

TO SHEET 2

ATTENTION:
THIS CIRCUIT IS SET UP FOR PUMP CONTROL

CAUTION:
MAXIMUM TWO STARTS PER HOUR WITH A MINIMUM OF FIVE MINUTES BETWEEN STARTS.

- LEGEND**
- [A] WIRE CONNECTIONS FOR PHASE A
 - [B] WIRE CONNECTIONS FOR PHASE B
 - [C] CONNECTIONS SHOWN FOR PHASE C
 - [G] CONNECT TO GROUND ONLY IF POWER SYSTEM IS GROUNDED
 - [L] CURRENT LOOP CONDUCTORS PASS THROUGH THE C.T.'S ON THE CURRENT LOOP GATE DRIVER BOARDS (CLGD)
 - CUSTOMER WIRING
 - SS SURGE SUPPRESSOR
 - REMOVE JUMPER WHEN CONNECTING REMOTE EQUIPMENT
 - Ⓛ LOW VOLTAGE DOOR MOUNTED DEVICE
 - ▲ REMOTE EQUIPMENT

⚠ DANGER
HIGH VOLTAGE LIVE CAPACITOR IN CIRCUIT

BEFORE TOUCHING ANYTHING OPEN THE ISOLATING SWITCH, WAIT 5 MINUTES, THEN SHORT-CIRCUIT THE CAPACITOR TERMINALS.

FAILURE TO SHORT-CIRCUIT THE CAPACITOR TERMINALS CAN RESULT IN SEVERE INJURY OR DEATH.

⚠ DANGER
STORAGE CAPACITOR INSIDE IN CIRCUIT

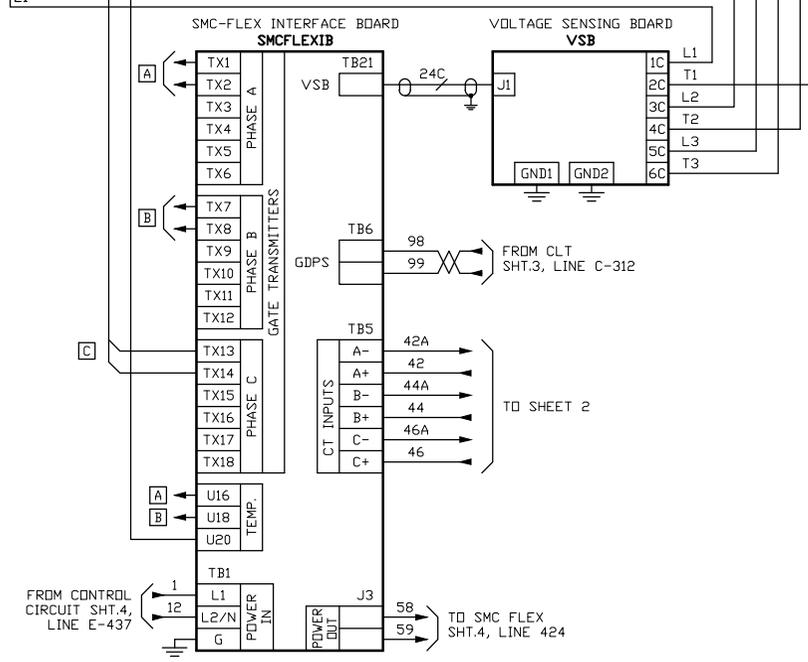
THE CONTROLLER PROVIDES FOR A MOTOR DE-ENERGIZATION DELAY OF UP TO 2 SECONDS DURING AN UNDER VOLTAGE CONDITION.

DE-ENERGIZE ALL CONTROL POWER SOURCES AND WAIT ONE MINUTE BEFORE SERVICING THE EQUIPMENT.

FAILURE TO DE-ENERGIZE POWER CAN RESULT IN SEVERE INJURY OR DEATH.

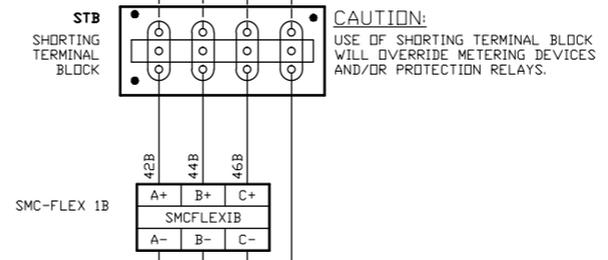
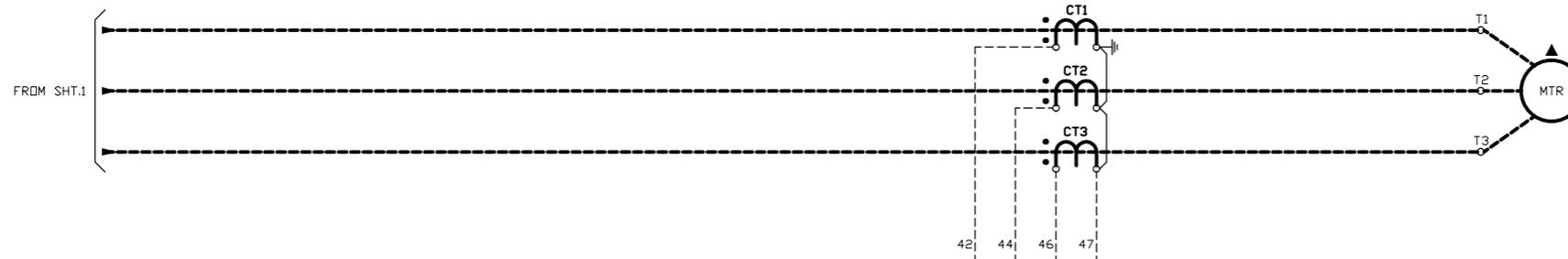
⚠ DANGER
MORE THAN ONE LIVE CIRCUIT

- NOTES**
- 1) REFER TO DIMENSION DRAWING FOR COMPONENT SIZING NOT SHOWN ON THIS DRAWING.
- ∞ #12 AWG TYPE TEW TINNED CONTROL WIRE



TO SHEET 2

TO SMC FLEX SHT.4, LINE 424



⚠ DANGER
MORE THAN ONE LIVE CIRCUIT

⚠ DANGER
⚠
HIGH VOLTAGE LIVE CAPACITOR IN CIRCUIT

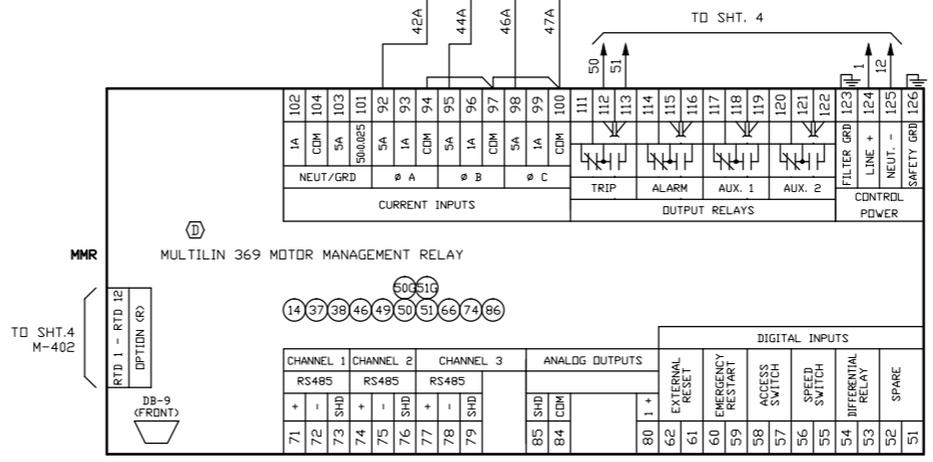
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⚠
STORAGE CAPACITOR INSIDE IN CIRCUIT

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FAILURE TO DE-ENERGIZE POWER CAN RESULT IN SEVERE INJURY OR DEATH



MMR
TO SHT.4
M-402

MULTILIN NOTES
OUTPUT RELAY CONTACTS SHOWN WITHOUT CONTROL POWER APPLIED. THE FOLLOWING FACTORY INSTALLED CONTACT POWER-UP STATES ARE IN EFFECT:
TRIP - FAIL SAFE
ALARM - NON FAIL SAFE
AUX.1 - NON FAIL SAFE
AUX.2 - FAIL SAFE

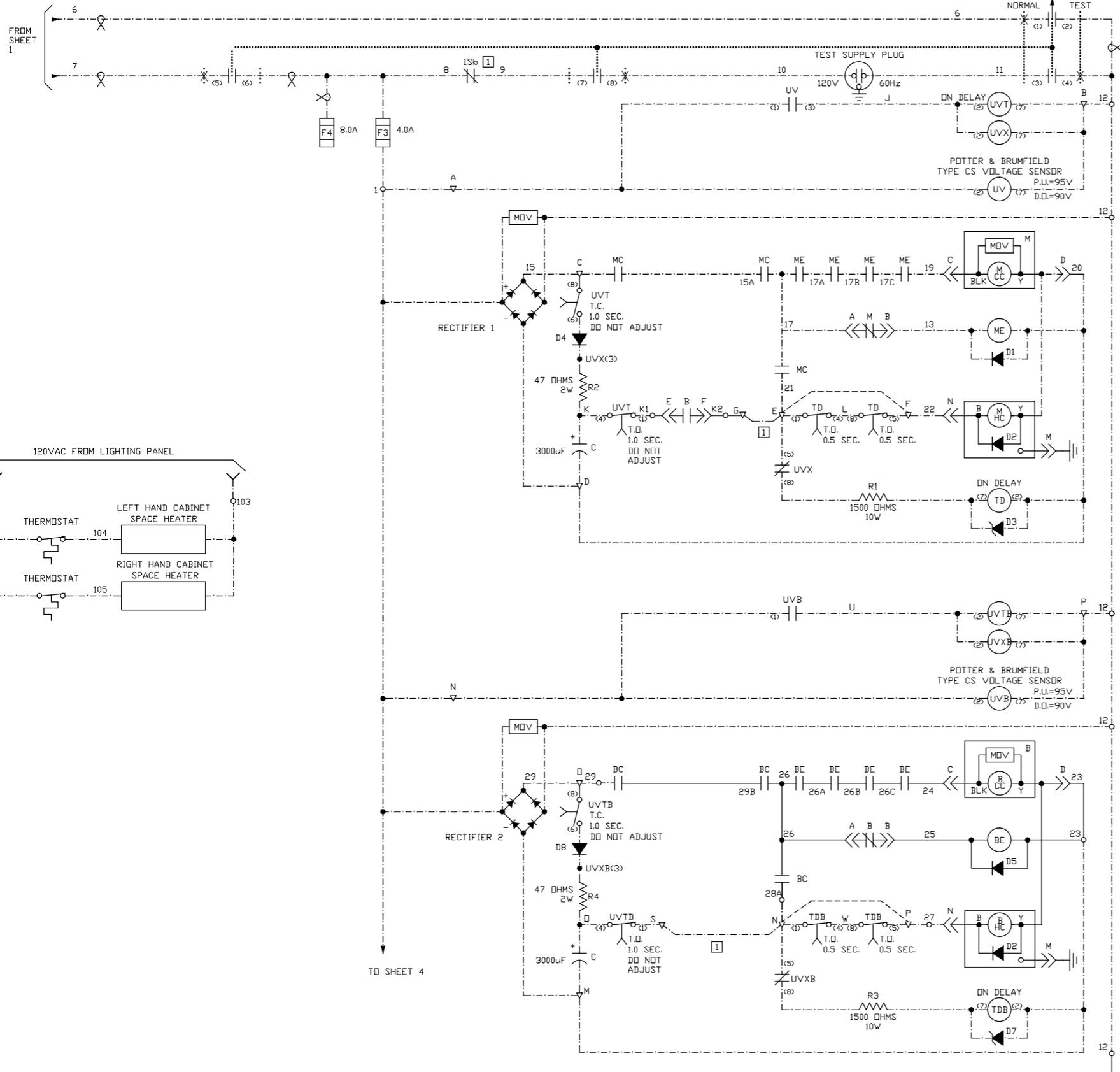
MULTILIN 369 RELAY TO BE PROGRAMMED BY THE CUSTOMER BEFORE START-UP.

ATTENTION: THIS CIRCUIT IS SET UP FOR SOFT START OR CURRENT LIMIT STARTING.

CAUTION: MAXIMUM TWO STARTS PER HOUR WITH A MINIMUM OF FIVE MINUTES BETWEEN STARTS.

- LEGEND**
- ▲ REMOTE EQUIPMENT
 - CUSTOMER WIRING
 - ⓓ LOW VOLTAGE DOOR MOUNTED DEVICE
 - SS SURGE SUPPRESSOR
 - REMOVE JUMPER WHEN CONNECTING REMOTE EQUIPMENT
 - ⊗ #12 AWG TYPE TEW TINNED CONTROL WIRE

NOTES
1) REFER TO DIMENSION DRAWING FOR COMPONENT SIZING NOT SHOWN ON THIS DRAWING.



UVT RELAY
 312
 316
 UVX RELAY
 318

UV RELAY
 305

MAIN CONTACTOR (M)
 411 417
 313 412 413

CC-CLOSING COIL
 HC-HOLDING COIL

ECONOMIZING CONTACTOR (ME)
 311 311
 311 311

TIME DELAY DE-ENERGIZATION RELAY (TD)
 316 316

UVTB RELAY
 330
 334
 UVXB RELAY
 336

UVB RELAY
 323

BYPASS CONTACTOR (B)
 316 422
 331 413 414

CC-CLOSING COIL
 HC-HOLDING COIL

ECONOMIZING CONTACTOR (BE)
 329 329
 329 329

TIME DELAY DE-ENERGIZATION RELAY (TDB)
 334 334

⚠ DANGER
 MORE THAN ONE LIVE CIRCUIT

⚠ DANGER
 HIGH VOLTAGE LIVE CAPACITOR IN CIRCUIT
 BEFORE TOUCHING ANYTHING OPEN THE ISOLATING SWITCH, WAIT 5 MINUTES, THEN SHORT-CIRCUIT THE CAPACITOR TERMINALS.
 FAILURE TO SHORT-CIRCUIT THE CAPACITOR TERMINALS CAN RESULT IN SEVERE INJURY OR DEATH.

⚠ DANGER
 STORAGE CAPACITOR INSIDE IN CIRCUIT
 THE CONTROLLER PROVIDES FOR A MOTOR DE-ENERGIZATION DELAY OF UP TO 2 SECONDS DURING AN UNDER VOLTAGE CONDITION.
 DE-ENERGIZE ALL CONTROL POWER SOURCES AND WAIT ONE MINUTE BEFORE SERVICING THE EQUIPMENT.
 FAILURE TO DE-ENERGIZE POWER CAN RESULT IN SEVERE INJURY OR DEATH

NOTE: TDB TIMING RELAY MUST BE SET FOR 0.5 SECOND LONGER THAN TIMING RELAY TD

WARNING: THE CONTROLLER PROVIDES FOR A MOTOR DE-ENERGIZATION DELAY OF UP TO 2 SECONDS DURING AN UNDERVOLTAGE CONDITION. ALWAYS DISCONNECT THE POWER BEFORE ATTEMPTING SERVICE EQUIPMENT.

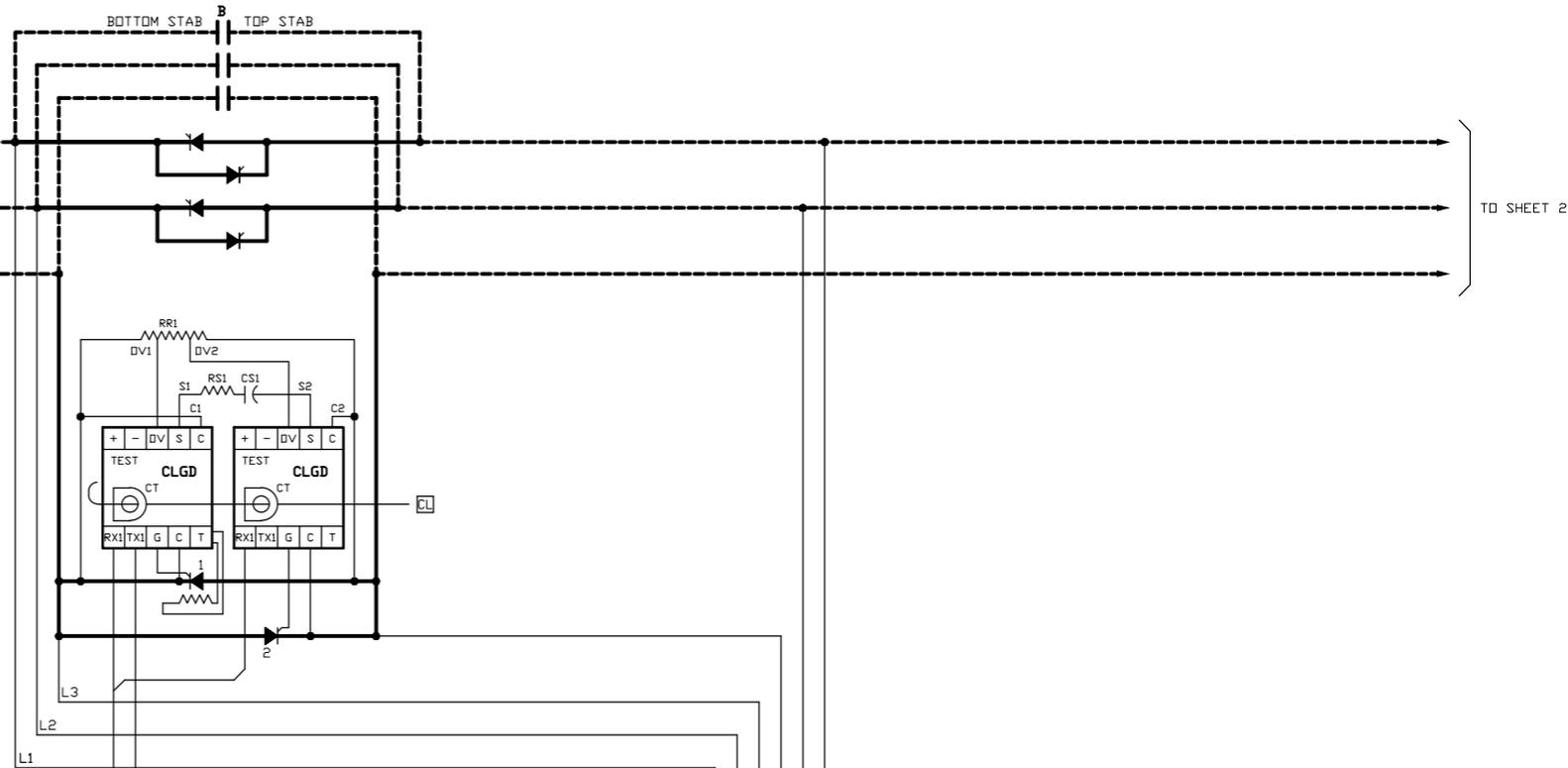
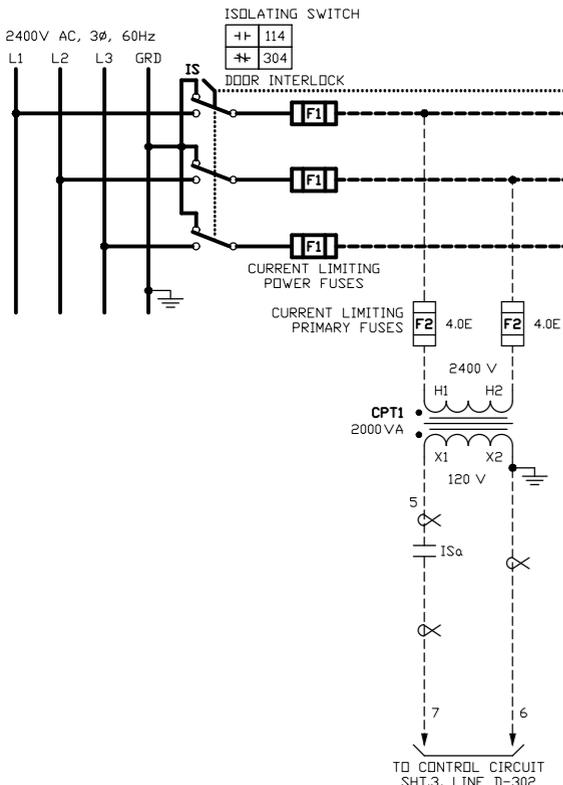
LEGEND

- 1 IF TIME DELAY UNDERVOLTAGE DE-ENERGIZATION IS NOT REQUIRED REMOVE THE JUMPER FROM TERMINALS G AND E AND PLACE BETWEEN TERMINALS E AND F. ALSO REMOVE THE JUMPER FROM S AND N AND PLACE BETWEEN TERMINALS N AND P.
- ▲ REMOTE EQUIPMENT
- == CUSTOMER WIRING
- Ⓛ LOW VOLTAGE DOOR MOUNTED DEVICE
- SS SURGE SUPPRESSOR
- REMOVE JUMPER WHEN CONNECTING REMOTE EQUIPMENT
- ▽ TERMINAL BLOCKS LOCATED ON ALLEN-BRADLEY TIME DELAY UNDERVOLTAGE DE-ENERGIZATION PANEL
- MDV METAL OXIDE VARISTOR
- ∞ #12 AWG TYPE TEW CONTROL WIRE

NOTE: REFER TO DIMENSION DRAWING FOR COMPONENT SIZING - POWER BUS RATING, GROUND BUS SIZE, POWER FUSE RATING, ETC.

FROM SHEET 1

TO SHEET 4



ATTENTION:
THIS CIRCUIT IS SET UP FOR PUMP CONTROL

CAUTION:
MAXIMUM TWO STARTS PER HOUR WITH A
MINIMUM OF FIVE MINUTES BETWEEN STARTS.

LEGEND

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ON THE CURRENT LOOP GATE DRIVER BOARDS (CLGD)

--- CUSTOMER WIRING
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■ REMOVE JUMPER WHEN CONNECTING REMOTE EQUIPMENT
Ⓟ LOW VOLTAGE DOOR MOUNTED DEVICE
▲ REMOTE EQUIPMENT

⚠ DANGER
▲ HIGH VOLTAGE
LIVE CAPACITOR
IN CIRCUIT

BEFORE TOUCHING
ANYTHING OPEN THE
ISOLATING SWITCH,
WAIT 5 MINUTES, THEN
SHORT-CIRCUIT THE
CAPACITOR TERMINALS.
FAILURE TO SHORT-
CIRCUIT THE CAPACITOR
TERMINALS CAN RESULT
IN SEVERE INJURY
OR DEATH.

⚠ DANGER
▲ STORAGE CAPACITOR
INSIDE
IN CIRCUIT

THE CONTROLLER PROVIDES
FOR A MOTOR
DE-ENERGIZATION DELAY OF
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DE-ENERGIZE ALL CONTROL
POWER SOURCES AND WAIT
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FAILURE TO DE-ENERGIZE
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⚠ DANGER
▲ MORE THAN ONE
LIVE CIRCUIT

NOTES

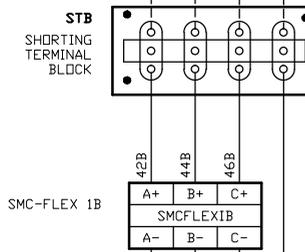
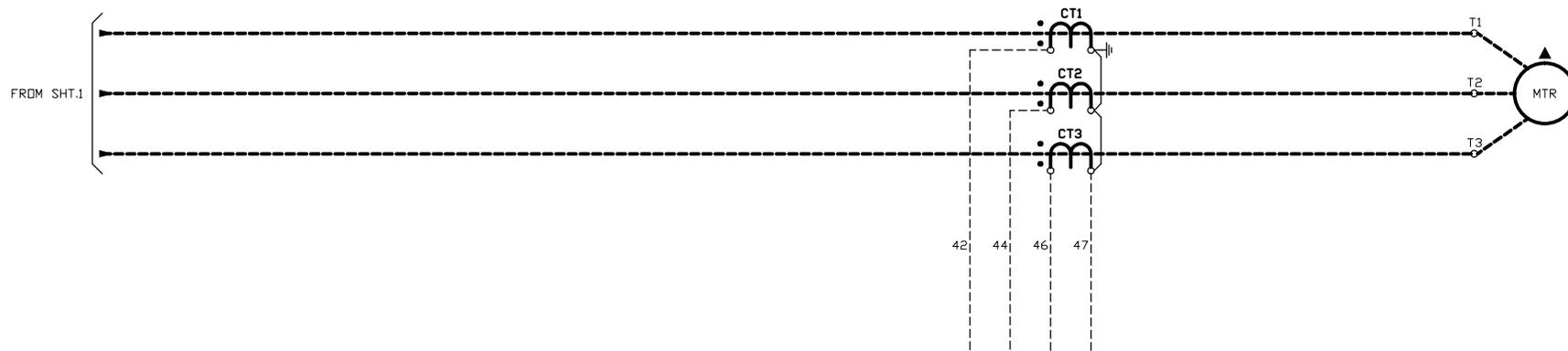
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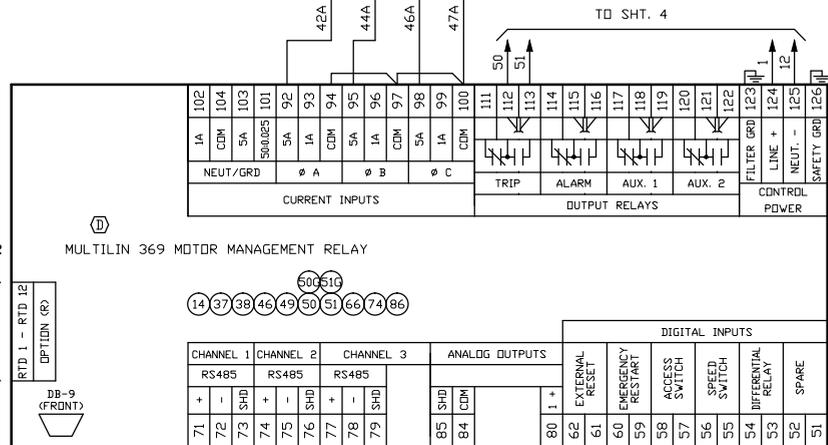
TO SHEET 2

TO SHEET 2

TO SMC FLEX
SHT.4, LINE 424



CAUTION:
USE OF SHORTING TERMINAL BLOCK WILL OVERRIDE METERING DEVICES AND/OR PROTECTION RELAYS.



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MULTILIN 369 RELAY TO BE PROGRAMMED BY THE CUSTOMER BEFORE START-UP.

⚠ DANGER
MORE THAN ONE LIVE CIRCUIT

⚠ DANGER
⚡ HIGH VOLTAGE
LIVE CAPACITOR IN CIRCUIT

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⚠ DANGER
⚡ STORAGE CAPACITOR
INSIDE IN CIRCUIT

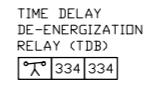
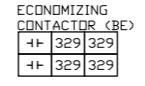
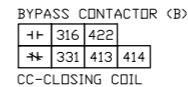
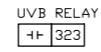
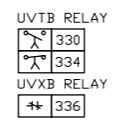
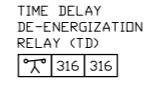
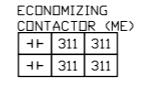
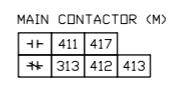
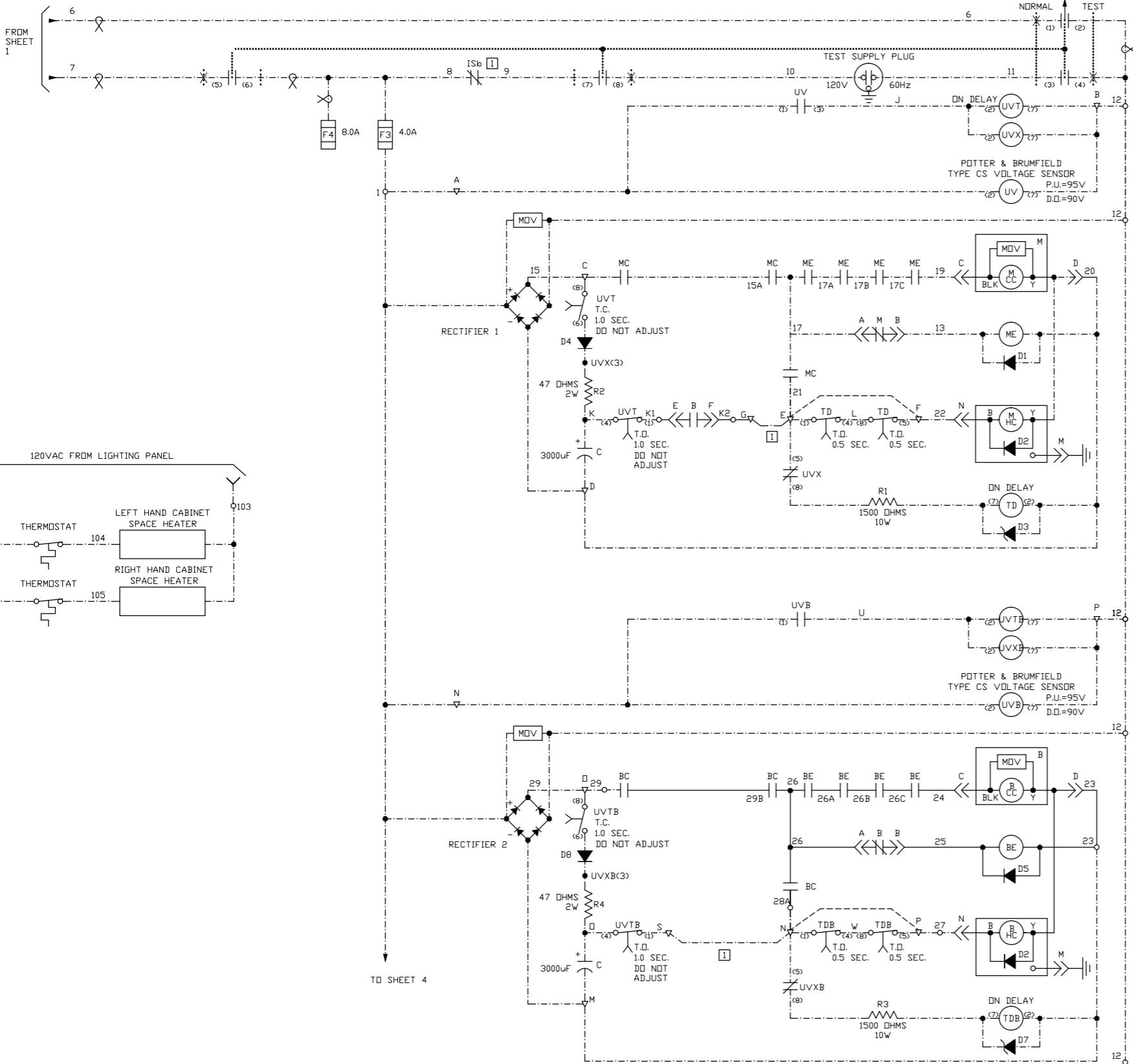
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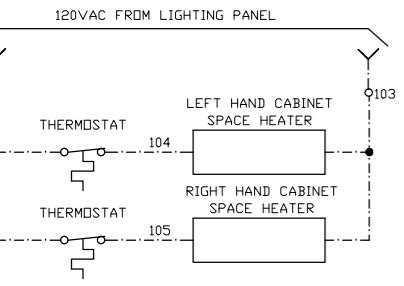
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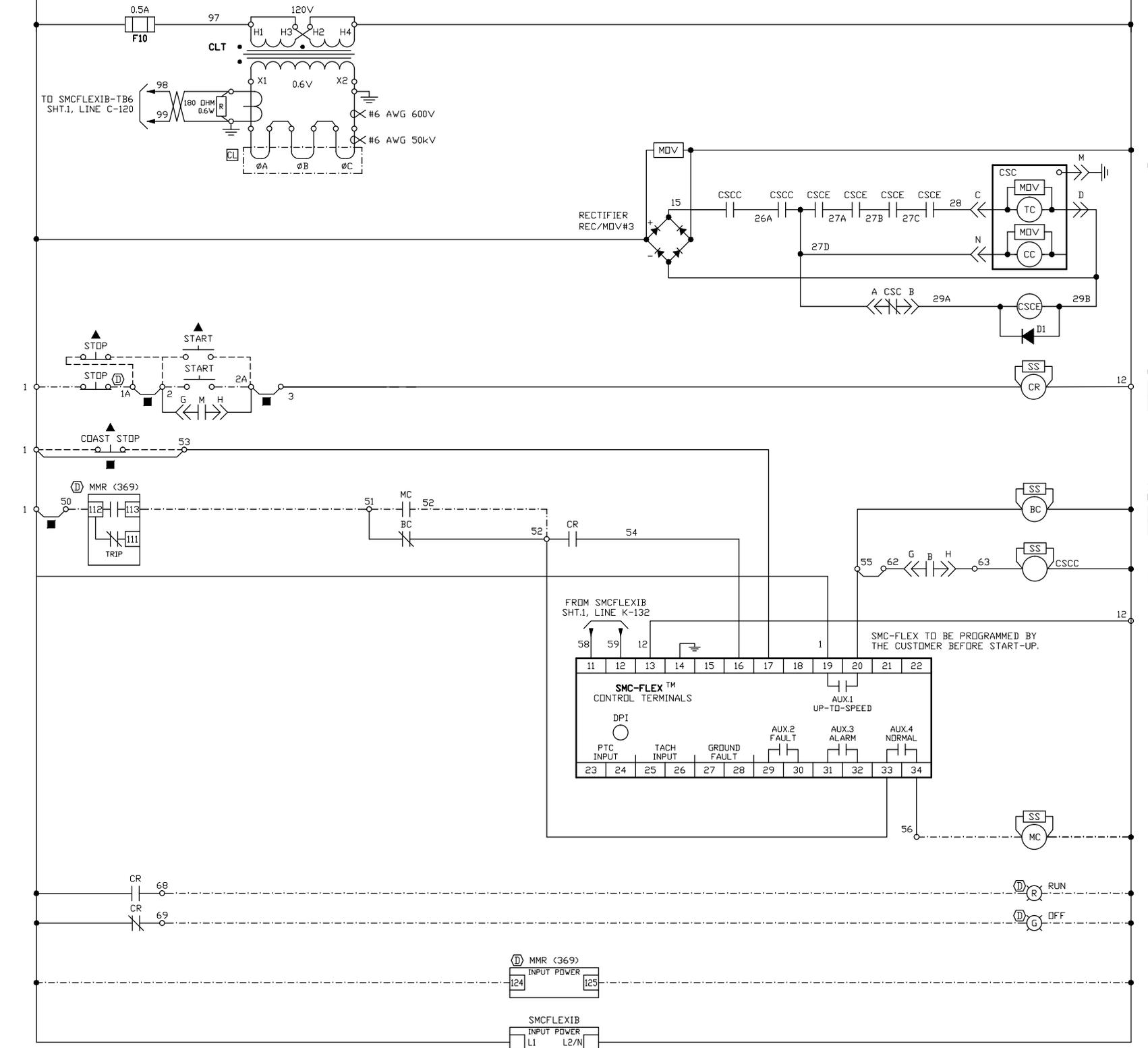


TO SHEET 4

TO SHEET 4

FROM SHT3.
LINE D-336

FROM SHT 3.
LINE K-340



CAPACITOR SWITCHING CONTACTOR (CSCC)

+	415	416
+	413	417 418

CC-CLOSING COIL
HC-HOLDING COIL

+	410	410
+	410	410

CONTROL RELAY (CR)

+	420	433
+	434	

BYPASS CONTACTOR PILOT RELAY (BC)

+	329	329
+	421	

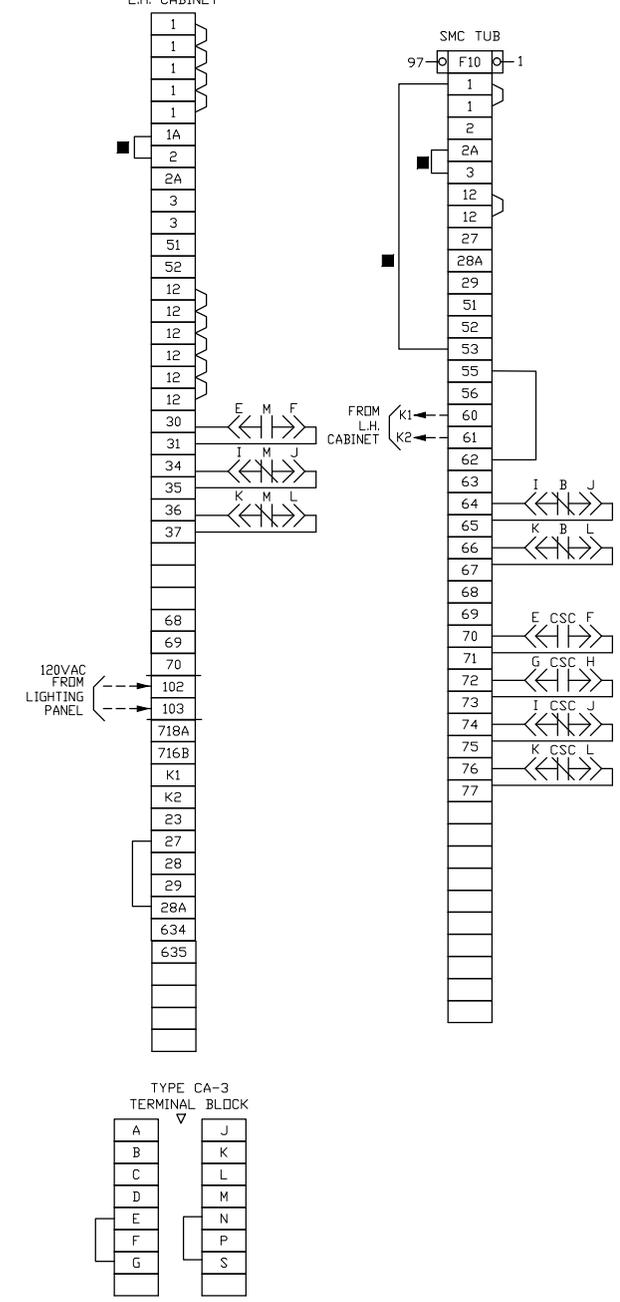
CAPACITOR SWITCHING PILOT RELAY (CSCC)

+	409	409
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MAIN CONTACTOR PILOT RELAY (MC)

+	311	311 420
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MMR (369)		OPTION (R)	
1	+	RTD 1	
2	-		
3	COM		
4	SHD		
5	+		
6	-	RTD 2	
7	COM		
8	SHD		
9	+		
10	-		
11	COM	RTD 3	
12	SHD		
13	+		
14	-	RTD 4	
15	COM		
16	SHD		
17	+		
18	-	RTD 5	
19	COM		
20	SHD		
21	+		
22	-	RTD 6	
23	COM		
24	SHD		
25	+		
26	-	RTD 7	
27	COM		
28	SHD		
29	+		
30	-	RTD 8	
31	COM		
32	SHD		
33	+		
34	-	RTD 9	
35	COM		
36	SHD		
37	+		
38	-	RTD 10	
39	COM		
40	SHD		
41	+		
42	-	RTD 11	
43	COM		
44	SHD		
45	+		
46	-	RTD 12	
47	COM		
48	SHD		



⚠ DANGER
MORE THAN ONE LIVE CIRCUIT

⚠ DANGER
HIGH VOLTAGE LIVE CAPACITOR IN CIRCUIT

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