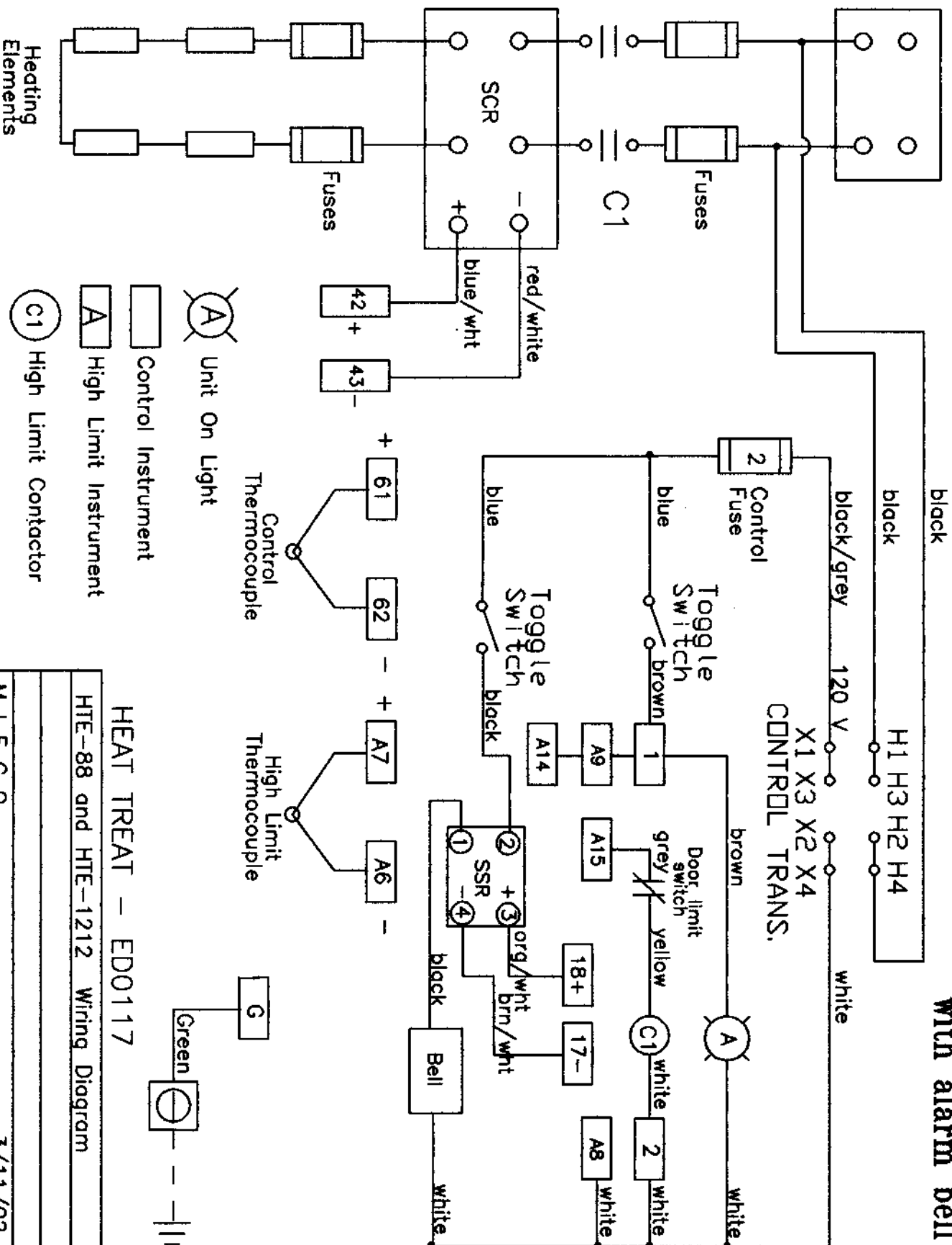
3/11/02

240 V 1 Ph. 60 Hz

HTE-88 and HTE-1212

with Watlow F4 controller and Series 97 High Limit

with alarm bell



HEAT TREAT - ED0117

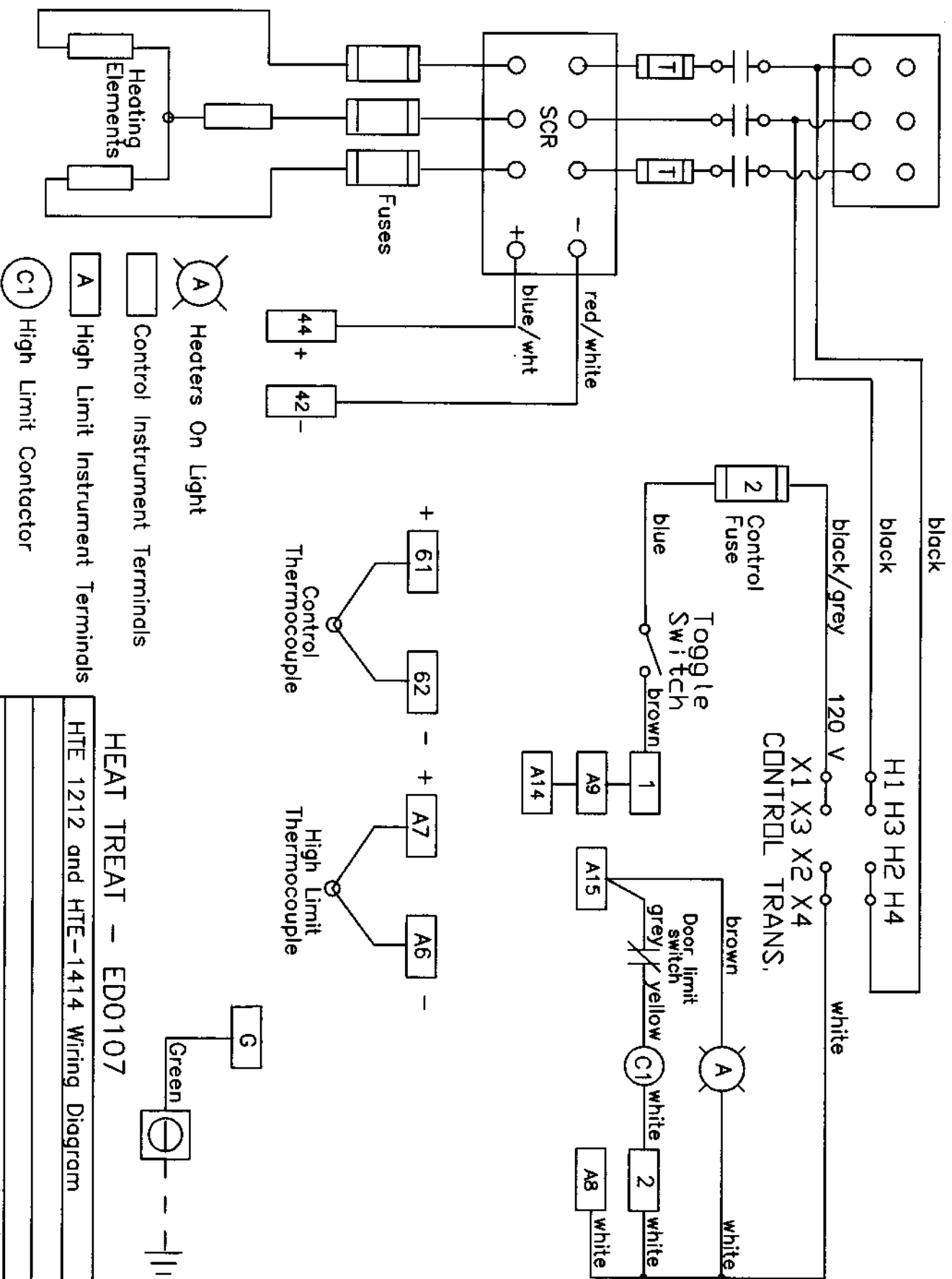
HTE-88 and HTE-1212 Wiring Diagram

M I F C O

3/11/02

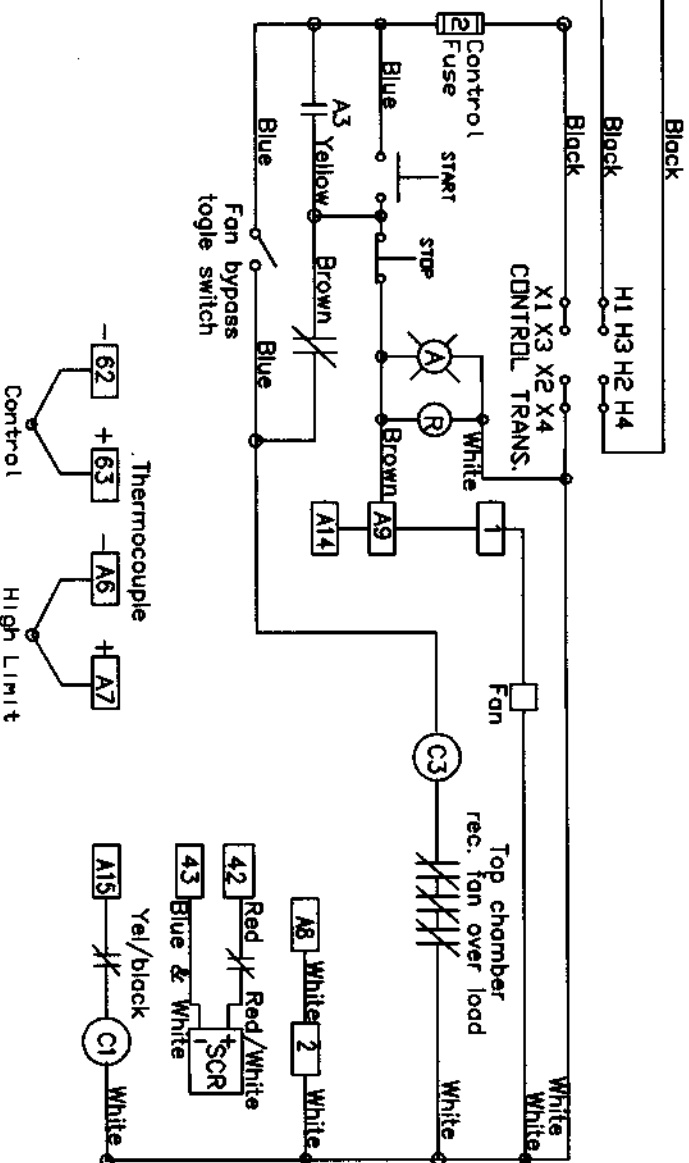
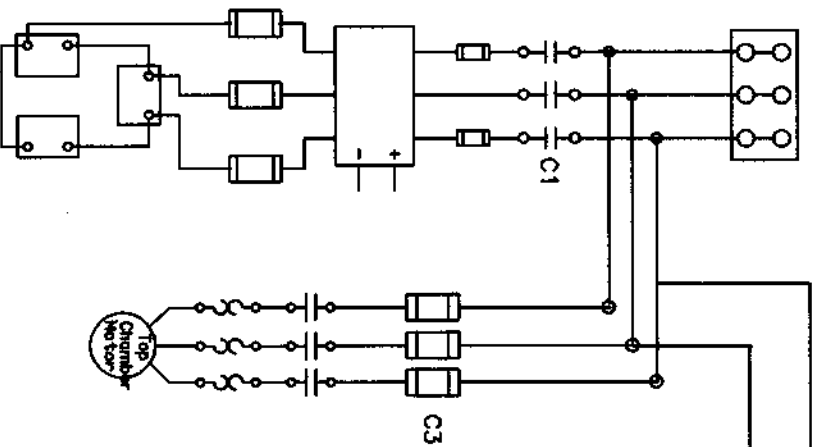
230/460 V 3 Ph. 60 Hz

HTE 1212 and HTE-1414 with Watlow F4 controller and Series 97 High Limit



Power Supply
230V / 460V
3 Ph / 60 Hz

HTE-2424-30 High Temperature Furnace Watlow F4 Controller and Series 97 High Limit

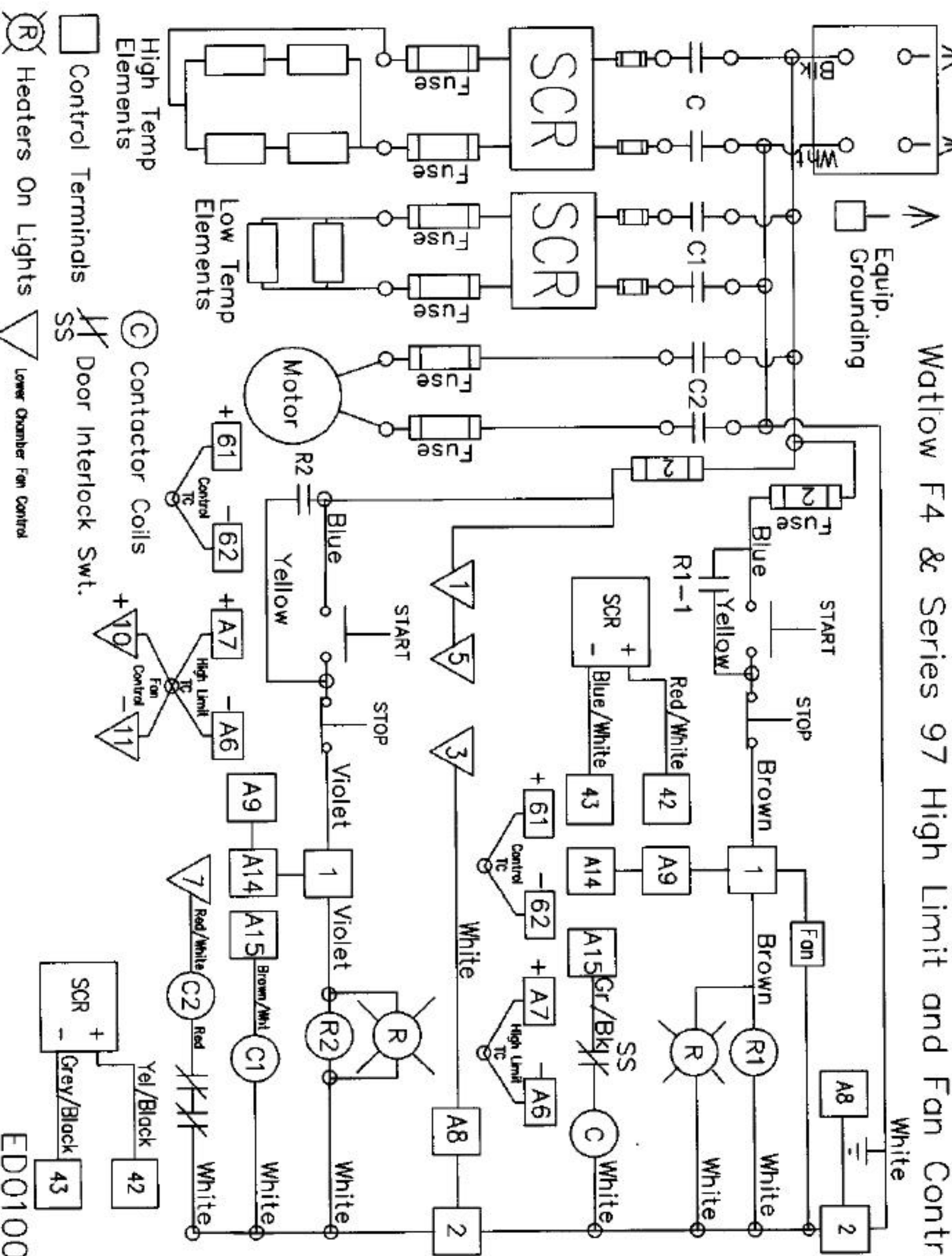


- ☐ Control Inst. Terminals
- ☐ High Limit Cont. Term.
- ☐ Contactor Coils
- ☒ Door inter lock
- ☐ Inst. Cabinet Cooling Fan

Field Power Supply
120 / 240 V - 1Ph 60Hz

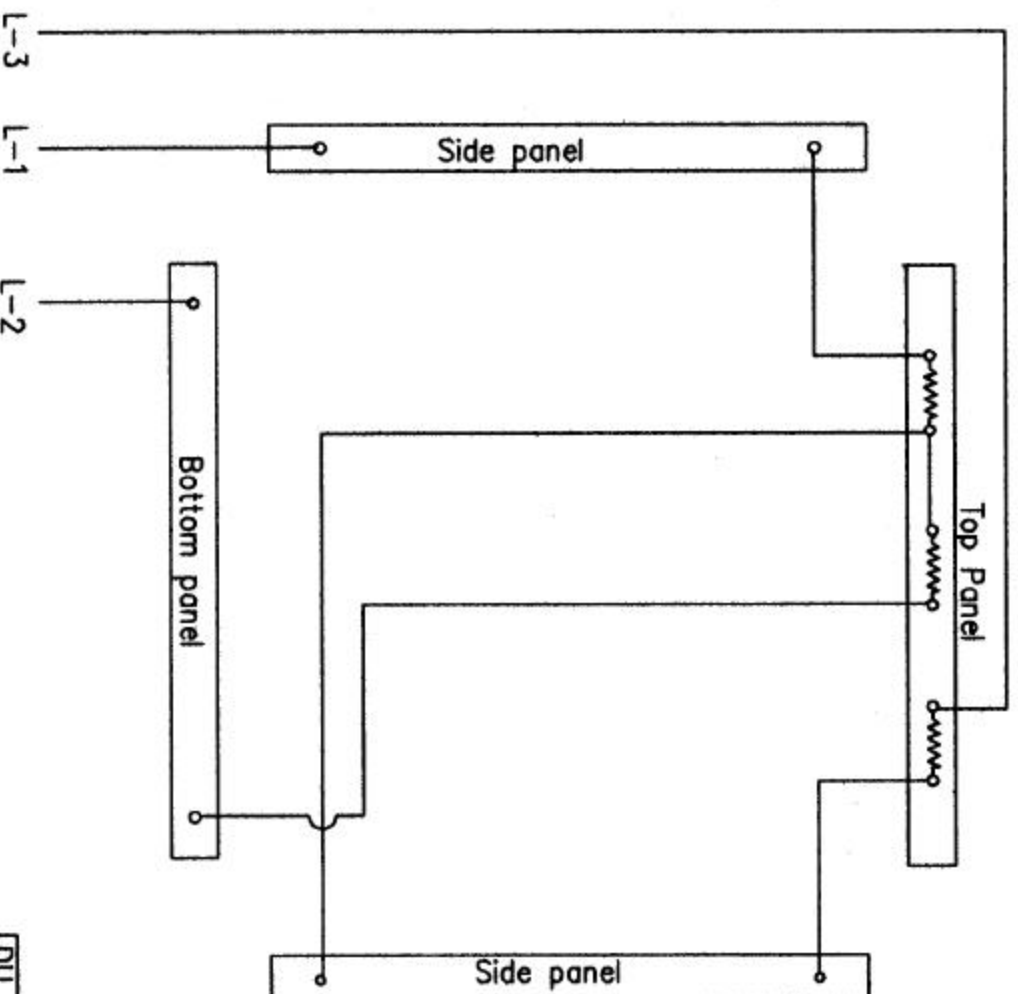
DU 614

Watlow F4 & Series 97 High Limit and Fan Control



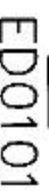
ED0100

DU 1020 Panel Connection Upper Chamber 460V, 60 Hz, 3Ph.

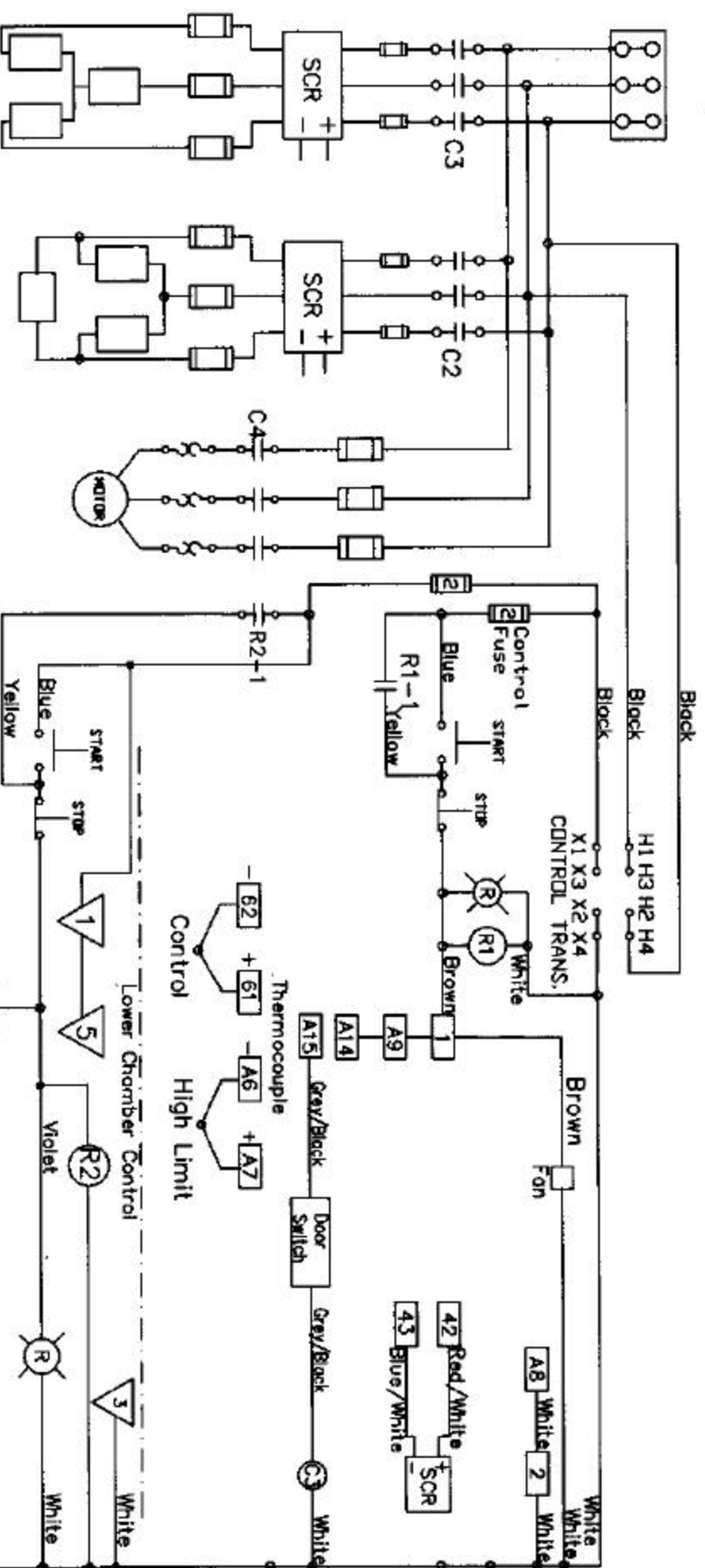


0090	Drawn By Bill Walter
DU 1020 460 V, 60 Hz, 3 Ph.	
top chamber panel connections	
Mot.	
M F C O	2/7/2001

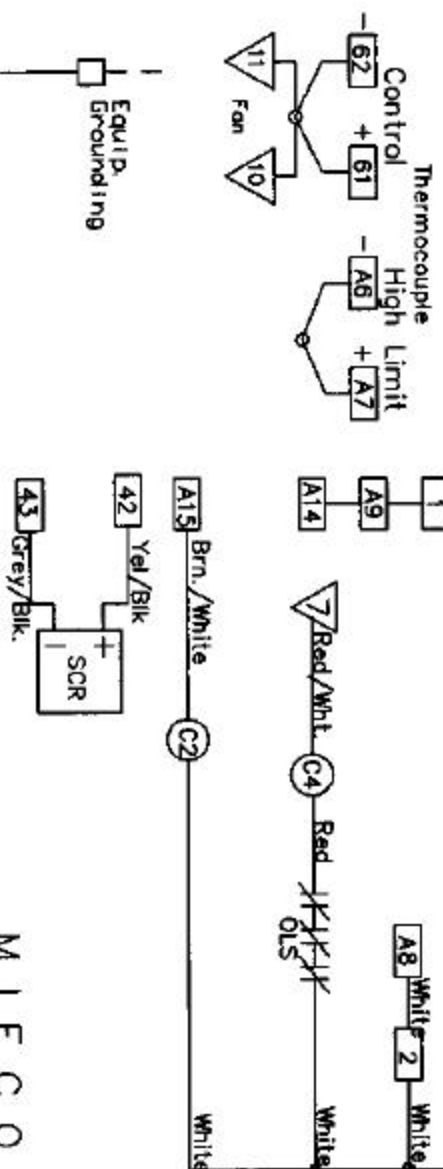
Dual Chamber Industrial Units



Power Supply **DUAL CHAMBER INDUSTRIAL UNIT**
 230V / 460V
 3 Ph / 60 Hz
Watlow F4 Controller and Series 97 High Limit
 with lower fan control

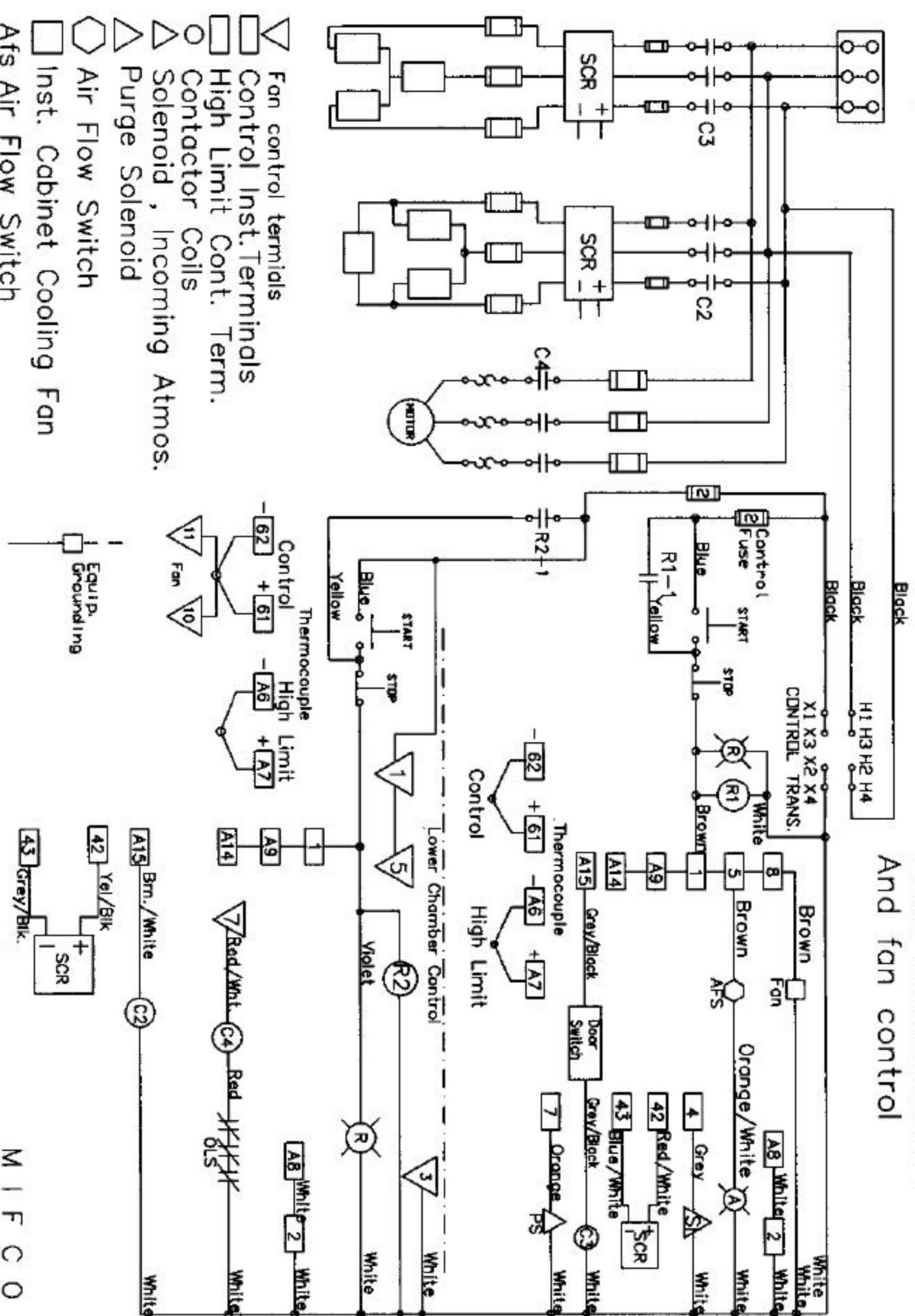


- ▽ Fan control terminals
- Control Inst. Terminals
- High Limit Cont. Term.
- Contactor Coils
- △ Solenoid, Incoming Atmos.
- △ Purge Solenoid
- Air Flow Switch
- Inst. Cabinet Cooling Fan
- Afs Air Flow Switch



Power Supply **DUAL CHAMBER INDUSTRIAL UNIT**
 230V / 460V
 3 Ph / 60 Hz
Watlow F4 Controller and Series 97 High Limit
WITH ATMOSPHERE

And fan control



Heat-Treat \ED0105

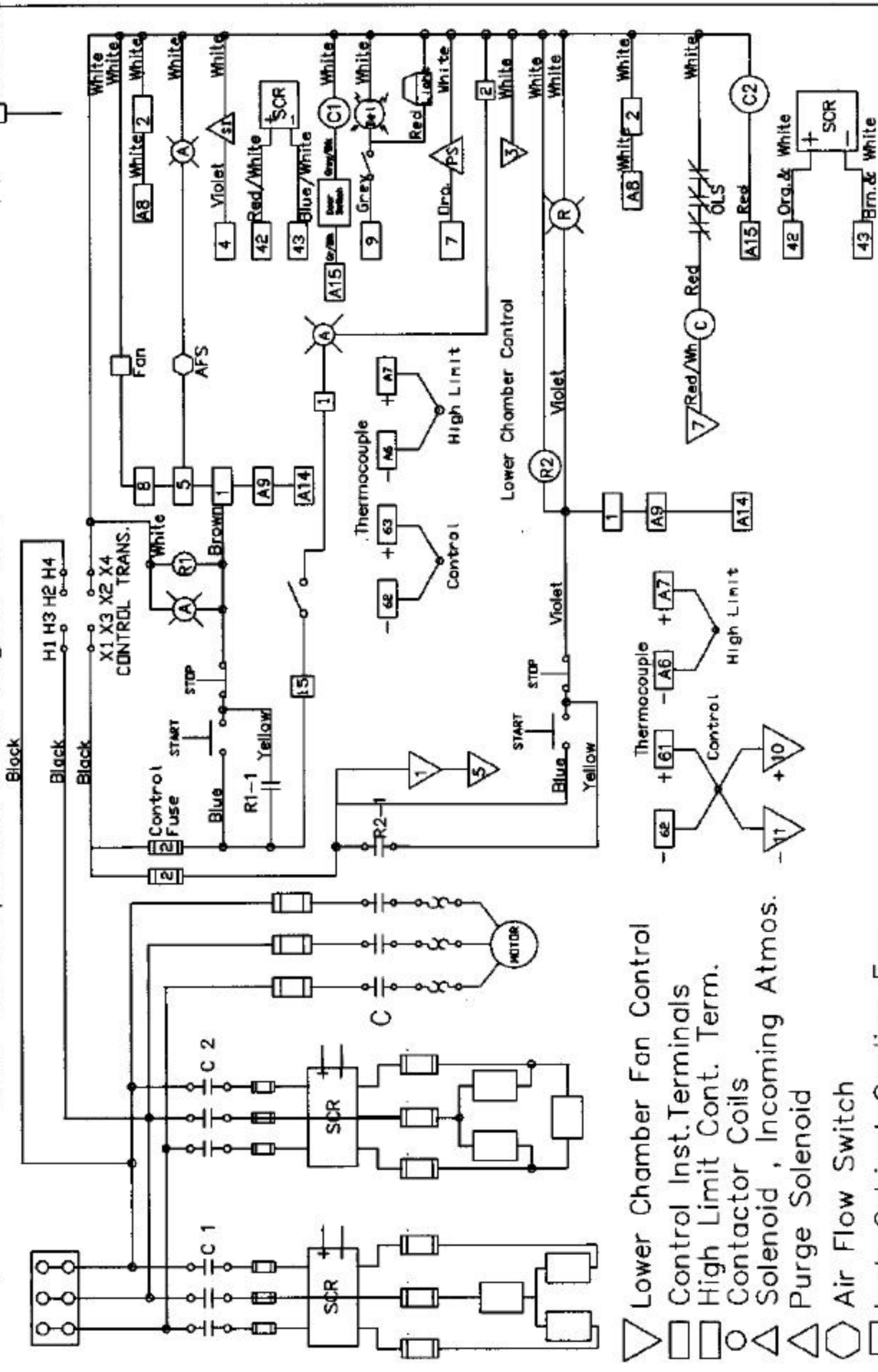
M I F C O
 2/25/2002

Power Supply DUAL CHAMBER INDUSTRIAL UNIT

230V / 460V Watlow F4 Controller and Series 97 High Limit

3 Ph / 60 Hz with Atmosphere, Bell, Light, and ATC Timer on upper

Equip. Grounding



▽ Lower Chamber Fan Control

□ Control Inst. Terminals

□ High Limit Cont. Term.

○ Contactor Coils

△ Solenoid, Incoming Atmos.

△ Purge Solenoid

○ Air Flow Switch

□ Inst. Cabinet Cooling Fan

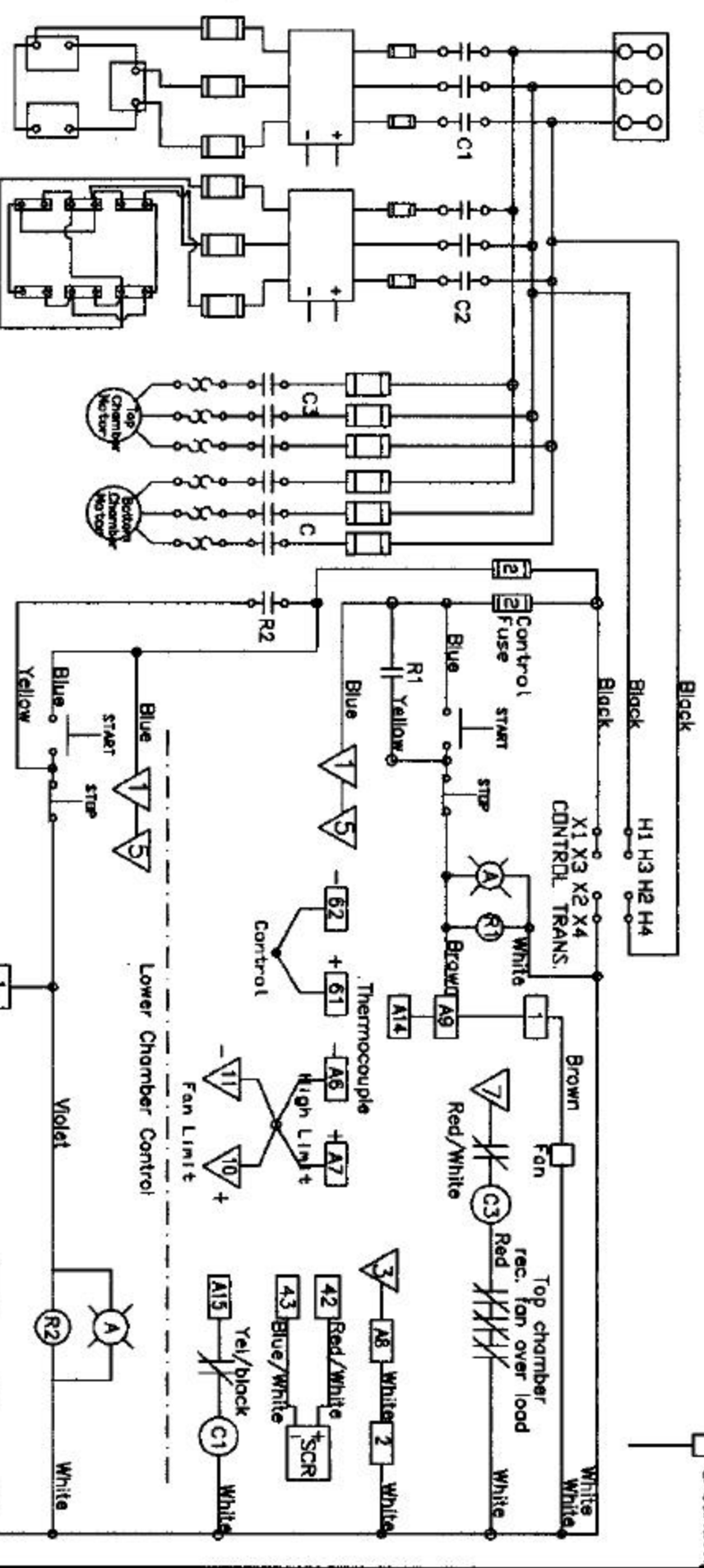
□ Afs Air Flow Switch

M I F C O

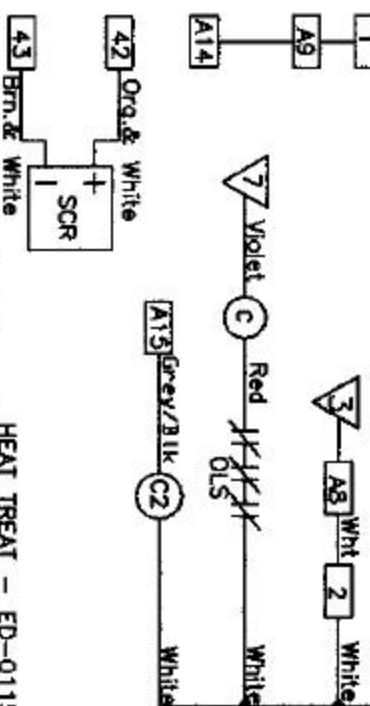
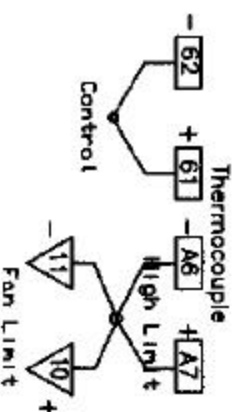
Heat-Tre ED0103 12/8/95

Power Supply
230V / 460V
3 Ph / 60 Hz

DU-2020-30 Dual Chamber Industrial Furnace, Watlow F4 Controller and Series 97 High Limit



- Control Inst. Terminals
- △ High Limit Cont. Term.
- Contactor Coils
- ✕ Door inter lock
- Inst. Cabinet Cooling Fan
- ▽ Fan Limit Control



DU 2020-30 Dual Chamber Heat Treat Furnace
Wiring Diagram 230/460V, 3 Ph, 60 Hz.

HEAT TREAT - ED-0115

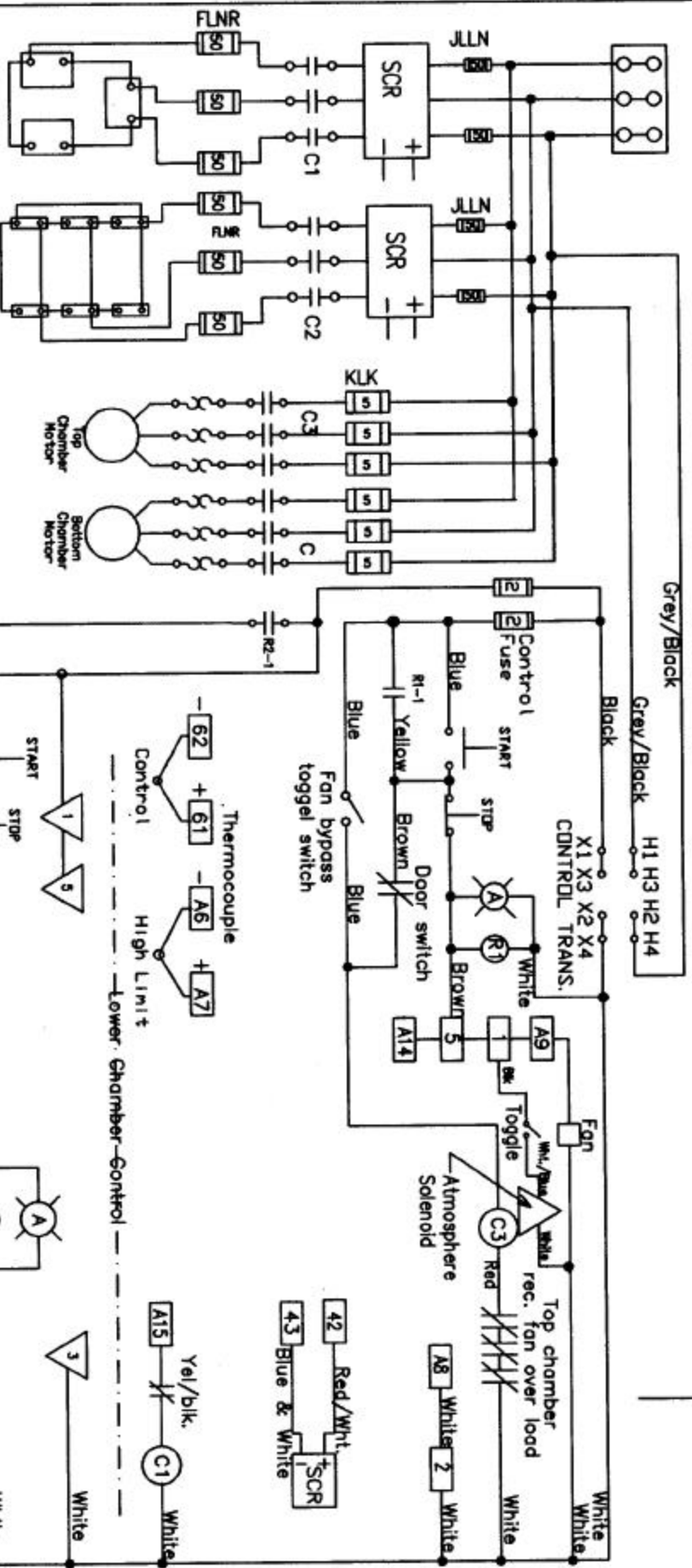
M I F C O

3/12/02

Power Supply
230 V
3 Ph / 60 Hz

DU 2020-30-1 Dual Chamber Industrial Furnace
Watlow F4 Controller and Series 97 High Limit
Watlow Din-A-Mite SCR on Both Chambers and Atmosphere

Equip. Grounding
No Neutral



- Control Inst. Terminals
- High Limit Cont. Term.
- Contactor Coils
- ⋈ Door inter lock
- Inst. Cabinet Cooling Fan
- △ Timer terminals
- △ Atmos. Solenoid

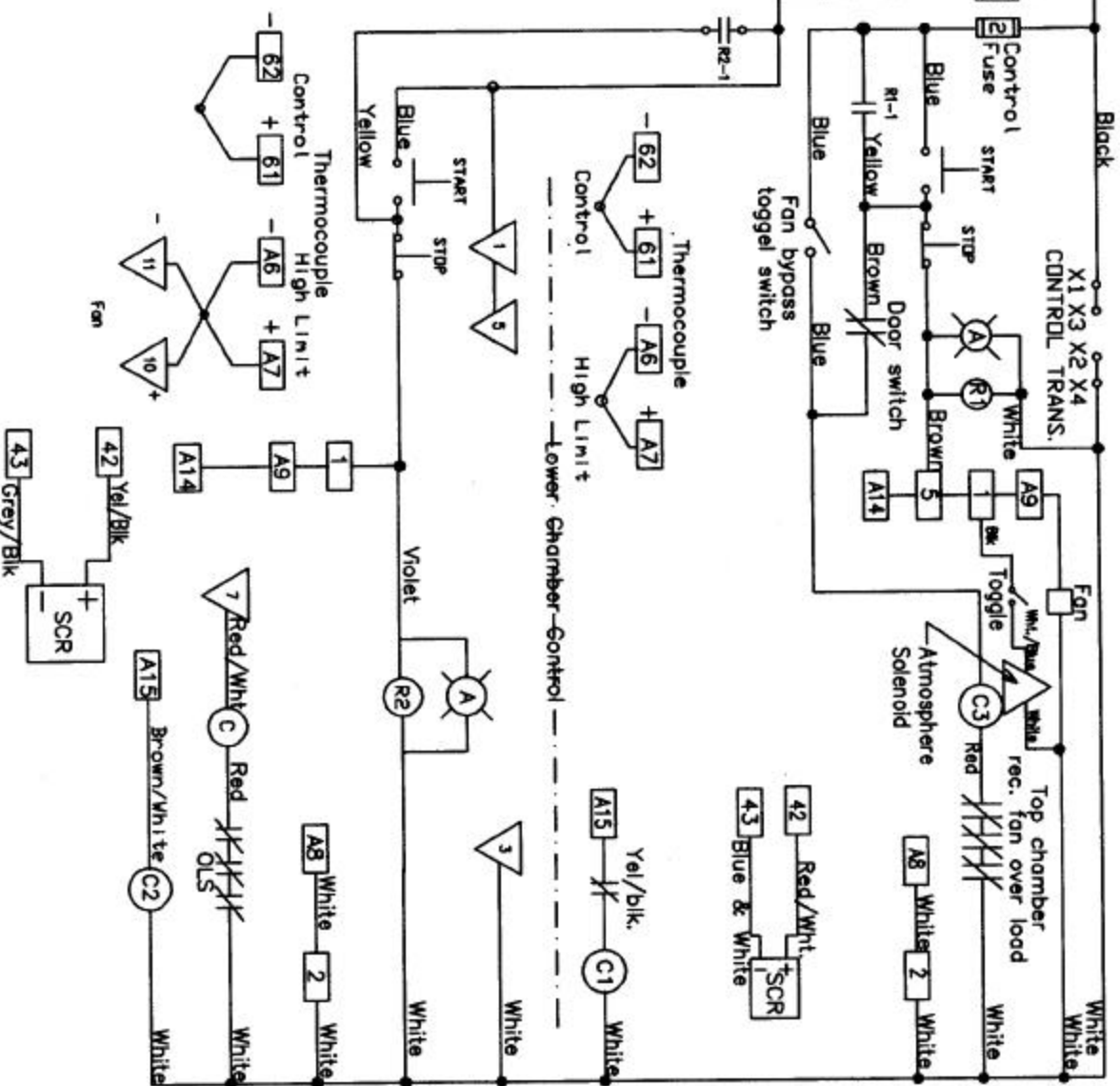
ED0121

DU 2020-30 Dual Chamber Heat Treat Furnace

Wiring Diagram 460V, 3 Ph., 60 Hz.

M I F C O

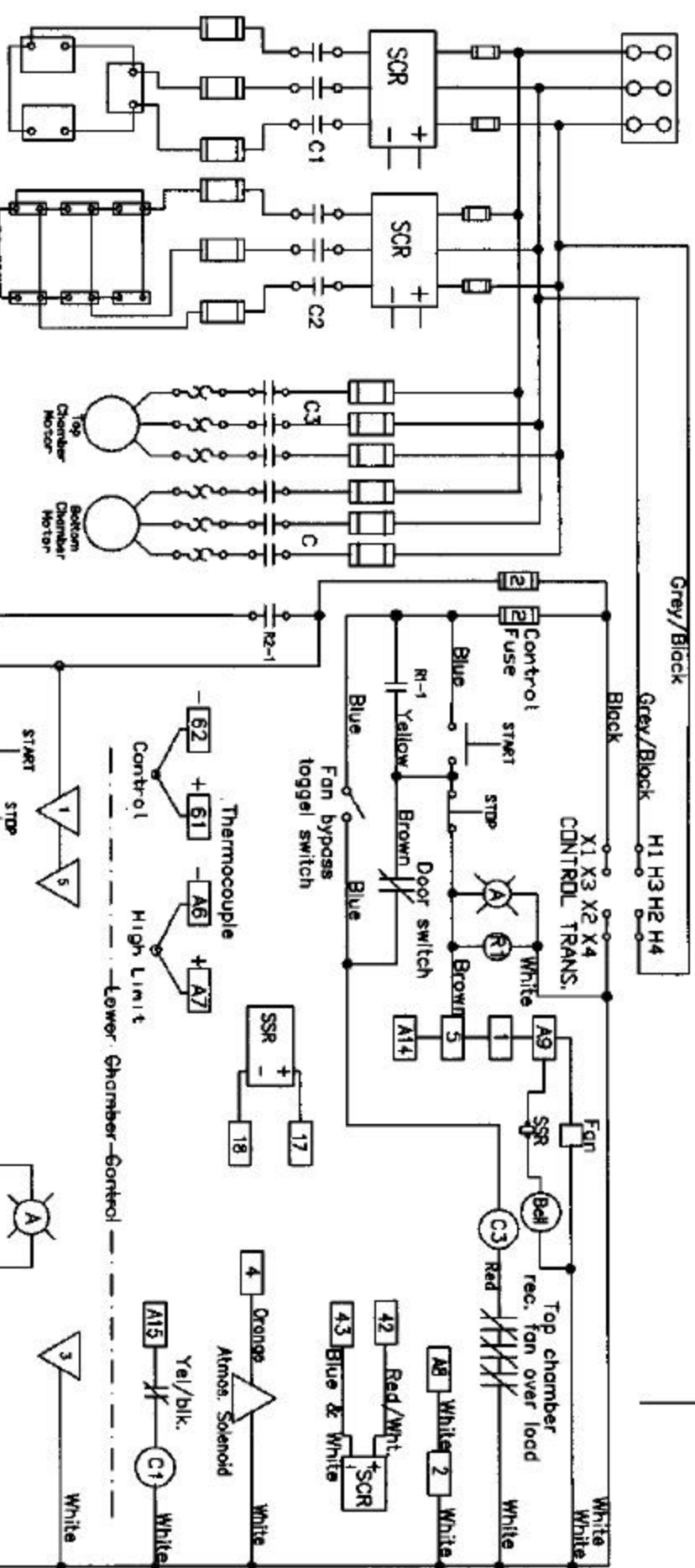
8/3/2000



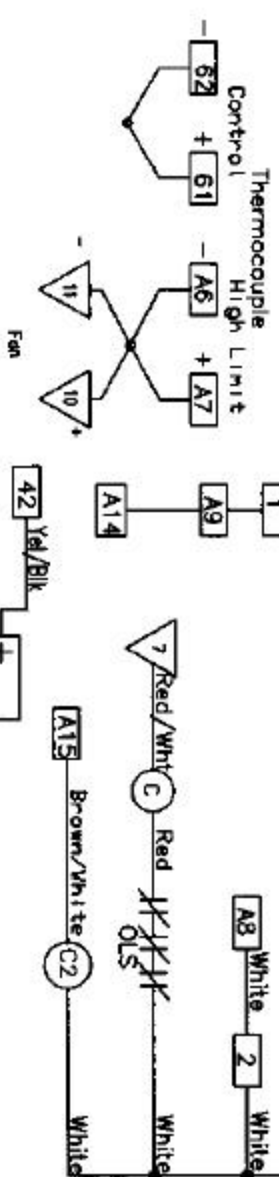
Power Supply
460 V
3 Ph / 60 Hz

DU 2020-30-1 Dual Chamber Industrial Furnace
Watlow F4 Controller and Series 97 High Limit
Watlow Din-A-Mite SCR on Both Chambers and Bell

Equip.
Grounding

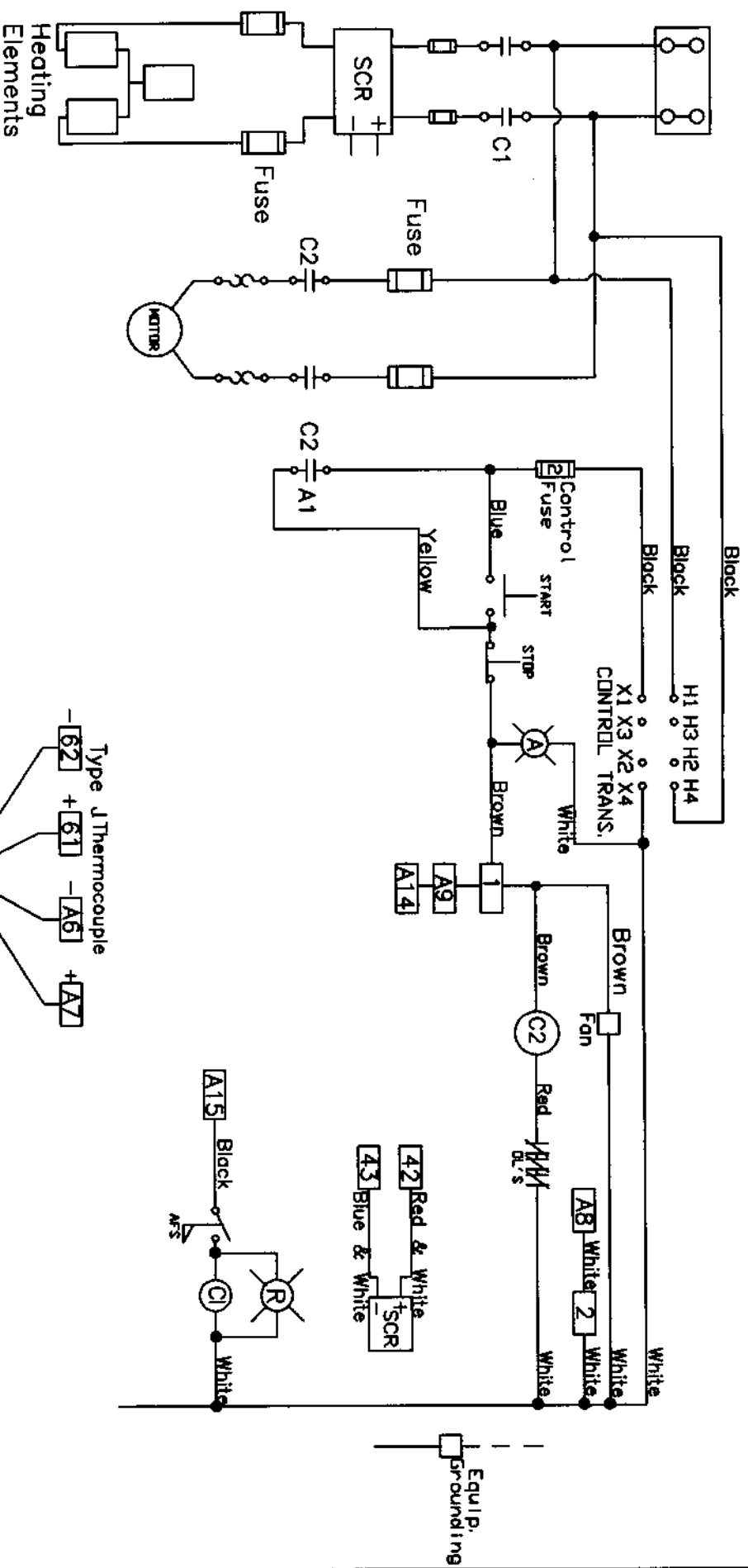


- ☐ Control Inst. Terminals
- ☐ High Limit Cont. Term.
- ☐ Contactor Coils
- ☒ Door inter lock
- ☐ Inst. Cabinet Cooling Fan
- ☐ Timer terminals
- ☐ Atmos. Solenoid



240 V
1 Ph / 60 Hz

Watlow F4 Controller and Series 97 High Limit



- ☐ Control Inst. Terminals
- ☐ High Limit Cont. Term.
- ☐ Contactor Coils
- ☐ Inst. Cabinet Cooling Fan
- Afs Air Flow Switch

LT 1824--LT 1830

HEAT TREAT - ED0110

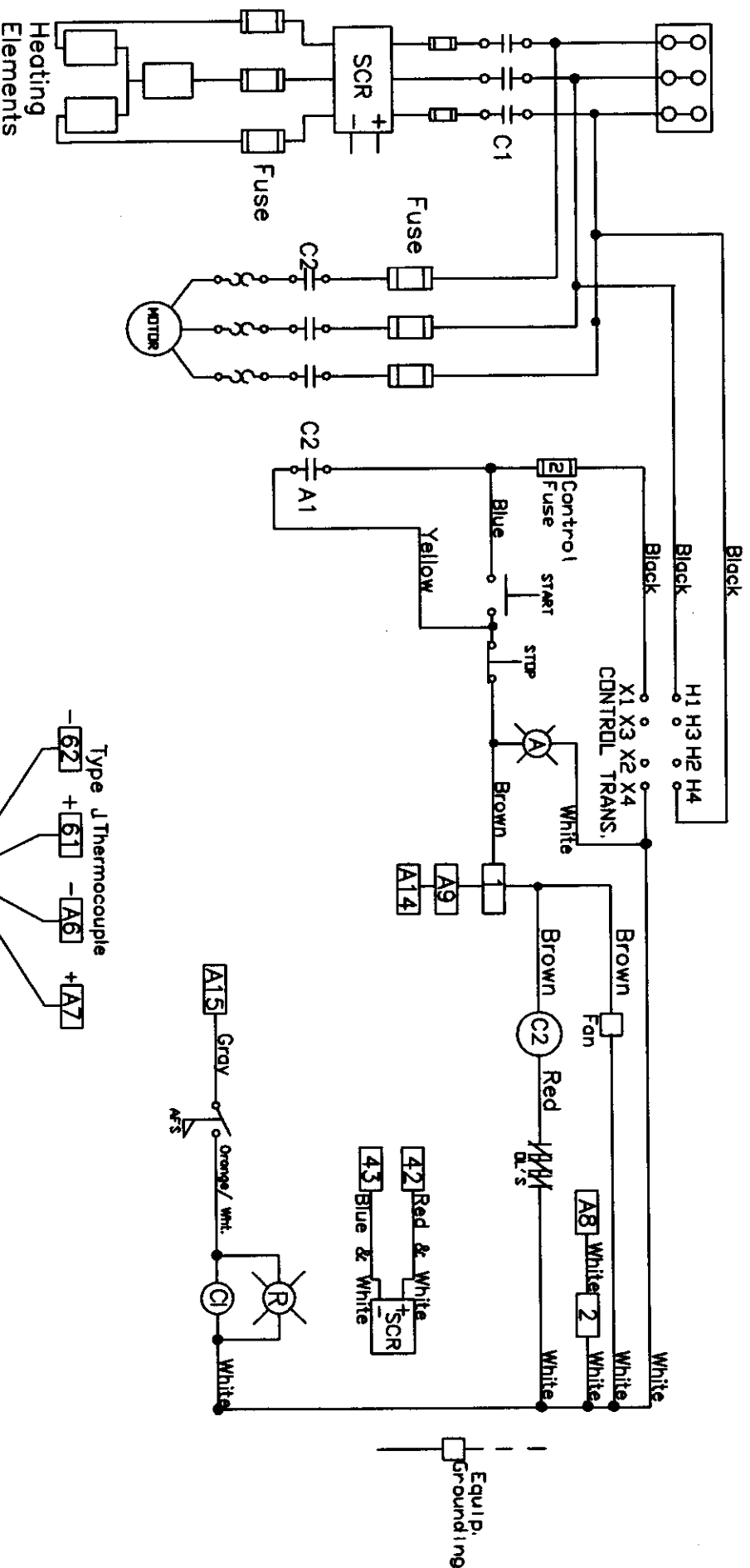
M I F C O

3/11/02

Power Supply
230V / 460V
3 Ph / 60 Hz

LT 1824-LT 1830

Watlow F4 Controller and Series 97 High Limit



- ☐ Control Inst. Terminals
- ☐ High Limit Cont. Term.
- ☐ Contactor Coils
- ☐ Inst. Cabinet Cooling Fan
- ☐ Afs Air Flow Switch

HEAT TREAT - ED0102

LT 1824--LT 1830

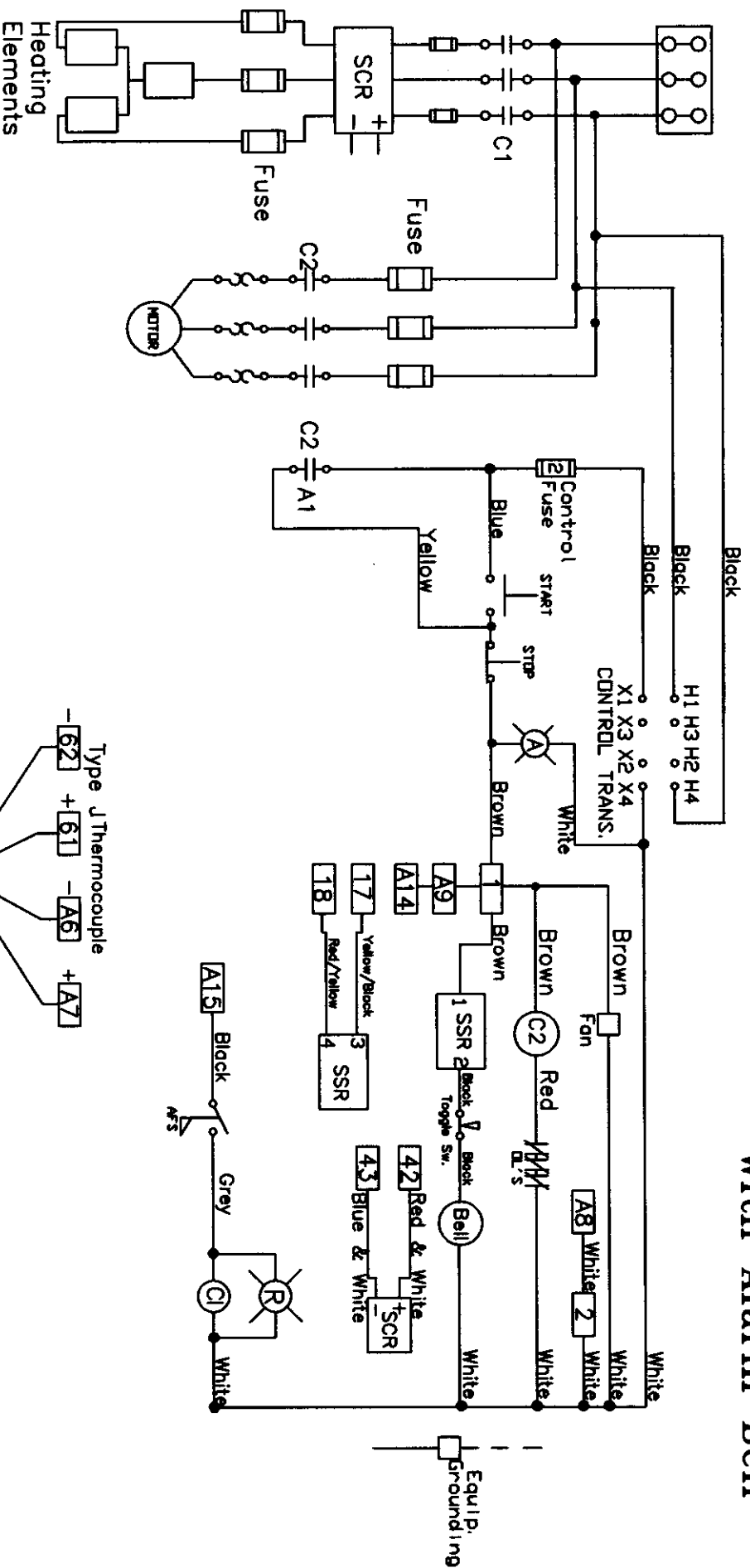
M I F C O

3/11/02

Power Supply
230V / 460V
3 Ph / 60 Hz

LT 1824-LT 1830

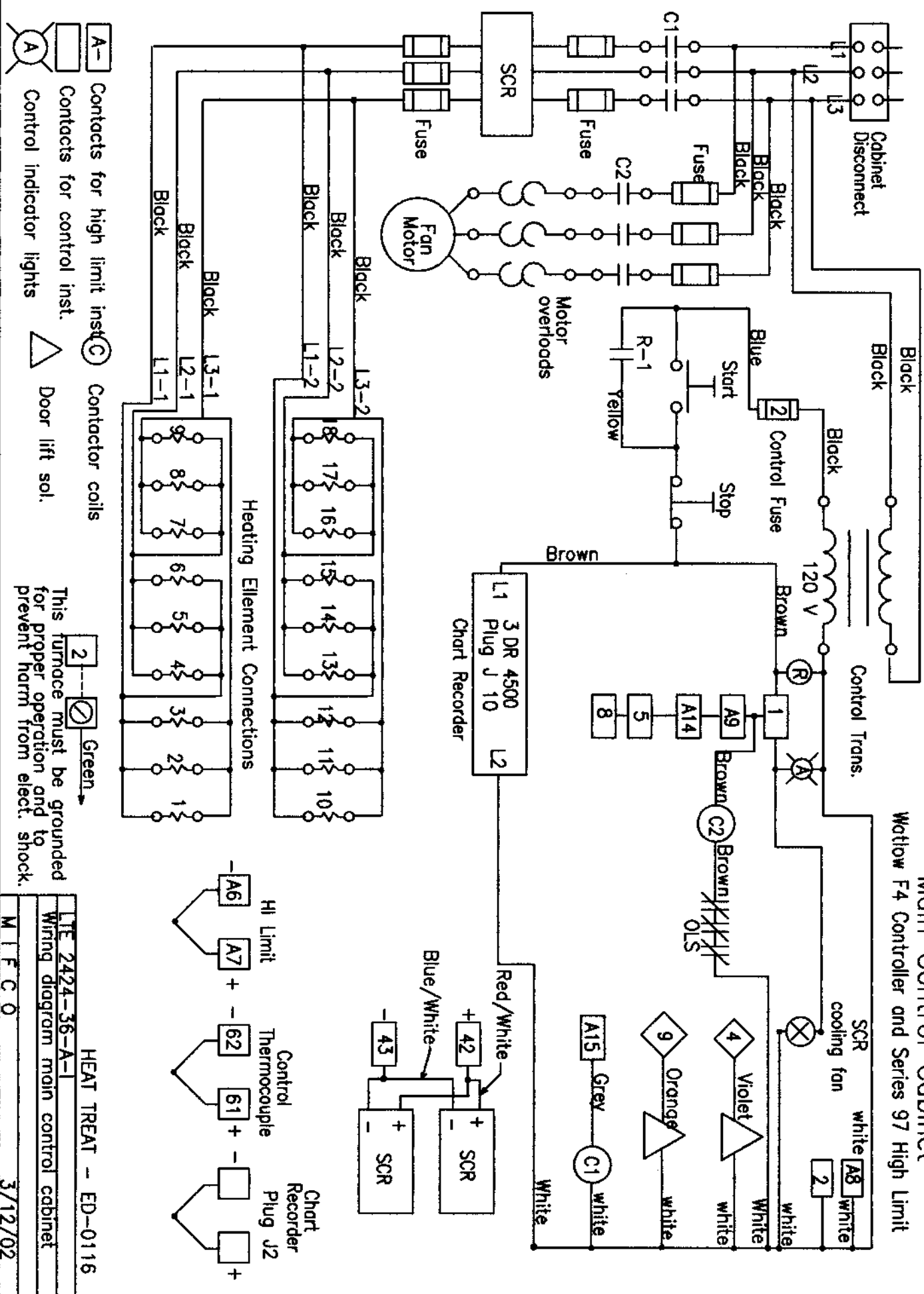
Watlow F4 Controller and Series 97 High Limit with Alarm Bell



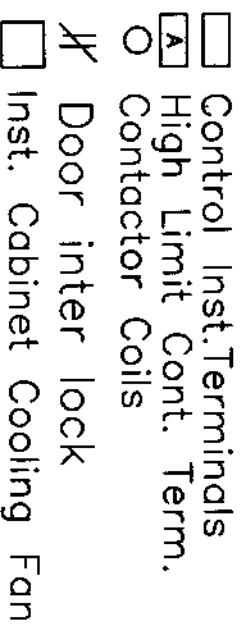
LT 1824--LT 1830
HEAT TREAT - ED-0118
M I F C O
2/25/03

240/480 V, 3 Ph, 60 Hz.

LTE 2424-36-1 Main Control Cabinet Motion F4 Controller and Series 97 High Limit



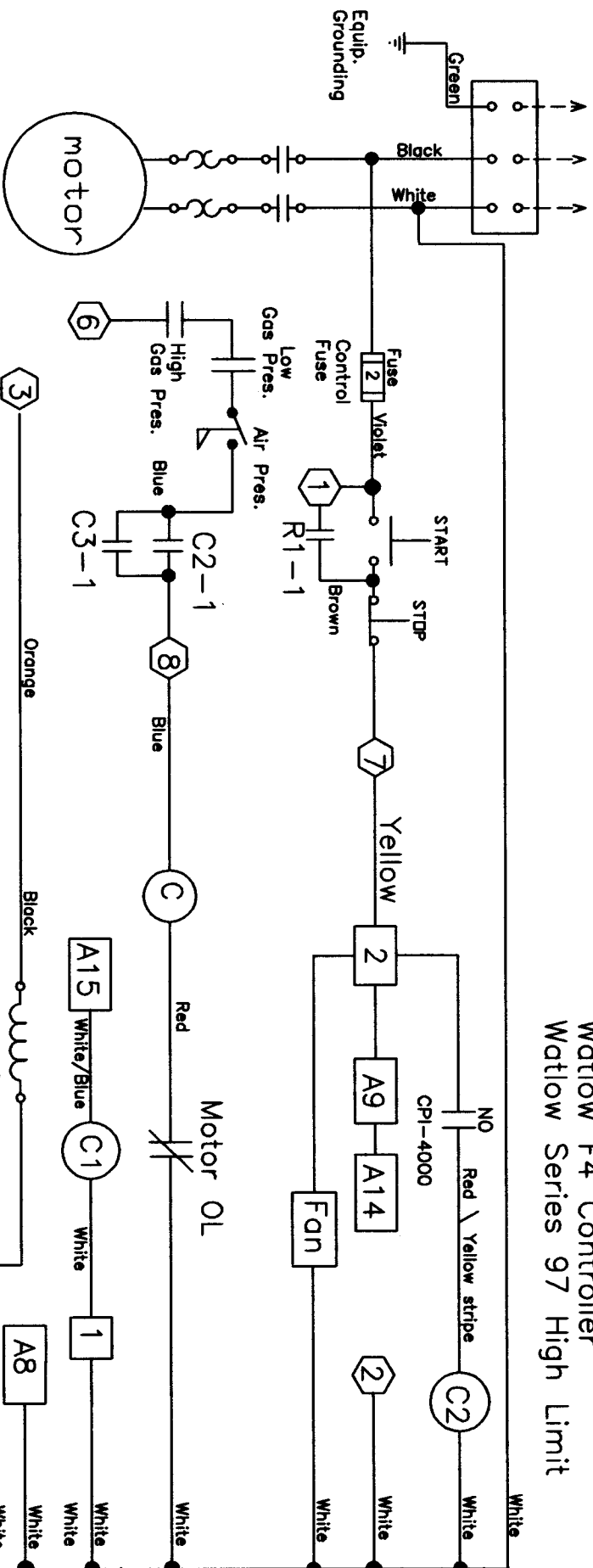
MTE-2424-36 Medium Temperature Furnace
Watlow F4 Controller and Series 97 High Limit



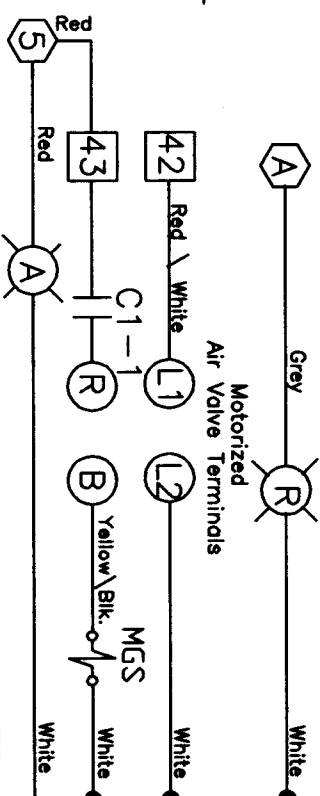
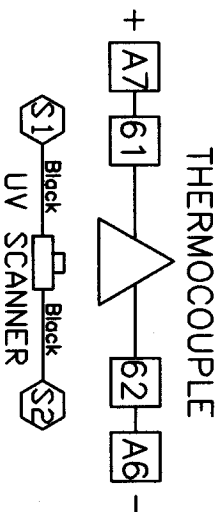
POWER BLOCK
120 V \ 1 Ph \ 60 Hz

COMBUSTION SAFEGUARD SYSTEM NUMBER 6

With FM proof of closure switch.
Fireye MC 120
Watlow F4 Controller
Watlow Series 97 High Limit



- High limit term.
- Temp. control term.
- Flame safety term.
- Contactor coils
- Pilot lights
- PilotGas Solenoid
- Air Pressure Switch
- 1 OL Air Pres. Switch
- Blower Contactor



COMBUSTION SAFEGUARD SYSTEM

POWER BLOCK

240-480v - 3 Ph

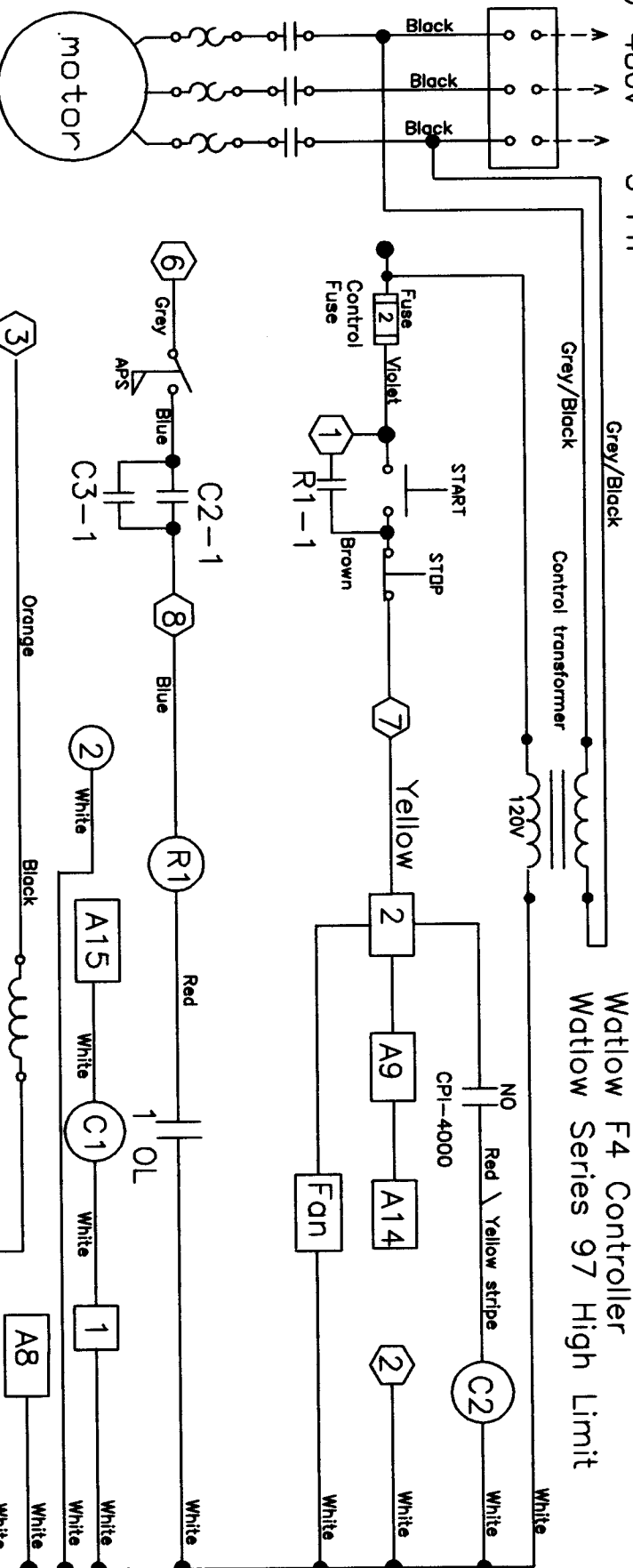
NUMBER 6

With proof of closure switch.

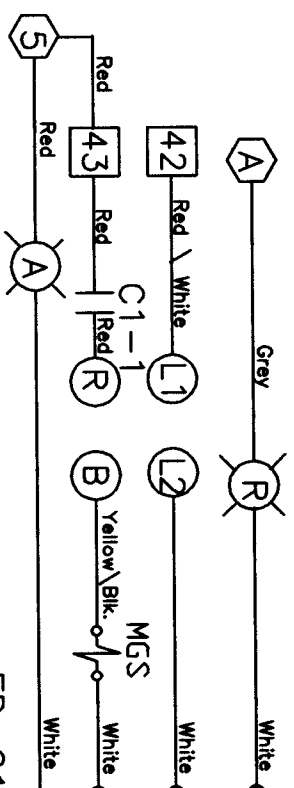
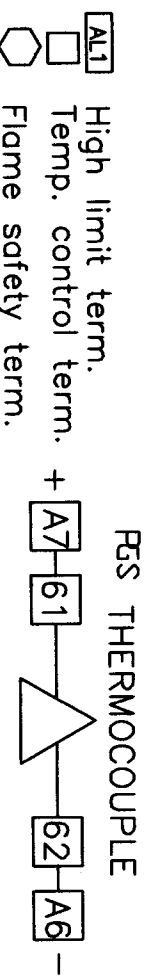
Fireye MC 120

Watlow F4 Controller

Watlow Series 97 High Limit



Equip.
Grounding



- High limit term.
- Temp. control term.
- Flame safety term.
- Contactors coils
- Pilot lights
- PGS PilotGas Solenoid
- APS Air Pressure Switch
- 1 OL Air Pres. Switch
- R1 Blower Contactor

- C Motor Contactor Coil
- R-1,R-2 Relay Contacts
- MGS Main Gas Solenoid