

**TERMINAL TYPES:**

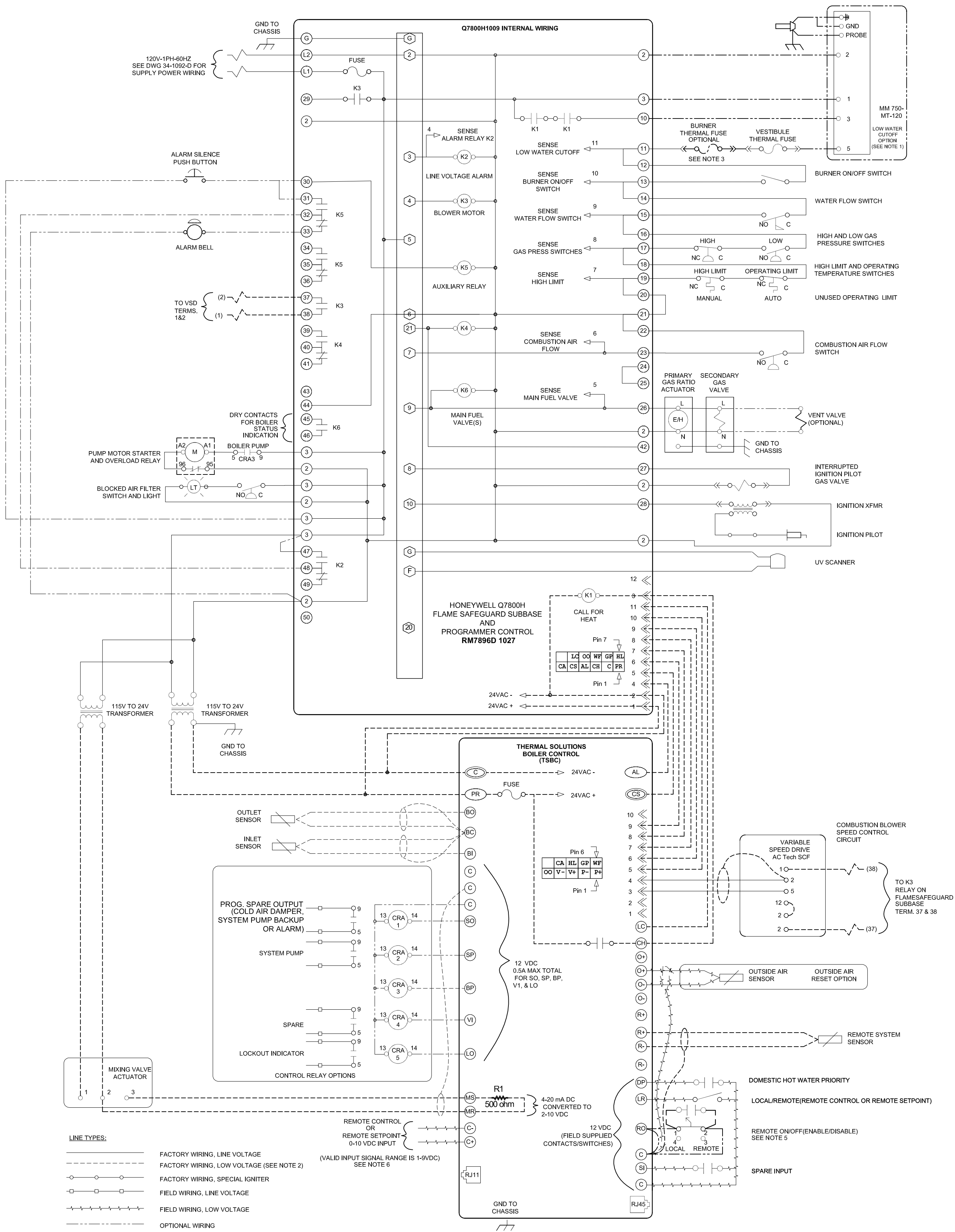
- # HONEYWELL RM 7800 SUBBASE
- # COMPRESSION
- # MOLEX CONNECTOR
- # MALE SPADE TERMINAL
- # FEMALE SPADE TERMINAL
- # RJ11 OR RJ45 CONNECTOR

**RELAY / SWITCH TERMINALS:**  
 C = COMMON  
 NC = NORM. CLOSED  
 NO = NORM. OPEN

REV: L	EN: 34-1084-9299	DATE: 10/2/14	DWN: CJW	CHKD: MKU	APPD:
LWCO WAS UPDATED					

- NOTES:**
- IF LOW WATER CUTOFF (LWCO) IS USED DISCONNECT WIRE, LABELED P2 10/VESTIBULE, FROM VESTIBULE THERMAL FUSE AND CONNECT TO LWCO TERMINAL 3 AND CONNECT LWCO TERMINAL 5 TO VESTIBULE THERMAL FUSE.
  - FACTORY WIRING, LOW VOLTAGE IS 24VAC UNLESS OTHERWISE INDICATED.
  - IF THE BURNER THERMAL FUSE IS NOT USED (VENTURI BOILERS), REMOVE WIRE LABELED VEST FUSE/BURNER FUSE AND CONNECT WIRE LABELED 11 P2/BURNER FUSE TO THE VESTIBULE THERMAL FUSE.
  - THE VALID INPUT SIGNAL RANGE FOR TERMINALS (C+,C-) IS 1-9VDC. A SIGNAL ABOVE OR BELOW THIS RANGE IS RECOGNIZED AS A 'SOFT' ALARM. AS A RESULT, THE CONTROL FUNCTION IS IGNORED.
  - IF THE REMOTE ON/OFF (ENABLE/DISABLE) SWITCH IS NOT ORDERED, JUMPER TERMINAL RO TO TERMINAL C ON THE TSBC. WHEN IT IS ORDERED, THE SWITCH IS FACTORY SUPPLIED AND THE CONTACTS ARE FIELD SUPPLIED.

- THE VALID INPUT SIGNAL RANGE FOR TERMINALS (C+,C-) IS 1-9VDC. A SIGNAL ABOVE OR BELOW THIS RANGE IS RECOGNIZED AS A 'SOFT' ALARM. AS A RESULT, THE CONTROL FUNCTION IS IGNORED.
- IF THE REMOTE ON/OFF (ENABLE/DISABLE) SWITCH IS NOT ORDERED, JUMPER TERMINAL RO TO TERMINAL C ON THE TSBC. WHEN IT IS ORDERED, THE SWITCH IS FACTORY SUPPLIED AND THE CONTACTS ARE FIELD SUPPLIED.



- LINE TYPES:**
- FACTORY WIRING, LINE VOLTAGE
  - FACTORY WIRING, LOW VOLTAGE (SEE NOTE 2)
  - - - - - FACTORY WIRING, SPECIAL IGNITER
  - □ □ □ □ FIELD WIRING, LINE VOLTAGE
  - □ □ □ □ FIELD WIRING, LOW VOLTAGE
  - - - - - OPTIONAL WIRING

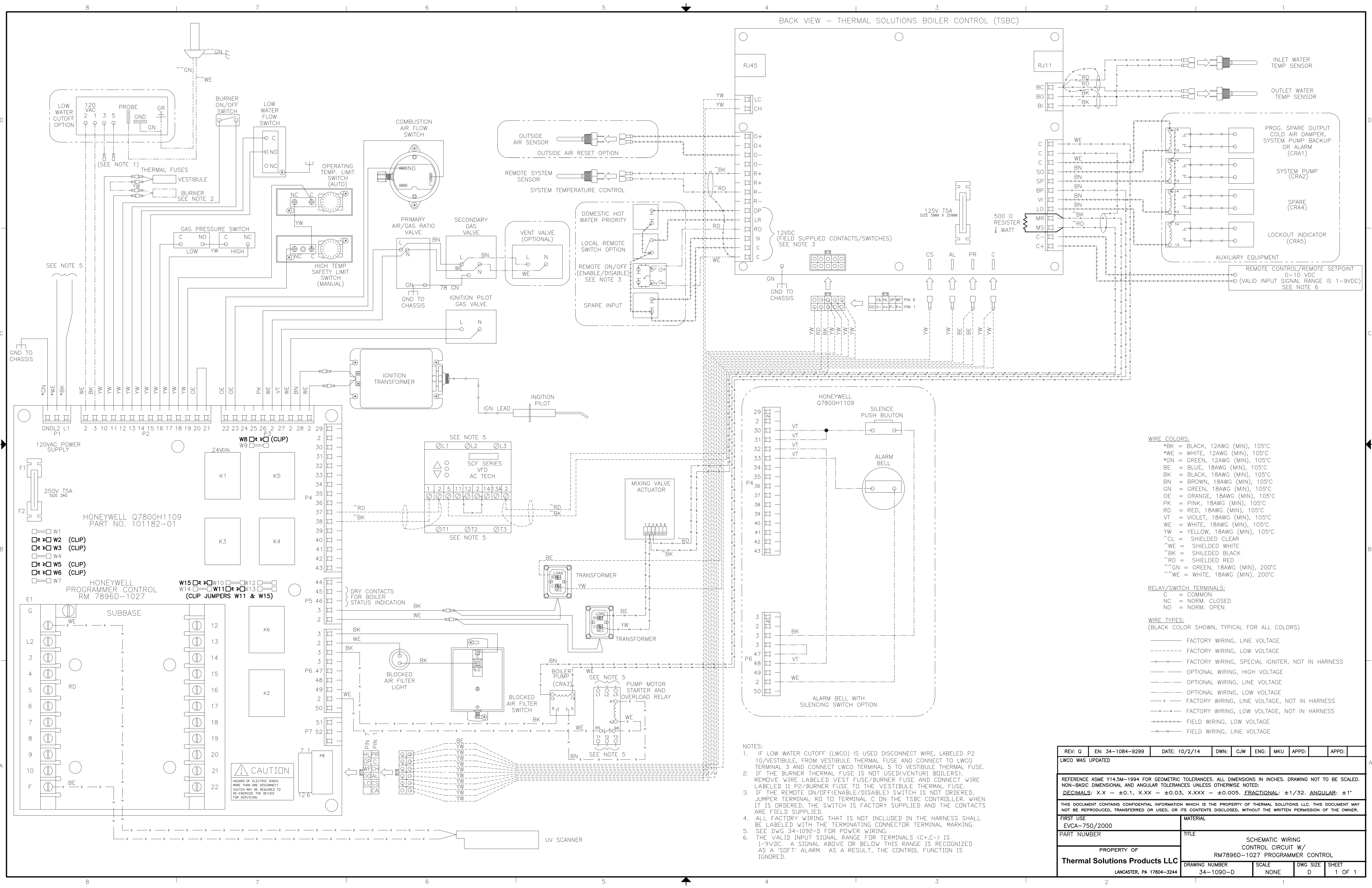
REFERENCE ASME Y14.5M-1994 FOR GEOMETRIC TOLERANCES. ALL DIMENSIONS IN INCHES. DRAWING NOT TO BE SCALED. NON-BASIC DIMENSIONAL AND ANGULAR TOLERANCES UNLESS OTHERWISE NOTED.  
 DECIMALS: X.X - #0.1, X.XX - #0.03, X.XXX - #0.005, FRACTIONAL: #1/32, ANGULAR: #1°

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**Thermal Solutions Products LLC**  
 PROPERTY OF  
 LANCASTER, PA 17604-3244

**RM7896D 1027 PROGRAMMER CONTROL**  
 LADDER WIRING DIAGRAM  
 DRAWING NUMBER 34-1093-C  
 SCALE NONE  
 DWG SIZE C  
 SHEET 1 OF 1

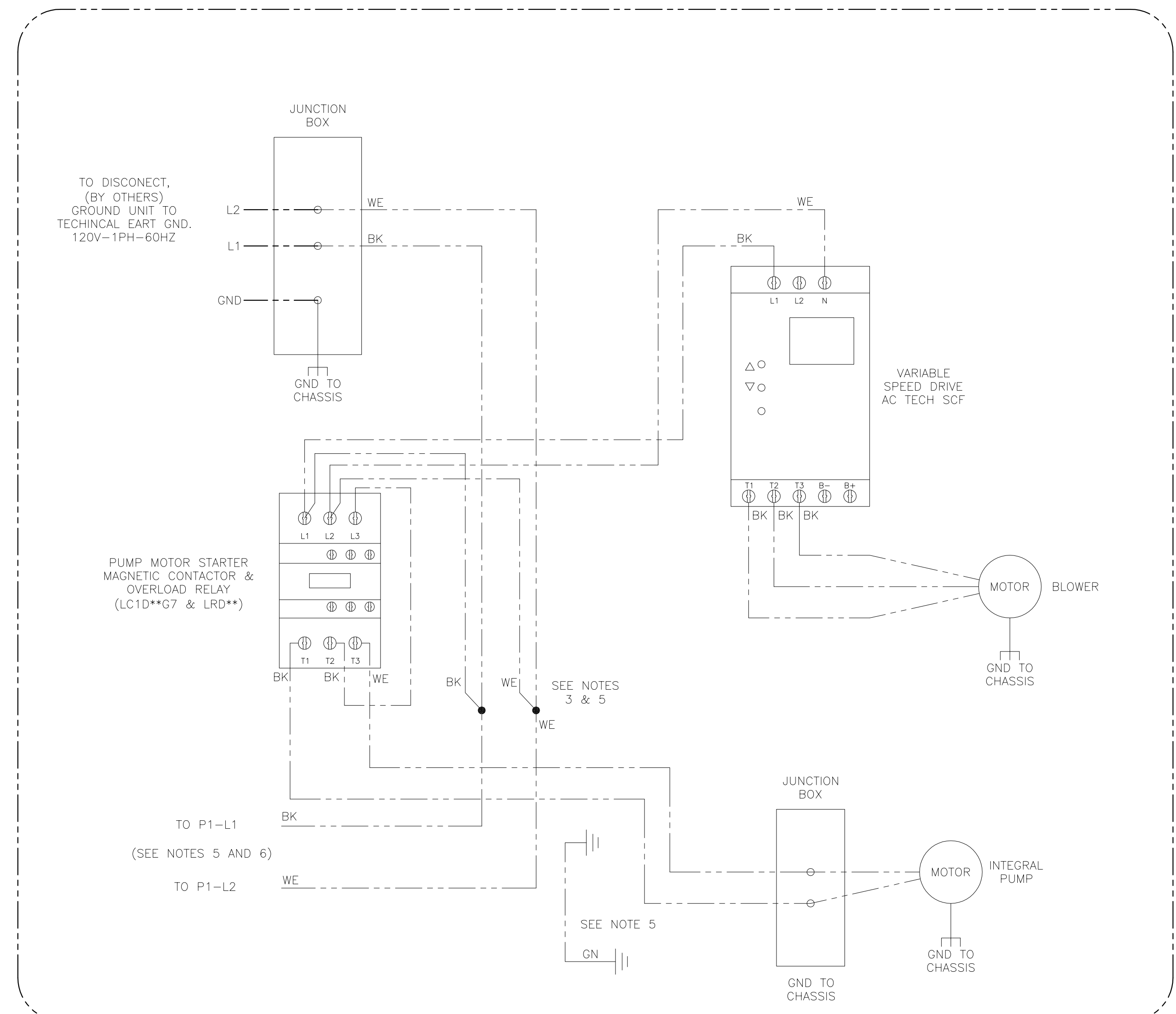
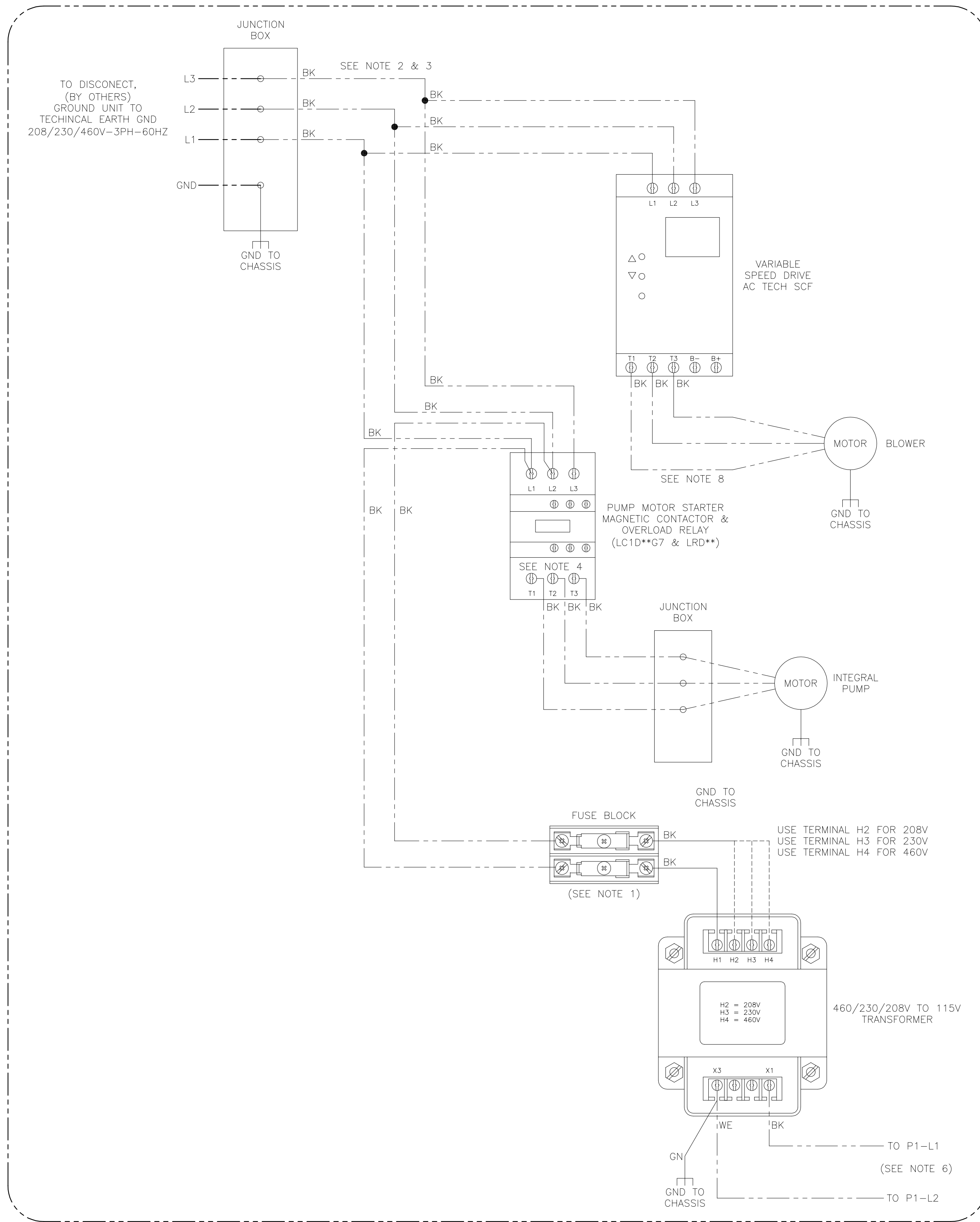
BACK VIEW - THERMAL SOLUTIONS BOILER CONTROL (TSBC)



- WIRE COLORS:**
- \*BK = BLACK, 12AWG (MIN), 105°C
  - \*WE = WHITE, 12AWG (MIN), 105°C
  - \*GN = GREEN, 12AWG (MIN), 105°C
  - BE = BLUE, 18AWG (MIN), 105°C
  - BK = BLACK, 18AWG (MIN), 105°C
  - BN = BROWN, 18AWG (MIN), 105°C
  - GN = GREEN, 18AWG (MIN), 105°C
  - OE = ORANGE, 18AWG (MIN), 105°C
  - PK = PINK, 18AWG (MIN), 105°C
  - RD = RED, 18AWG (MIN), 105°C
  - VT = VIOLET, 18AWG (MIN), 105°C
  - WE = WHITE, 18AWG (MIN), 105°C
  - YW = YELLOW, 18AWG (MIN), 105°C
  - \*CL = SHIELDED CLEAR
  - \*WE = SHIELDED WHITE
  - \*BK = SHIELDED BLACK
  - \*RD = SHIELDED RED
  - \*GN = GREEN, 18AWG (MIN), 200°C
  - \*WE = WHITE, 18AWG (MIN), 200°C
- RELAY/SWITCH TERMINALS:**
- C = COMMON
  - NC = NORM. CLOSED
  - NO = NORM. OPEN
- WIRE TYPES:**  
(BLACK COLOR SHOWN, TYPICAL FOR ALL COLORS)
- FACTORY WIRING, LINE VOLTAGE
  - FACTORY WIRING, LOW VOLTAGE
  - FACTORY WIRING, SPECIAL IGNITER, NOT IN HARNESS
  - FACTORY WIRING, HIGH VOLTAGE
  - FACTORY WIRING, LINE VOLTAGE
  - FACTORY WIRING, LOW VOLTAGE
  - x—x— FACTORY WIRING, LINE VOLTAGE, NOT IN HARNESS
  - FACTORY WIRING, LOW VOLTAGE, NOT IN HARNESS
  - FIELD WIRING, LOW VOLTAGE
  - FIELD WIRING, LINE VOLTAGE

- NOTES:**
- IF LOW WATER CUTOFF (LWCO) IS USED DISCONNECT WIRE, LABELED P2 10/VESTIBULE, FROM VESTIBULE THERMAL FUSE AND CONNECT TO LWCO TERMINAL 3 AND CONNECT LWCO TERMINAL 5 TO VESTIBULE THERMAL FUSE.
  - IF THE BURNER THERMAL FUSE IS NOT USED(VENTURI BOILERS), REMOVE WIRE LABELED VEST FUSE/BURNER FUSE AND CONNECT WIRE LABELED 11 P2/BURNER FUSE TO THE VESTIBULE THERMAL FUSE.
  - IF THE REMOTE ON/OFF(ENABLE/DISABLE) SWITCH IS NOT ORDERED, JUMPER TERMINAL RD TO TERMINAL C ON THE TSBC CONTROLLER. WHEN IT IS ORDERED, THE SWITCH IS FACTORY SUPPLIED AND THE CONTACTS ARE FIELD SUPPLIED.
  - ALL FACTORY WIRING THAT IS NOT INCLUDED IN THE HARNESS SHALL BE LABELED WITH THE TERMINATING CONNECTOR TERMINAL MARKING.
  - SEE DWG 34-1092-D FOR POWER WIRING.
  - THE VALID INPUT SIGNAL RANGE FOR TERMINALS (C+,C-) IS 1-9VDC. A SIGNAL ABOVE OR BELOW THIS RANGE IS RECOGNIZED AS A 'SOFT' ALARM. AS A RESULT, THE CONTROL FUNCTION IS IGNORED.

REV: Q	EN: 34-1084-9299	DATE: 10/2/14	DWN: CJW	ENG: MKU	APPD:	APPD:
LWCO WAS UPDATED						
REFERENCE ASME Y14.5M-1994 FOR GEOMETRIC TOLERANCES. ALL DIMENSIONS IN INCHES. DRAWING NOT TO BE SCALED. NON-BASIC DIMENSIONAL AND ANGULAR TOLERANCES UNLESS OTHERWISE NOTED: DECIMALS: X.X - ±0.1, X.XX - ±0.03, X.XXX - ±0.005. FRACTIONAL: ±1/32. ANGULAR: ±1°						
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FIRST USE EVCA-750/2000	MATERIAL					
PART NUMBER	TITLE SCHEMATIC WIRING CONTROL CIRCUIT W/ RM7896D-1027 PROGRAMMER CONTROL					
PROPERTY OF <b>Thermal Solutions Products LLC</b> LANCASTER, PA 17604-3244			DRAWING NUMBER 34-1090-D	SCALE NONE	DWG SIZE D	SHEET 1 OF 1



NOTES:

- UL CLASS 'CC' CARTRIDGE FUSE TIME DELAY, 600V AC, 200K I.R., 3 AMP.
- IF SINGLE PHASE ELECTRICAL INPUT IS USED, L3 IS NOT USED.
- USE SPRING CAGE CONNECTORS (PN 81368915) FOR WIRE JUNCTIONS.
- FOR SINGLE PHASE WIRING, WIRE BETWEEN T2 AND PUMP MOTOR IS REPLACED WITH BK 12 AWG JUMPER BETWEEN T2 AND L3 ON MOTOR STARTER.
- FOR 120V-1PH ONLY:
  - REMOVE FORKED CONNECTOR FROM BK WIRE LABELED L1-P1/115V XFMR X1 AND COMBINE INTO CONNECTOR AS SHOWN.
  - CLIP AND REMOVE WE WIRE LABELED L2-P1/115V XFMR X3 FROM FORKED CONNECTOR AND COMBINE INTO CONNECTOR AS SHOWN.
  - SECURE FORKED END AND RING TERMINAL END OF GN WIRE LABELED 115V XFMR GND/X3 TO THE CONTROL PANEL ASSEMBLY.
- FOR CONTROL CIRCUIT WIRING, USE THE FOLLOWING DWGS:
 

SCHEMATIC:	
34-1090-D STANDARD	} EVCA-750/2000
34-1150-D P.O.C. OPTION	
34-1165-D STANDARD	} EVCA-2000S/3000
34-1166-D P.O.C. OPTION	
LADDER:	
34-1093-C STANDARD	} EVCA-750/2000
34-1149-C P.O.C. OPTION	
34-1168-C STANDARD	} EVCA-2000S/3000
34-1167-C P.O.C. OPTION	
- ALL WIRING SHALL BE LABELED WITH THE TERMINATING CONNECTOR TERMINAL MARKING.
- FOR 3 PHASE INPUT, THE LEAD WIRES MUST BE REVERSED AS SHOWN BELOW TO GET PROPER MOTOR ROTATION.
  - > L1 TO T2
  - > L2 TO T1
  - > L3 TO T3

WIRING LEGEND

--- FACTORY WIRING, 12 AWG, 600V, 105°C

--- FACTORY WIRING, 18 AWG, 600V, 105°C

REV: N	EN: 34-1112-9677	DATE: 02/26/15	DWN: C/JW	ENG: MKU	APPD:	APPD:
DESCRIPTION: ADDED NOTE 8						
REFERENCE ASME Y14.5M-1994 FOR GEOMETRIC TOLERANCES. ALL DIMENSIONS IN INCHES. DRAWING NOT TO BE SCALED. NON-BASIC DIMENSIONAL AND ANGULAR TOLERANCES UNLESS OTHERWISE NOTED: DECIMALS: X.X ± 0.1, X.XX ± 0.03, X.XXX ± 0.005. FRACTIONAL: ± 1/32. ANGULAR: ± 1°						
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FIRST USE EVCA-750/3000	MATERIAL					
PART NUMBER	TITLE SCHEMATIC WIRING SUPPLY POWER					
PROPERTY OF <b>Thermal Solutions Products LLC</b> LANCASTER, PA 17604-3244						
DRAWING NUMBER 34-1092-D	SCALE NONE	DWG SIZE D	SHEET 1 OF 1			