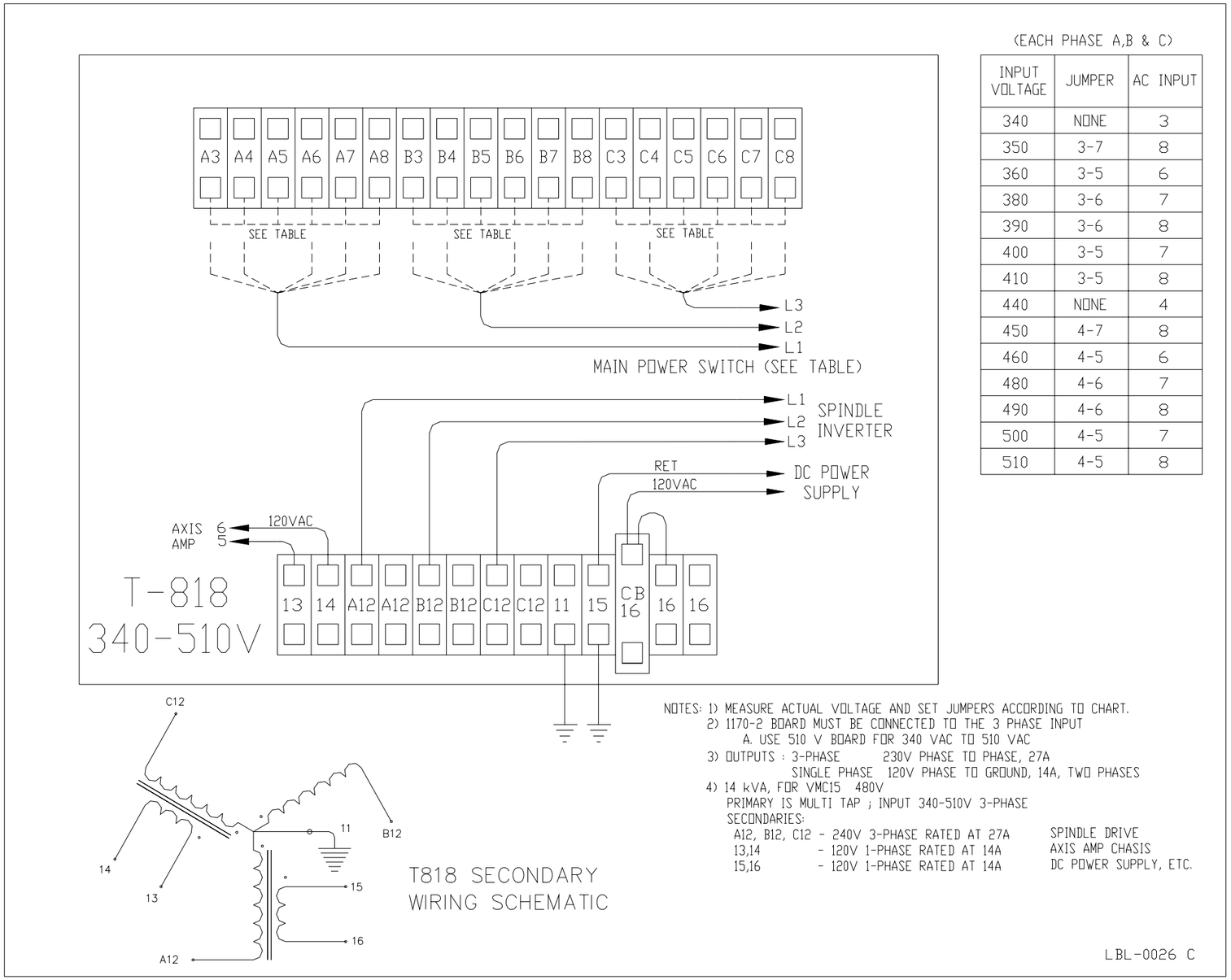
SECTION 7

Transformers

Lbl_0026C_label_t818_transformer_340-510V



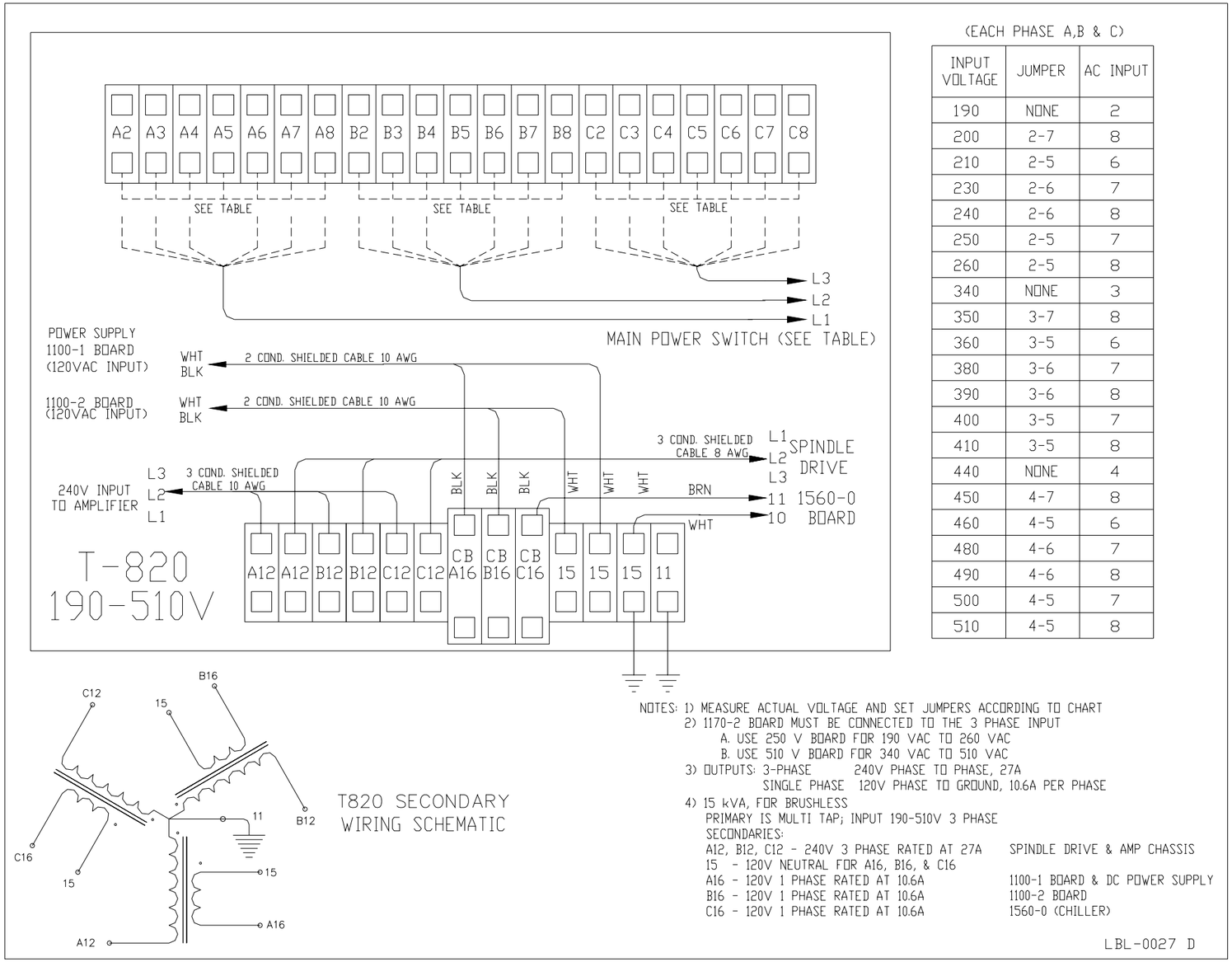
(EACH PHASE A,B & C)

INPUT VOLTAGE	JUMPER	AC INPUT
340	NONE	3
350	3-7	8
360	3-5	6
380	3-6	7
390	3-6	8
400	3-5	7
410	3-5	8
440	NONE	4
450	4-7	8
460	4-5	6
480	4-6	7
490	4-6	8
500	4-5	7
510	4-5	8

NOTES: 1) MEASURE ACTUAL VOLTAGE AND SET JUMPERS ACCORDING TO CHART.
2) 1170-2 BOARD MUST BE CONNECTED TO THE 3 PHASE INPUT
A. USE 510 V BOARD FOR 340 VAC TO 510 VAC
3) OUTPUTS : 3-PHASE 230V PHASE TO PHASE, 27A
SINGLE PHASE 120V PHASE TO GROUND, 14A, TWO PHASES
4) 14 kVA, FOR VMC15 480V
PRIMARY IS MULTI TAP ; INPUT 340-510V 3-PHASE
SECONDARIES:
A12, B12, C12 - 240V 3-PHASE RATED AT 27A SPINDLE DRIVE
13,14 - 120V 1-PHASE RATED AT 14A AXIS AMP CHASIS
15,16 - 120V 1-PHASE RATED AT 14A DC POWER SUPPLY, ETC.

LBL-0026 C

Lbl_0027D_label_t820_transformer_190-510V



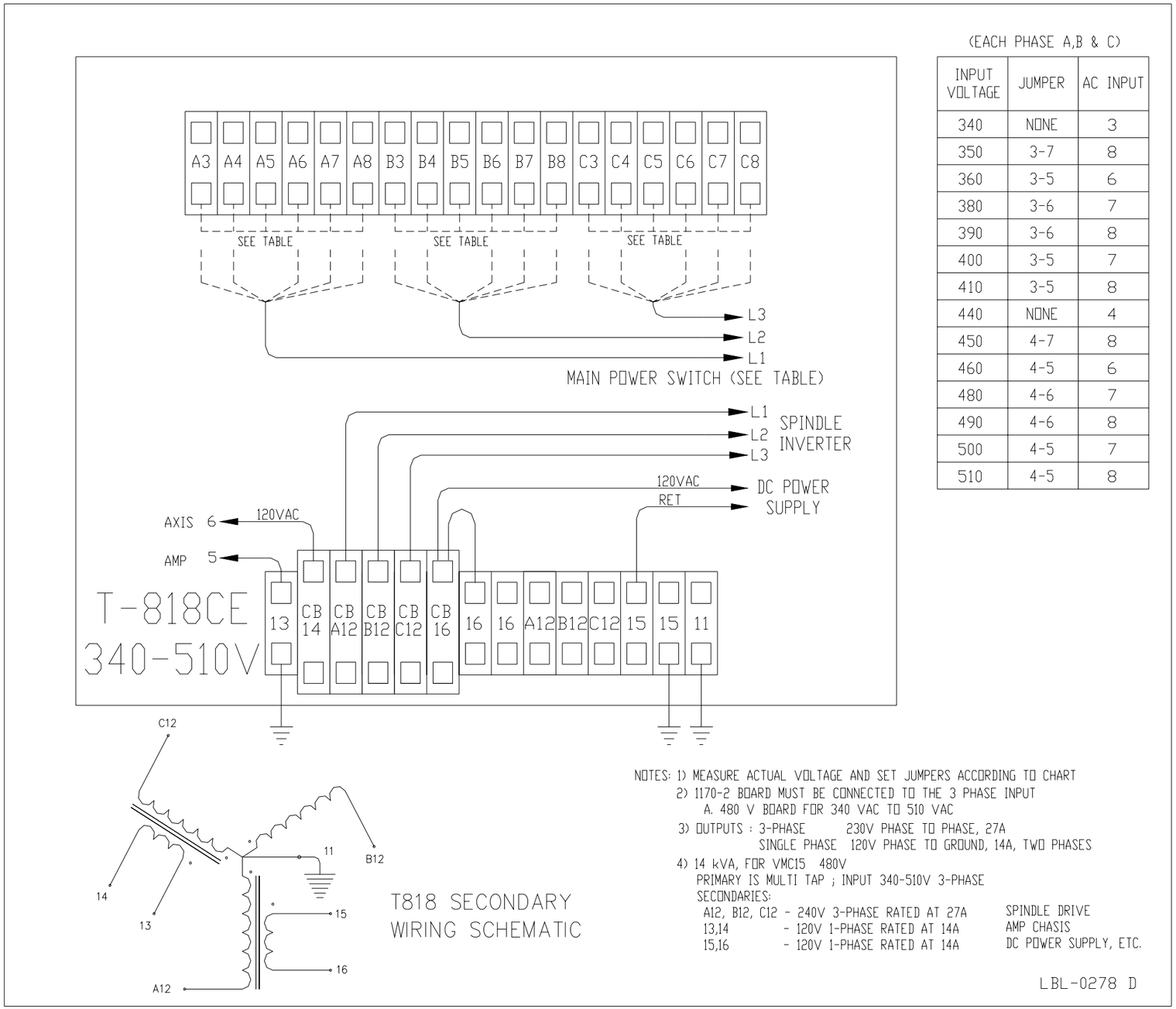
(EACH PHASE A,B & C)

INPUT VOLTAGE	JUMPER	AC INPUT
190	NONE	2
200	2-7	8
210	2-5	6
230	2-6	7
240	2-6	8
250	2-5	7
260	2-5	8
340	NONE	3
350	3-7	8
360	3-5	6
380	3-6	7
390	3-6	8
400	3-5	7
410	3-5	8
440	NONE	4
450	4-7	8
460	4-5	6
480	4-6	7
490	4-6	8
500	4-5	7
510	4-5	8

NOTES: 1) MEASURE ACTUAL VOLTAGE AND SET JUMPERS ACCORDING TO CHART
2) 1170-2 BOARD MUST BE CONNECTED TO THE 3 PHASE INPUT
A. USE 250 V BOARD FOR 190 VAC TO 260 VAC
B. USE 510 V BOARD FOR 340 VAC TO 510 VAC
3) OUTPUTS: 3-PHASE 240V PHASE TO PHASE, 27A
SINGLE PHASE 120V PHASE TO GROUND, 10.6A PER PHASE
4) 15 kVA, FOR BRUSHLESS
PRIMARY IS MULTI TAP; INPUT 190-510V 3 PHASE
SECONDARIES:
A12, B12, C12 - 240V 3 PHASE RATED AT 27A SPINDLE DRIVE & AMP CHASSIS
15 - 120V NEUTRAL FOR A16, B16, & C16
A16 - 120V 1 PHASE RATED AT 10.6A 1100-1 BOARD & DC POWER SUPPLY
B16 - 120V 1 PHASE RATED AT 10.6A 1100-2 BOARD
C16 - 120V 1 PHASE RATED AT 10.6A 1560-0 (CHILLER)

LBL-0027 D

Lbl_0278D_label_t818ce_transformer_340-510V



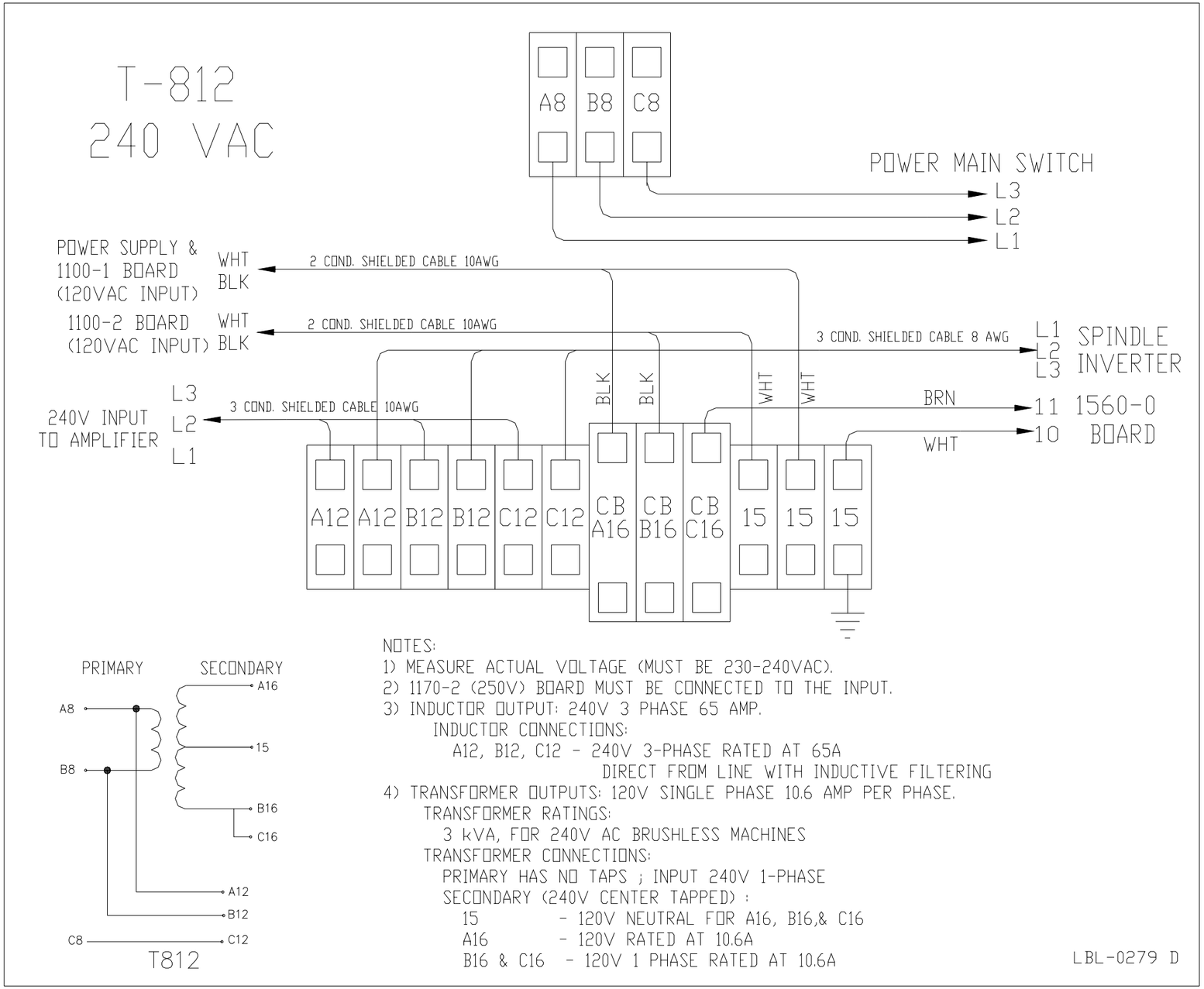
(EACH PHASE A,B & C)

INPUT VOLTAGE	JUMPER	AC INPUT
340	NONE	3
350	3-7	8
360	3-5	6
380	3-6	7
390	3-6	8
400	3-5	7
410	3-5	8
440	NONE	4
450	4-7	8
460	4-5	6
480	4-6	7
490	4-6	8
500	4-5	7
510	4-5	8

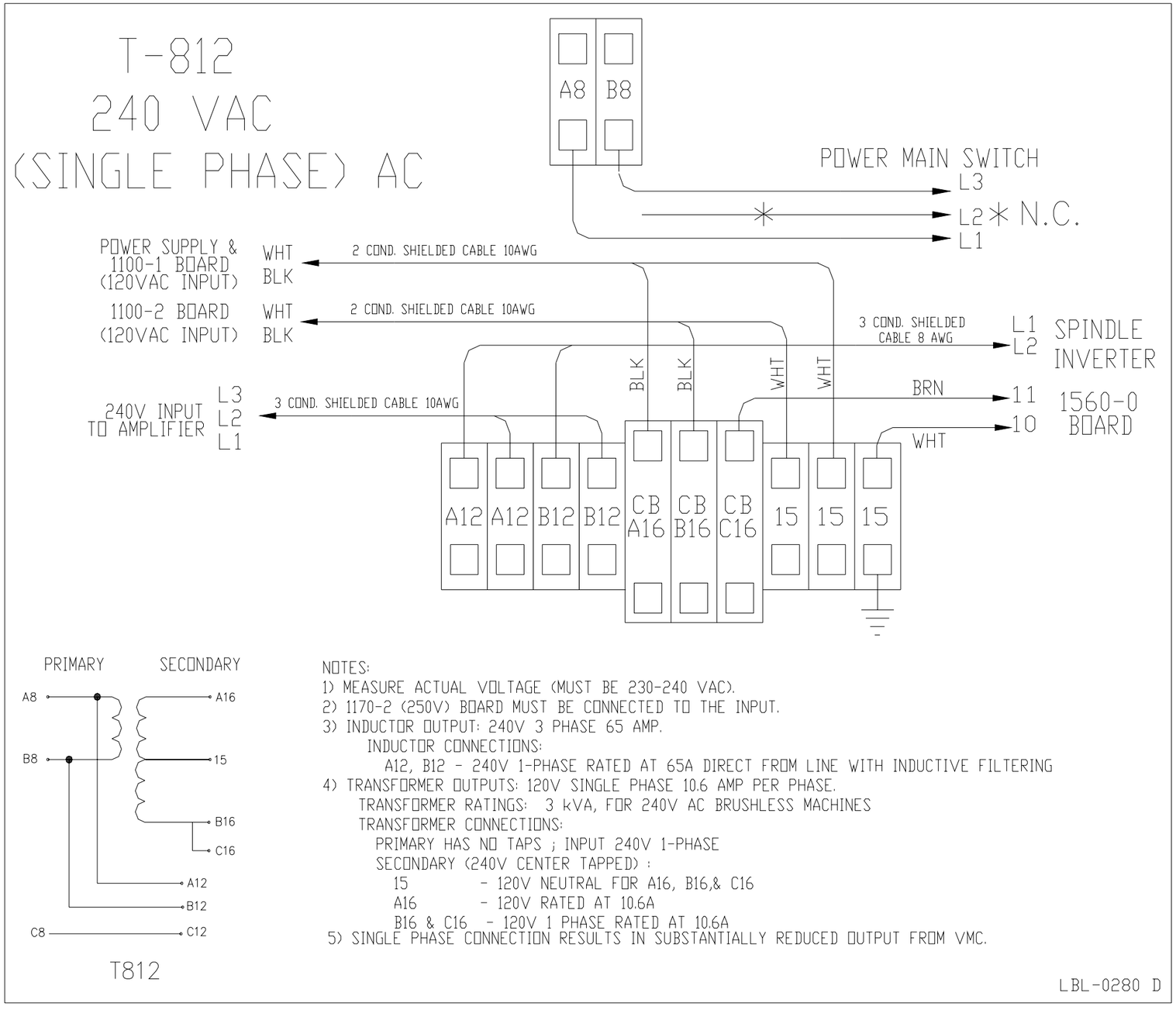
NOTES: 1) MEASURE ACTUAL VOLTAGE AND SET JUMPERS ACCORDING TO CHART
2) 1170-2 BOARD MUST BE CONNECTED TO THE 3 PHASE INPUT
A. 480 V BOARD FOR 340 VAC TO 510 VAC
3) OUTPUTS : 3-PHASE 230V PHASE TO PHASE, 27A
SINGLE PHASE 120V PHASE TO GROUND, 14A, TWO PHASES
4) 14 kVA, FOR VMC15 480V
PRIMARY IS MULTI TAP ; INPUT 340-510V 3-PHASE
SECONDARIES:
A12, B12, C12 - 240V 3-PHASE RATED AT 27A SPINDLE DRIVE
13,14 - 120V 1-PHASE RATED AT 14A AMP CHASIS
15,16 - 120V 1-PHASE RATED AT 14A DC POWER SUPPLY, ETC.

LBL-0278 D

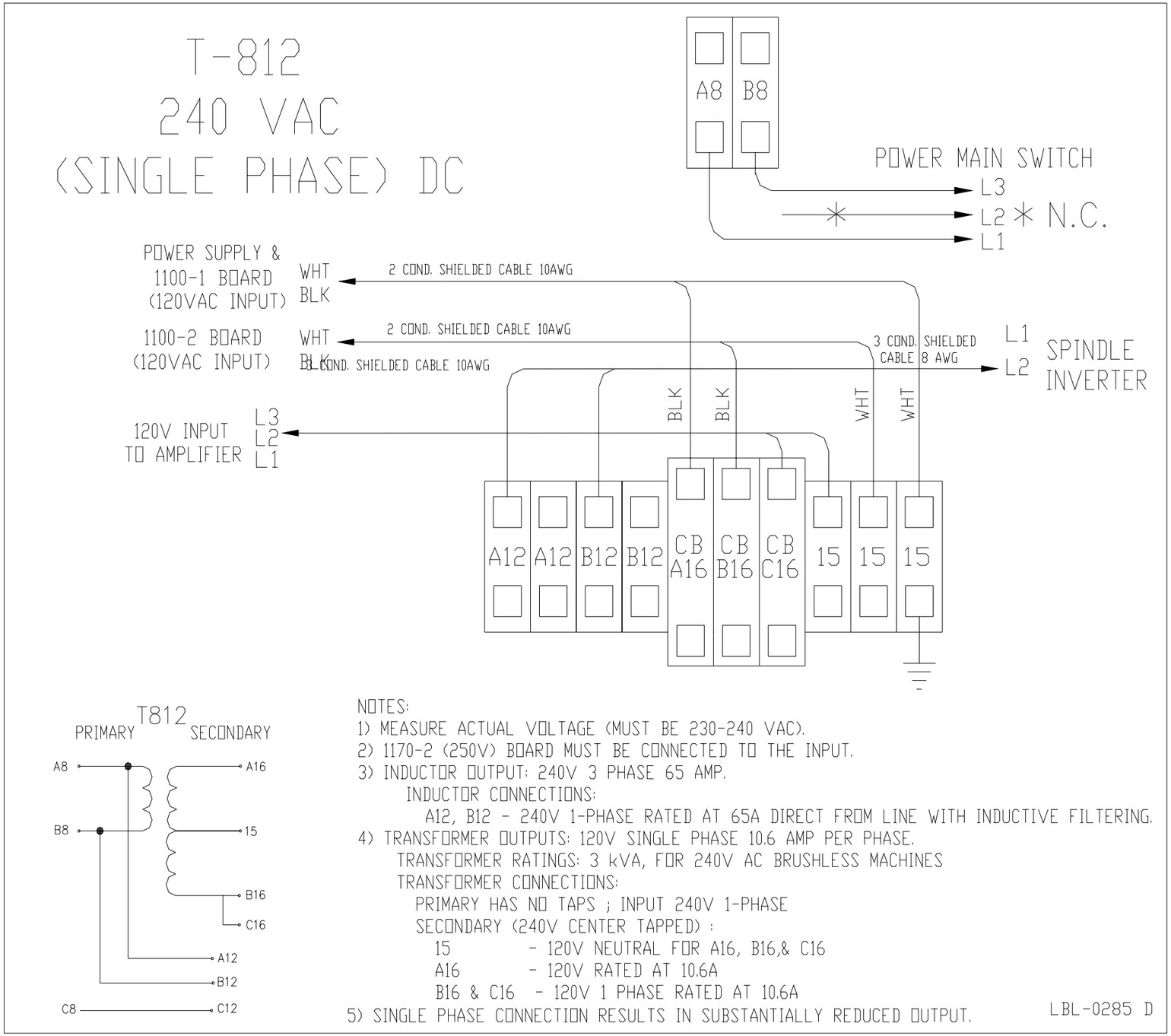
LBL_0279D_label_t812_transformer 240V



LBL_0280D_label_t812_transformer_single_phs_ac_240V

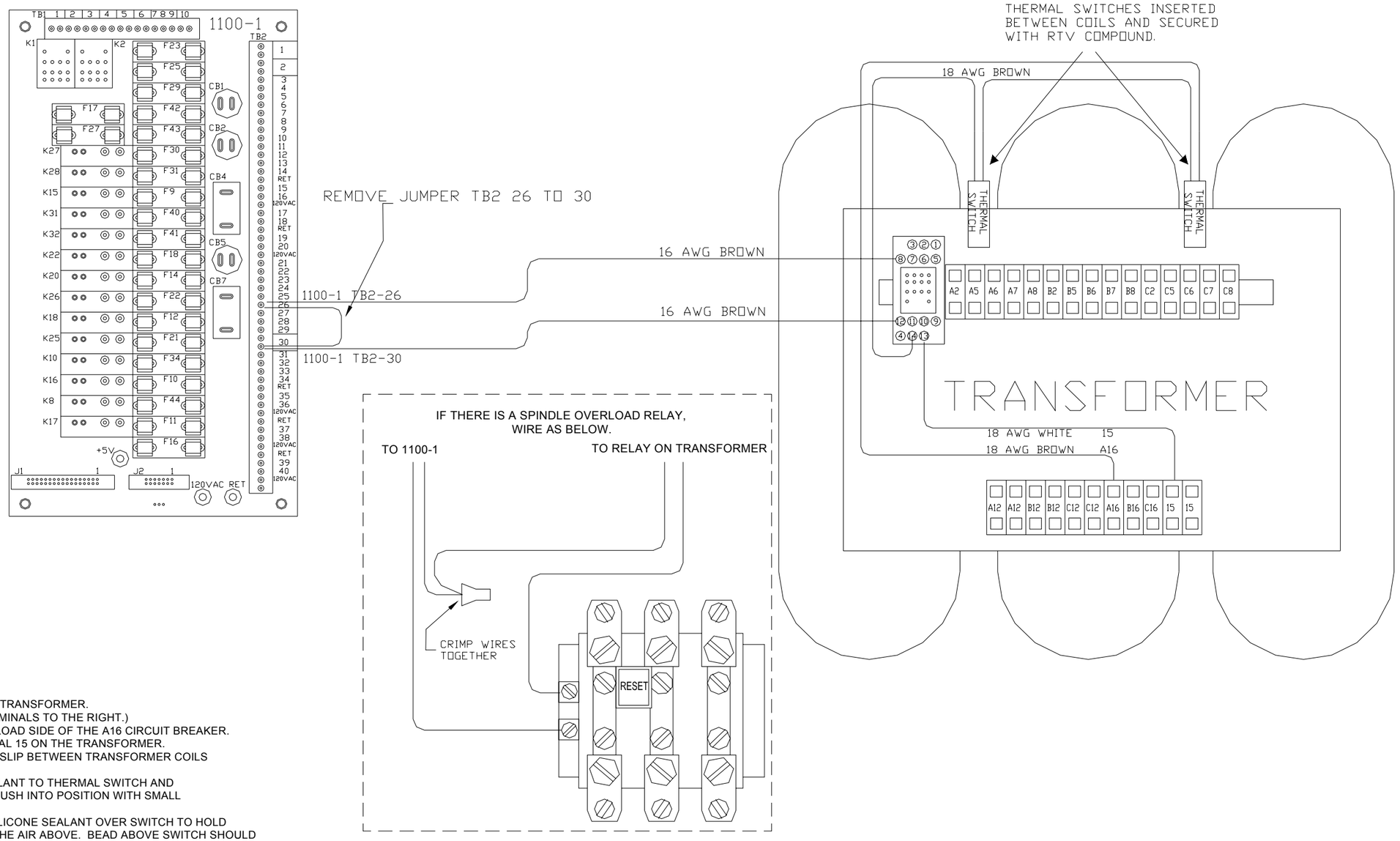


LBL_0285D_label_t812_transformer_single_phs_dc_240V



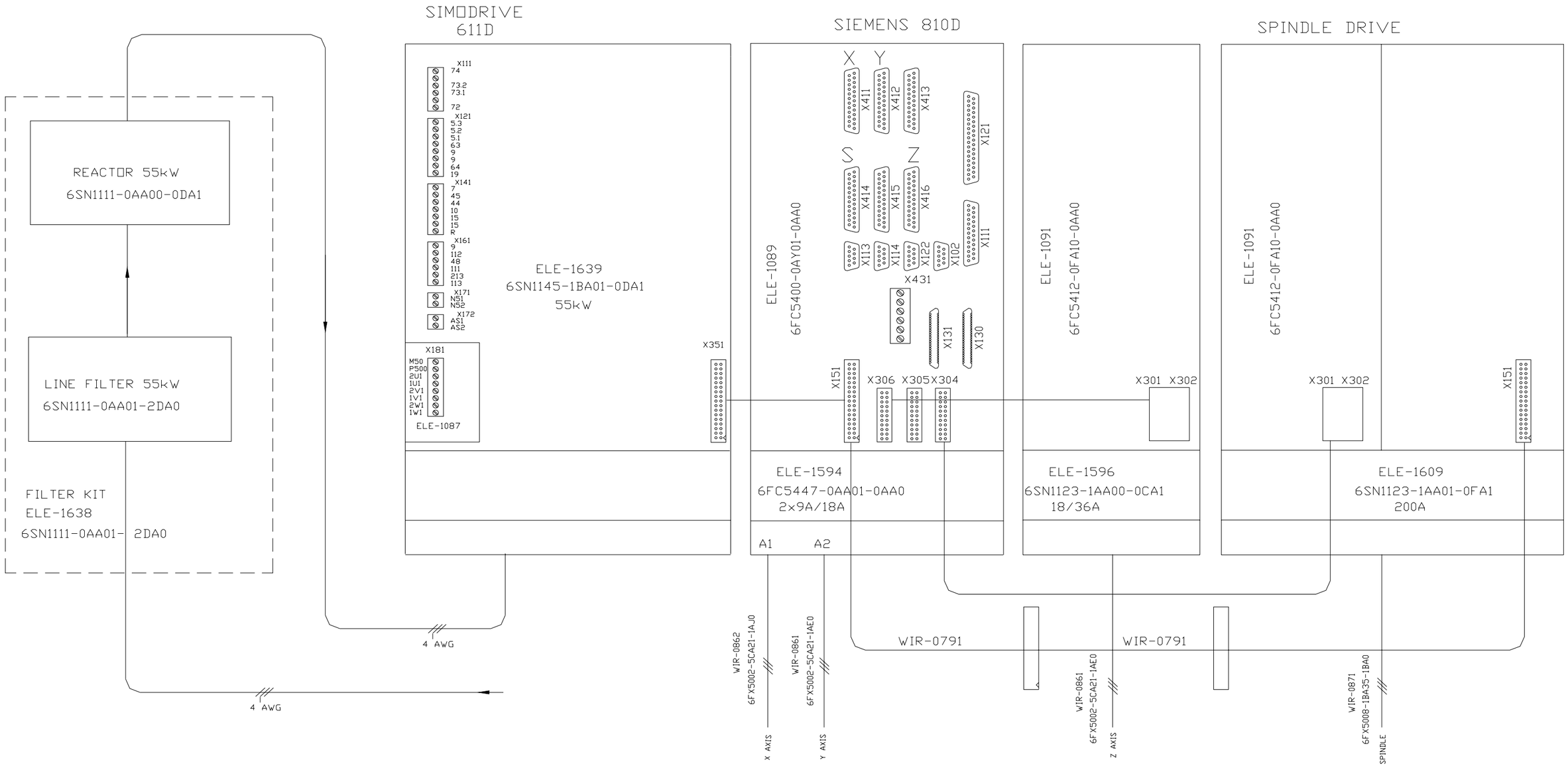
WRG_0042A_TransformerThermalSwitch

MATERIAL LIST:
- Omron relay socket (#PYF14A-E) (ELE-1440)
- Omron MY4N relay 110VAC coil (ELE-0072)
- Selco thermal switches (2) (UP62-120C or UP72-120C) (ELE-1441)
  (Switches may be for any temperature rating from 110C to 120C)
- 16AWG brown wire (2 pieces 8.5 feet long)
- 18AWG white wire (1 piece 12 inches long)
- 18AWG brown wire (2 pieces, 15 and 10 inches)
- Crimp connector (WIR-0190)
- Loctite Blue RTV Silicone Adhesive



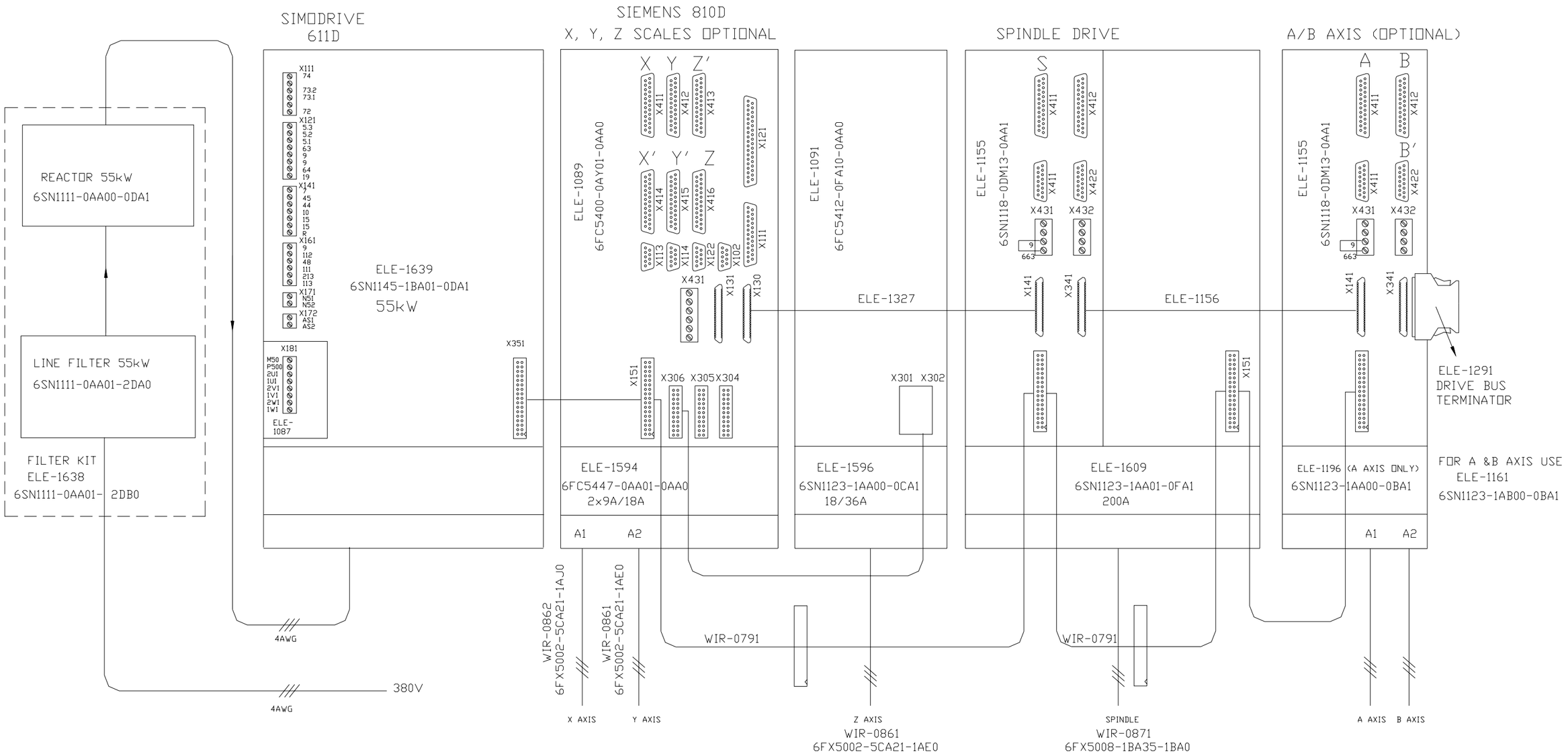
1. TURN OFF POWER.
2. ATTACH RELAY SOCKET TO UPPER DIN RAIL ON TRANSFORMER.
   (ON T820, YOU MAY NEED TO SLIDE WAGO TERMINALS TO THE RIGHT.)
3. CONNECT BROWN WIRE MARKED "A16" TO THE LOAD SIDE OF THE A16 CIRCUIT BREAKER.
4. CONNECT WHITE WIRE MARKED "15" TO TERMINAL 15 ON THE TRANSFORMER.
5. FIND LOCATION WHERE THERMAL SWITCH WILL SLIP BETWEEN TRANSFORMER COILS (SHOULD BE SNUG).
6. APPLY HIGH TEMPERATURE RTV SILICONE SEALANT TO THERMAL SWITCH AND INSERT BETWEEN COILS OF TRANSFORMER. PUSH INTO POSITION WITH SMALL SCREWDRIVER IF NEEDED.
7. APPLY ADDITIONAL HIGH TEMPERATURE RTV SILICONE SEALANT OVER SWITCH TO HOLD SWITCH IN PLACE AND TO INSULATE IT FROM THE AIR ABOVE. BEAD ABOVE SWITCH SHOULD BE AT LEAST 1/4" THICK.
7. IF VMC HAS A THERMAL OVERLOAD RELAY FOR THE SPINDLE MOTOR CONNECT THE TWO WIRES MARKED "1100-1 TB2-26" AND "1100-1 TB2-30" AS SHOWN IN THE DOTTED BOX AND CONTINUE AT STEP 11.
8. ROUTE THE TWO WIRES MARKED "1100-1 TB2-26" AND "1100-1 TB2-30" TO THE 1100-1 BOARD.
9. REMOVE THE JUMPER WIRE FROM 1100-1 TB2 TERMINAL 26 TO 30.
10. CONNECT "TB2-26" WIRE TO TB2 TERMINAL 26 ON THE 1100-1 AND WIRE "TB2-30" TO TERMINAL 30. (THIS IS WHERE YOU REMOVED THE JUMPER WIRE FROM.)
11. POWER ON MACHINE. RELAY SHOULD BE ON AND MACHINE SHOULD NOT BE IN EMERGENCY STOP. WHEN THE TRANSFORMER EXCEEDS 130 DEGREES C, THE THERMAL SENSORS WILL OPEN, THE RELAY WILL GO OFF, AND THE MACHINE WILL ENTER EMERGENCY STOP UNTIL THE TRANSFORMER COOLS BELOW 90 DEGREES C.
12. TEST: REMOVE THE RELAY FROM THE SOCKET; VMC SHOULD GO INTO EMERGENCY STOP. (SINCE THE TRANSFORMER WILL NOT NORMALLY REACH A TEMPERATURE TO TRIP THE THERMAL SWITCHES, THIS IS THE ONLY WAY TO TEST THE WIRING.)

Wrg_0054A_6535_50tap_siemens810_Std



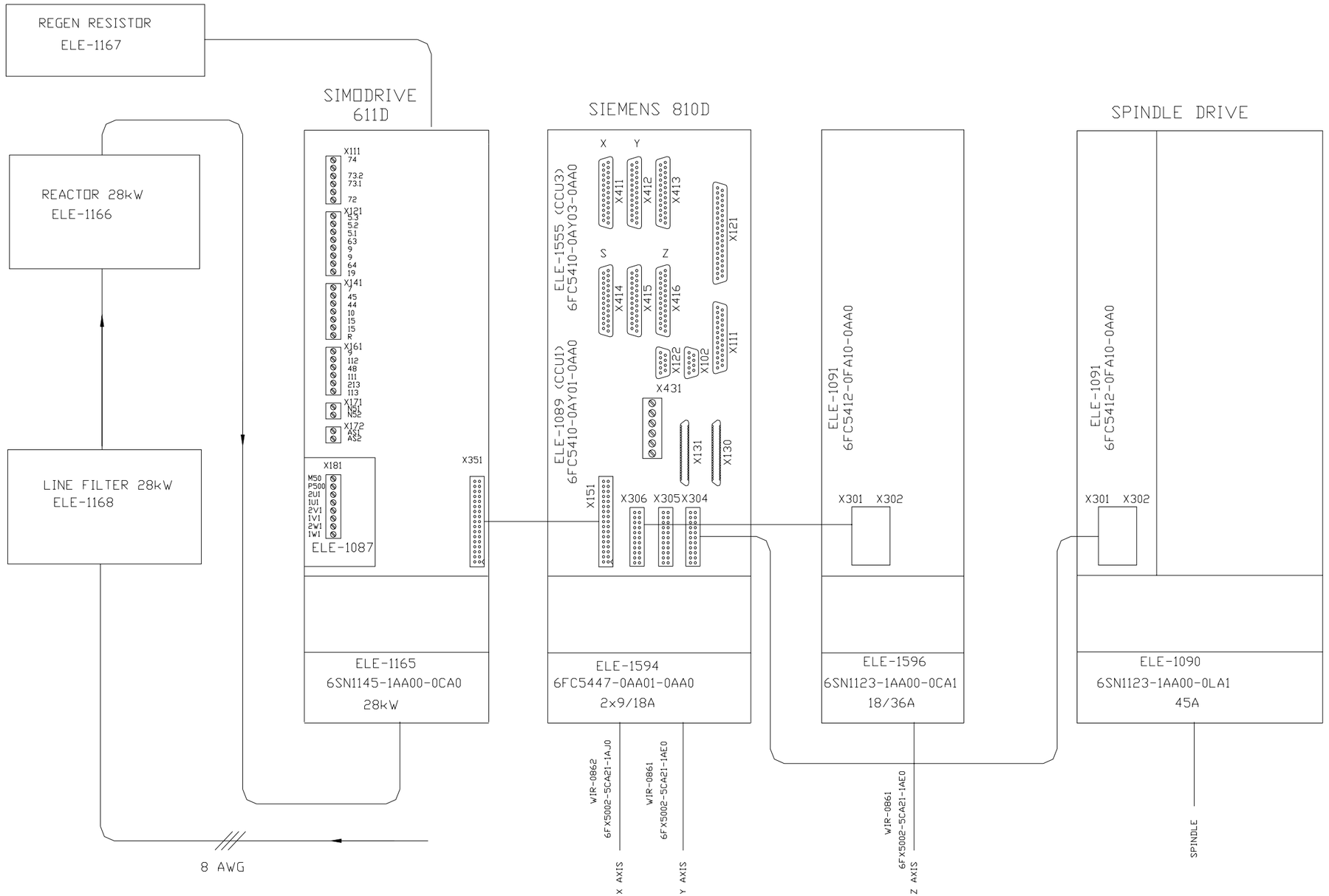
NOTE: - X, Y, Z AXES MOTOR - MTR-0224 1FT6086-8AC71-1AG0
- SPINDLE MOTOR - MTR-0225 1PH7167-2ND03-0DB0
- Y, Z AXES SIGNAL CABLE - WIR-0741 6FX5002-2CA31-1AE0
- X AXIS SIGNAL CABLE - WIR-0742 6FX5002-2CA31-1AJ0
- Y, Z AXES POWER CABLE - WIR-0861 6FX5002-5CA21-1AE0
- X AXIS POWER CABLE - WIR-0862 6FX5002-2CA21-1AJ0
- MAIN POWER DISCONNECT 100A ELE-1600

Wrg_0066A_6535_50tap_siemens810_rot_scale



NOTE: - X, Y, Z AXES MOTOR - MTR-0224 1FT6086-8AC71-1AG0
- SPINDLE MOTOR - MTR-0225 1PH7167-2ND03-0DB0
- Y, Z AXES SIGNAL CABLE - WIR-0741 6FX5002-2CA31-1AE0
- X AXIS SIGNAL CABLE - WIR-0742 6FX5002-2CA31-1AJ0
- Y, Z AXES POWER CABLE - WIR-0861 6FX5002-5CA21-1AE0
- X AXIS POWER CABLE - WIR-0862 6FX5002-2CA21-1AJ0
- A AXIS (VH65) - ROT-0431
- A/B AXIS (TR65) - ROT-0436
- MAIN POWER DISCONNECT 100A - ELE-1600

Wrg_0067_6535_40tap_siemens810_std



NOTE: -X, Y, Z AXES MOTOR - MTR-0224 1FT6086-8AC71-1AG0
-Y, Z AXES SIGNAL CABLE - WIR-0741 6FX5002-2CA31-1AE0
-X AXIS SIGNAL CABLE - WIR-0742 6FX5002-2CA31-1AJ0
-Y, Z AXES POWER CABLE - WIR-0861 6FX5002-5CA21-1AE0
-X AXIS POWER CABLE - WIR-0862 6FX5002-2CA21-1AJ0
- FOR VHT USE ELE-1164 SPINDLE POWER SECTION

Wrg_0068A_atc_wiring