

TERMINAL TYPES:

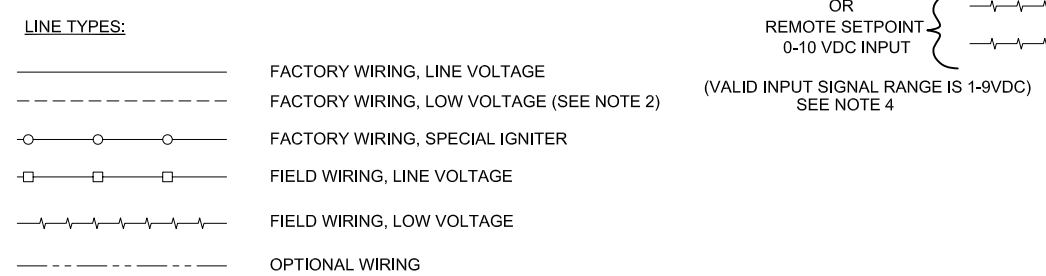
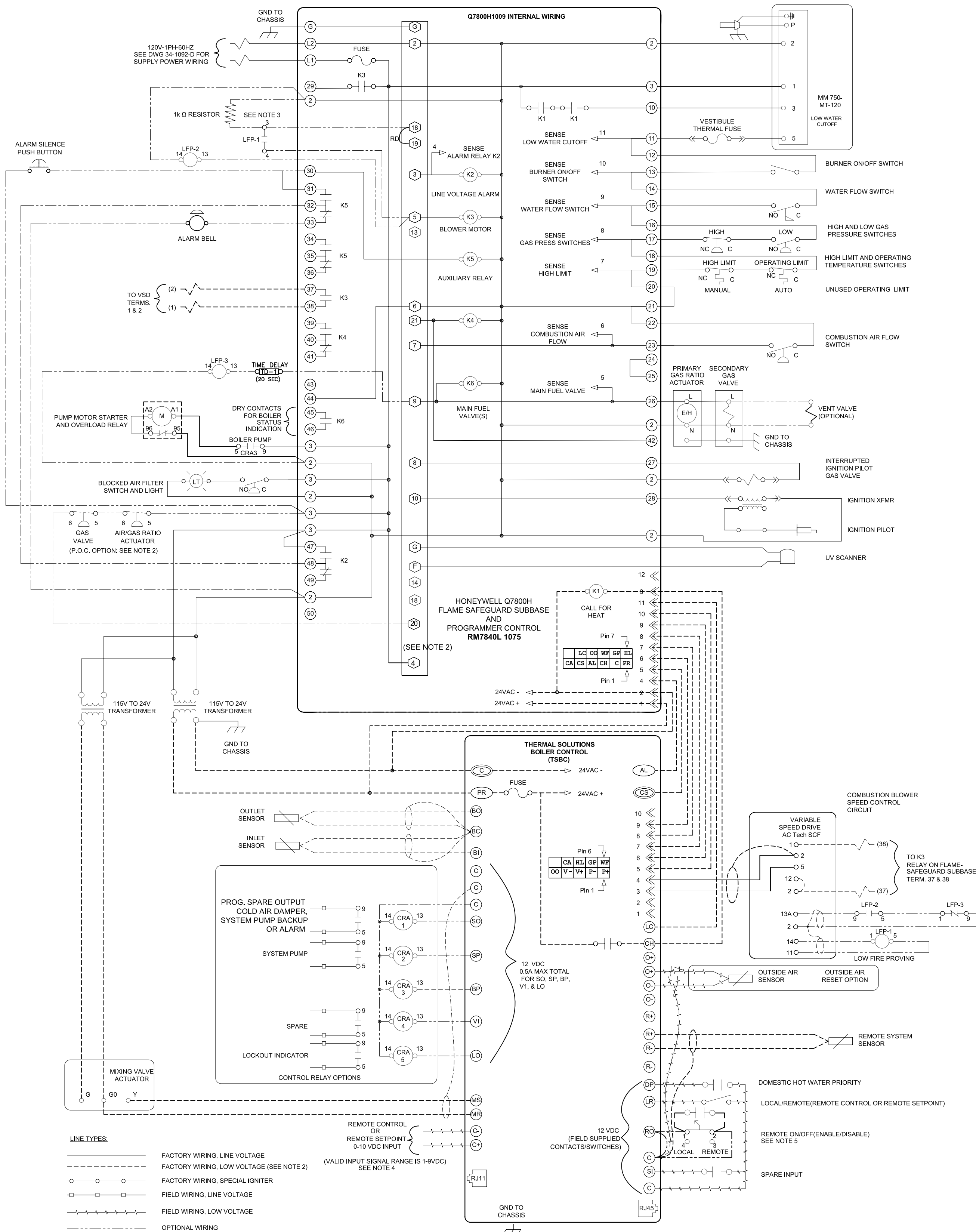
- HONEYWELL RM 7800 SUBBASE
- COMPRESSION
- MOLEX CONNECTOR
- MALE SPADE TERMINAL
- FEMALE SPADE TERMINAL
- RJ11 OR RJ45 CONNECTOR

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

- NOTES:**
1. FACTORY WIRING, LOW VOLTAGE IS 24VAC UNLESS OTHERWISE INDICATED.
 2. IF THE P.O.C. OPTION IS NOT USED, JUMPER TERMINAL 4 TO TERMINAL 20 ON THE FLAME SAFEGUARD SUBBASE.
 3. IF THE LFP OPTION IS NOT USED, JUMPER TERMINAL 5 TO TERMINAL 18 ON THE FLAME SAFEGUARD SUBBASE.

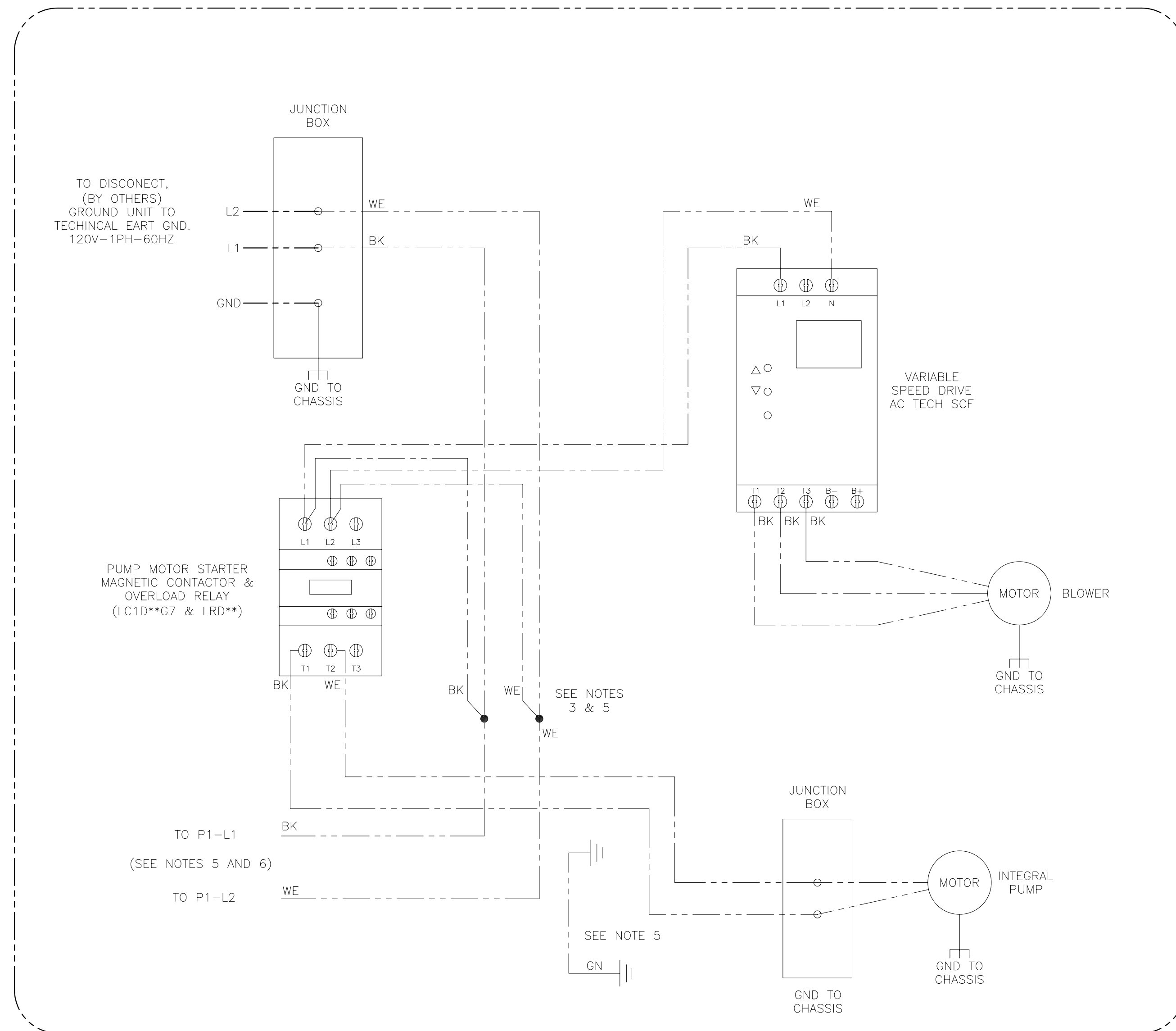
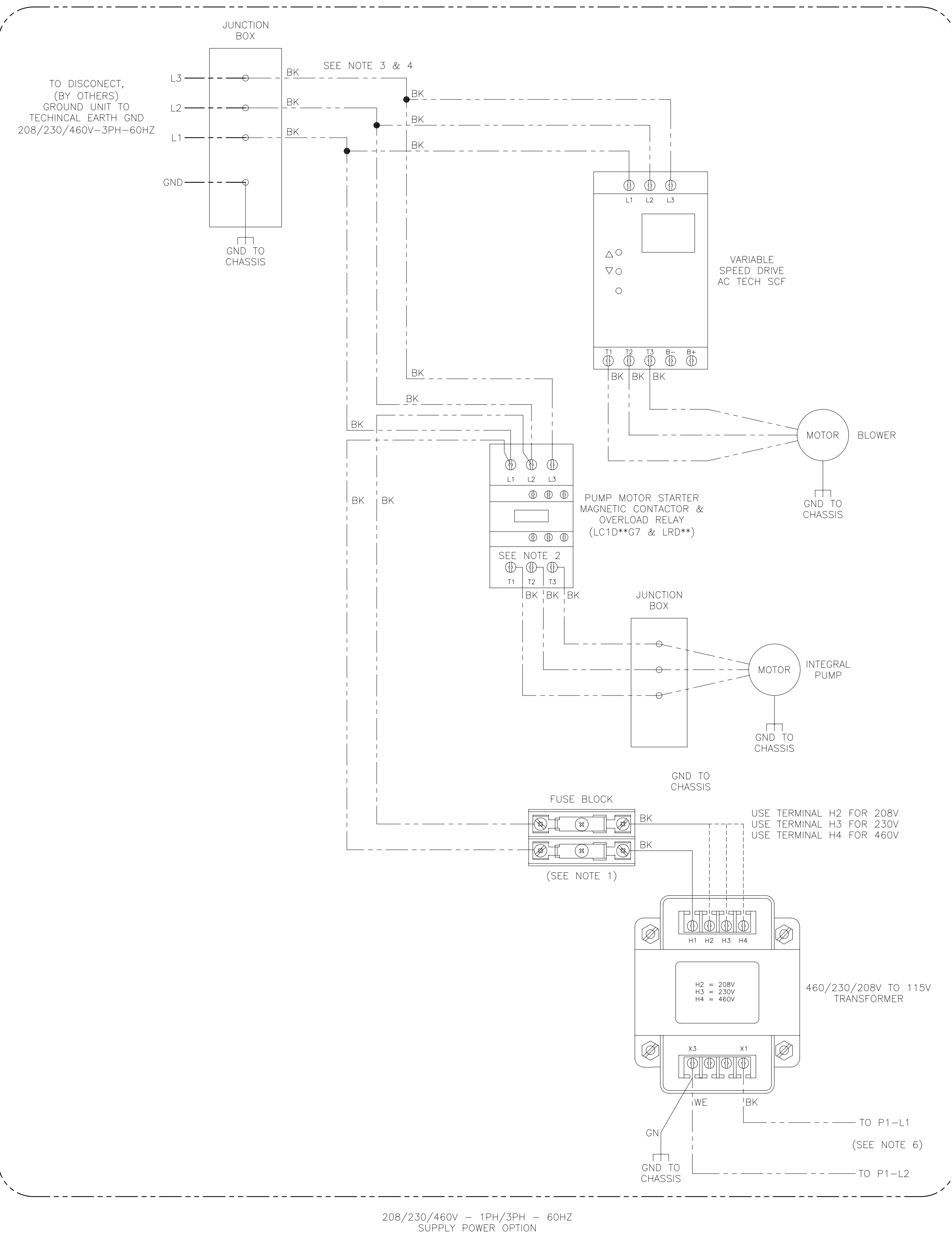
4. THE VALID INPUT SIGNAL RANGE FOR TERMINALS (C+,C-) IS 1-9VDC. A SIGNAL ABOVE OR BELOW THIS RANGE IS RECOGNIZED AS A 'SOFT' ALARM. AS A RESULT, THE CONTROL FUNCTION IS IGNORED.
5. IF THE REMOTE ON/OFF(ENABLE/DISABLE) SWITCH IS NOT ORDERED, JUMPER TERMINAL RD TO TERMINAL C ON THE TSBC. WHEN IT IS ORDERED,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

REV: F	EN: 34-992-7157	DATE: 11/30/11	DWN: CJW	CHKD: BMS	APPD: APPD:
ADDED MANUAL AND/OR AUTO TO TEMP SWITCH DESCRIPTIONS; GND LEG REMOVED ON IGNITER; ADDED DRAIN LEGS WHERE NECESSARY; CORRECTED WIRE TYPES AND BOLTING; STANDARDIZED LWCO LAYOUT AND LOOK; DRY CONTACTS FOR BOILER STATUS INDICATION WIRES REMOVED AND NOTE MOVED IN					



PROPERTY OF	TITLE
Thermal Solutions Products LLC LANCASTER, PA 17604-3244	LADDER WIRING DIAGRAM CONTROL CIRCUIT W/ P.O.C. & L.F.P. RM7840L 1075 PROGRAMMER CONTROL, EVCA-3000
DRAWING NUMBER	SCALE
34-1167-C	NONE
DWG SIZE	SHEET
C	1 OF 1

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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 SUPERCEDES:



NOTES:

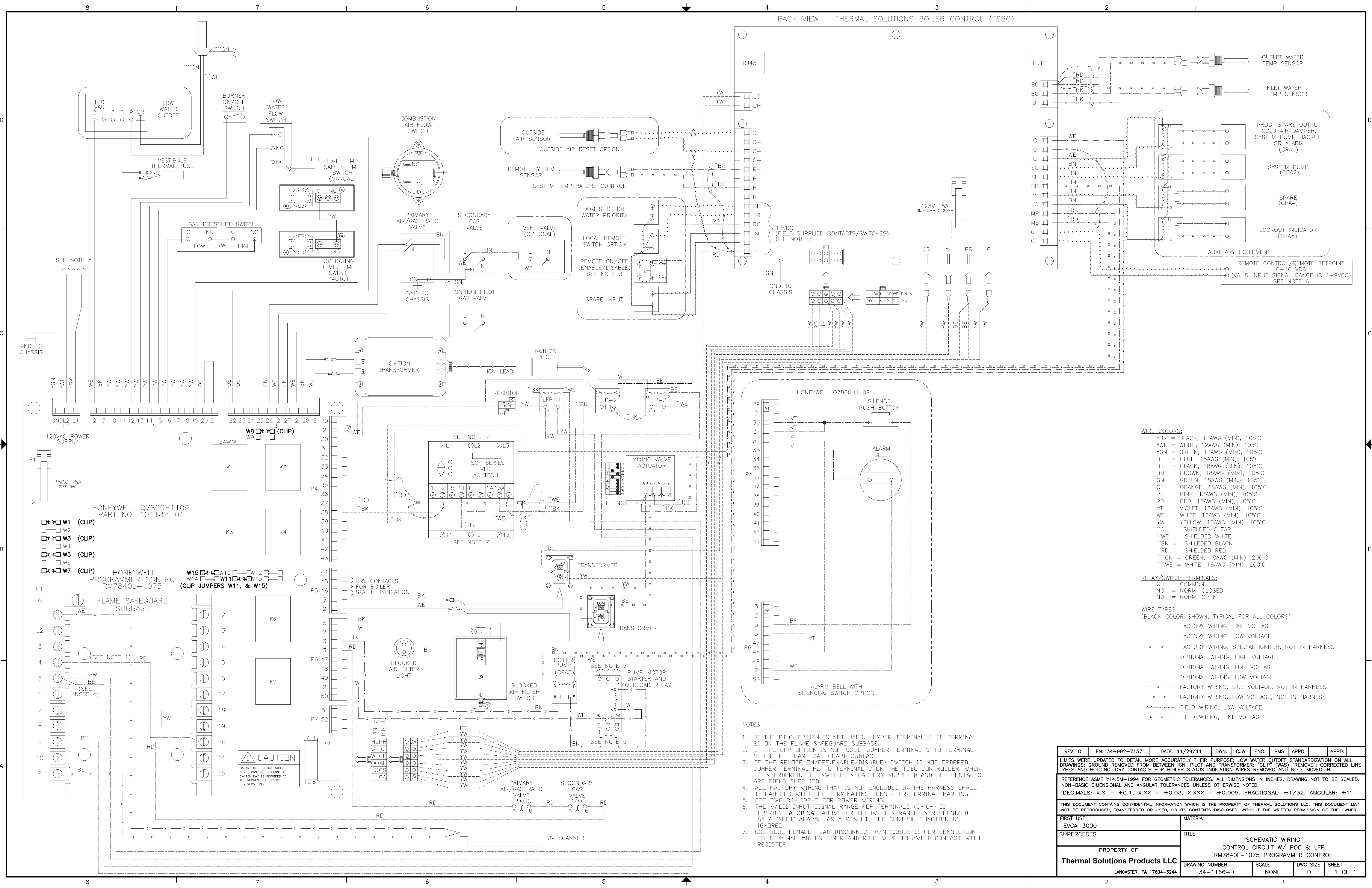
- UL CLASS 'CC' CARTRIDGE FUSE TIME DELAY, 600V AC, 200K I.R., 3 AMP.
- T3 WIRING OMITTED WHEN 3 PHASE NOT SPECIFIED.
- USE SPRING CAGE CONNECTORS (PN 81368915) FOR WIRE JUNCTIONS.
- IF SINGLE PHASE ELECTRICAL INPUT IS USED, L3 IS NOT USED.
- FOR 120V-1PH ONLY:
 - REMOVE FORKED CONNECTOR FROM BK WIRE 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	
34-1166-D P.O.C. OPTION	} EVCA-2000S/3000
LADDER:	
34-1093-C STANDARD	} EVCA-750/2000
34-1149-C P.O.C. OPTION	
34-1168-C STANDARD	
34-1167-C P.O.C. OPTION	} EVCA-2000S/3000
- ALL WIRING SHALL BE LABELED WITH THE TERMINATING CONNECTOR TERMINAL MARKING.

WIRING LEGEND

- FACTORY WIRING, 12 AWG, 600V, 105°C
- FACTORY WIRING, 18 AWG, 600V, 105°C

REV: K	EN: 34-966-6913	DATE: 07/01/11	DWN: C/JW	ENG: BMS	APPD:	APPD:
DESCRIPTION: WE WIRE FROM L2 ON PUMP MOTOR STARTER TO L2 ON THE J-BOX (WAS) BK						
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 Thermal Solutions Products LLC LANCASTER, PA 17604-3244						
DRAWING NUMBER 34-1092-D	SCALE NONE	DWG SIZE D	SHEET 1 OF 1			



- 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
 - CN = 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
 - x— OPTIONAL WIRING, HIGH VOLTAGE
 - - - - OPTIONAL WIRING, LINE VOLTAGE
 - - - - OPTIONAL WIRING, LOW VOLTAGE
 - x— FACTORY WIRING, LINE VOLTAGE, NOT IN HARNESS
 - - - - FACTORY WIRING, LOW VOLTAGE, NOT IN HARNESS
 - x— FIELD WIRING, LOW VOLTAGE
 - FIELD WIRING, LINE VOLTAGE

- NOTES:**
- IF THE P.O.C. OPTION IS NOT USED, JUMPER TERMINAL 4 TO TERMINAL 20 ON THE FLAME SAFEGUARD SUBBASE.
 - IF THE LFP OPTION IS NOT USED, JUMPER TERMINAL 5 TO TERMINAL 18 ON THE FLAME SAFEGUARD SUBBASE.
 - 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,+-) IS 1-9VDC. A SIGNAL ABOVE OR BELOW THIS RANGE IS RECOGNIZED AS A 'SOFT' ALARM. AS A RESULT, THE CONTROL FUNCTION IS IGNORED.
 - USE BLUE FEMALE FLAG DISCONNECT P/N 103833-01 FOR CONNECTION TO TERMINAL #10 ON TIMER AND ROUT WIRE TO AVOID CONTACT WITH RESISTOR.

REV: G	EN: 34-992-7157	DATE: 11/29/11	DWN: CJW	ENG: BMS	APPD:	APPD:
LIMITS WERE UPDATED TO DETAIL MORE ACCURATELY THEIR PURPOSE: LOW WATER CUTOFF STANDARDIZATION ON ALL DRAWINGS; GROUND REMOVED FROM BETWEEN IGN. PILOT AND TRANSFORMER; 'CLIP' (WAS) 'REMOVE'; CORRECTED LINE TYPES AND BOLDING; DRY CONTACTS FOR BOILER STATUS INDICATION WIRES REMOVED AND NOTE MOVED IN						
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-3000	MATERIAL			TITLE		
SUPERCEDES	PROPERTY OF Thermal Solutions Products LLC LANCASTER, PA 17604-3244			SCHEMATIC WIRING CONTROL CIRCUIT W/ POC & LFP RM7840L-1075 PROGRAMMER CONTROL		
	DRAWING NUMBER 34-1166-D	SCALE NONE	DWG SIZE D	SHEET 1	OF 1	