

Notes:

1. MAIN DISCONNECT PROVIDED BY OTHER.
2. FIELD WIRING TO BE COPPER RATED FOR 75°C MINIMUM.
3. --- --- INDICATES FIELD WIRING OUTSIDE OF CABINET.
4. THE AMPACITY OF CONDUCTORS SUPPLYING THE CONTROL PANEL TO BE ROUNDED UP TO THE NEXT SIZE LARGER STANDARD WIRE GAUGE.
5. MOP VALUES TO BE ROUNDED DOWN TO THE NEAREST STANDARD RATING OF THE OVERCURRENT PROTECTION DEVICE.
6. SHORT CIRCUIT CURRENT RATING (SCCR): 5 kA
7. POWER TO TERMINAL BLOCKS 32 & 33 OPENS ISOLATION VALVE 1  
POWER TO TERMINAL BLOCKS 34 & 35 CLOSES ISOLATION VALVE 1

**OPERATION:**

DURING NORMAL OPERATION, THE HOA SWITCH SHOULD BE IN THE AUTO POSITION. THE PLC WILL SIGNAL THE PUMP TO START WHEN VS-1 CLOSSES WITH FALLING VACUUM LEVEL. WHEN VS-1 OPENS, THE PLC WILL MOVE TO PURGE OPERATION UNTIL VS-1 CLOSSES AND NORMAL OPERATION CONTINUES. AFTER THE PUMP RUN TIMER EXPIRES (FACTORY SET TO 10 HOURS), THE PUMP WILL ENTER PURGE MODE AND THEN TURN OFF.

HAND OPERATION; (EMERGENCY/TROUBLE SHOOTING MODE ONLY)

WITH THE HOA SWITCH IN THE HAND POSITION THE PUMP WILL START AND RUN CONTINUOUSLY.

PURGE OPERATION: DURING PURGE OPERATION, THE PUMP ISOLATION VALVE WILL CLOSE AND THE PURGE VALVE WILL OPEN. WHEN THE MINIMUM PURGE TIME HAS EXPIRED, THE PURGE VALVE WILL CLOSE, THE ISOLATION VALVE WILL REMAIN CLOSED AND THE PUMP WILL TURN OFF.

**MINIMUM CIRCUIT AMPACITY (MCA)**

SYSTEM HP	208 V	230 V	380/400 V	460 V
1.5 HP	9.2 AMPS	8.3 AMPS	4.8 AMPS	4.3 AMPS
2 HP	10.3 AMPS	9.3 AMPS	6.1 AMPS	4.8 AMPS

**MAXIMUM OVERCURRENT PROTECTION (MOP)**

SYSTEM HP	208 V	230 V	380/400 V	460 V
1.5 HP	14.9 AMPS	13.5 AMPS	8.2 AMPS	6.8 AMPS
2 HP	16.9 AMPS	15.3 AMPS	9.3 AMPS	7.7 AMPS

**SIMPLEX SYSTEM FULL LOAD AMPERES**

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
1.5 HP	5.2 AMPS	5.1 AMPS	3.1 AMPS	2.7 AMPS
2 HP	6.3 AMPS	6.1 AMPS	3.7 AMPS	3.2 AMPS

**INDIVIDUAL FULL LOAD AMPERES**

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
1.5 HP	4.5 AMPS	4.4 AMPS	2.6 AMPS	2.2 AMPS
2 HP	5.6 AMPS	5.4 AMPS	3.2 AMPS	2.7 AMPS

**FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)**

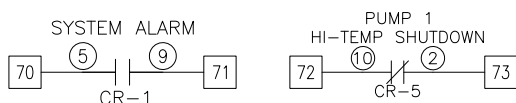
FUSES	208 V	230 V	380 V	460 V
F1/F2	6.0 AMPS	6.0 AMPS	6.0 AMPS	6.0 AMPS
F3	---	---	6.0 AMPS	6.0 AMPS
F9	4.0 AMPS	4.0 AMPS	4.0 AMPS	4.0 AMPS

F1-F3 ARE LITTELFUSE KLDR 600V TYPE  
F9 IS LITTELFUSE 2AG 250V TYPE

**VACUUM SWITCH SETTINGS**

ALTITUDE	VS-1
0-3000'	20"-25"Hg
3001'-4000'	19"-24"Hg
4001'-5000'	18"-23"Hg
5001'-6000'	17"-22"Hg
6001'-7000'	17"-21"Hg
7001'-8000'	16"-20"Hg
8001'-9000'	16"-19"Hg
9001'-10000'	16"-18"Hg

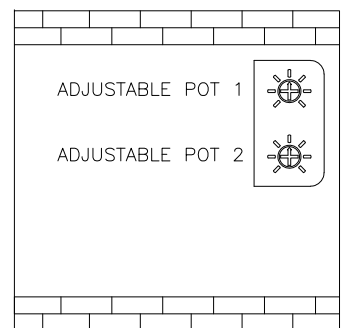
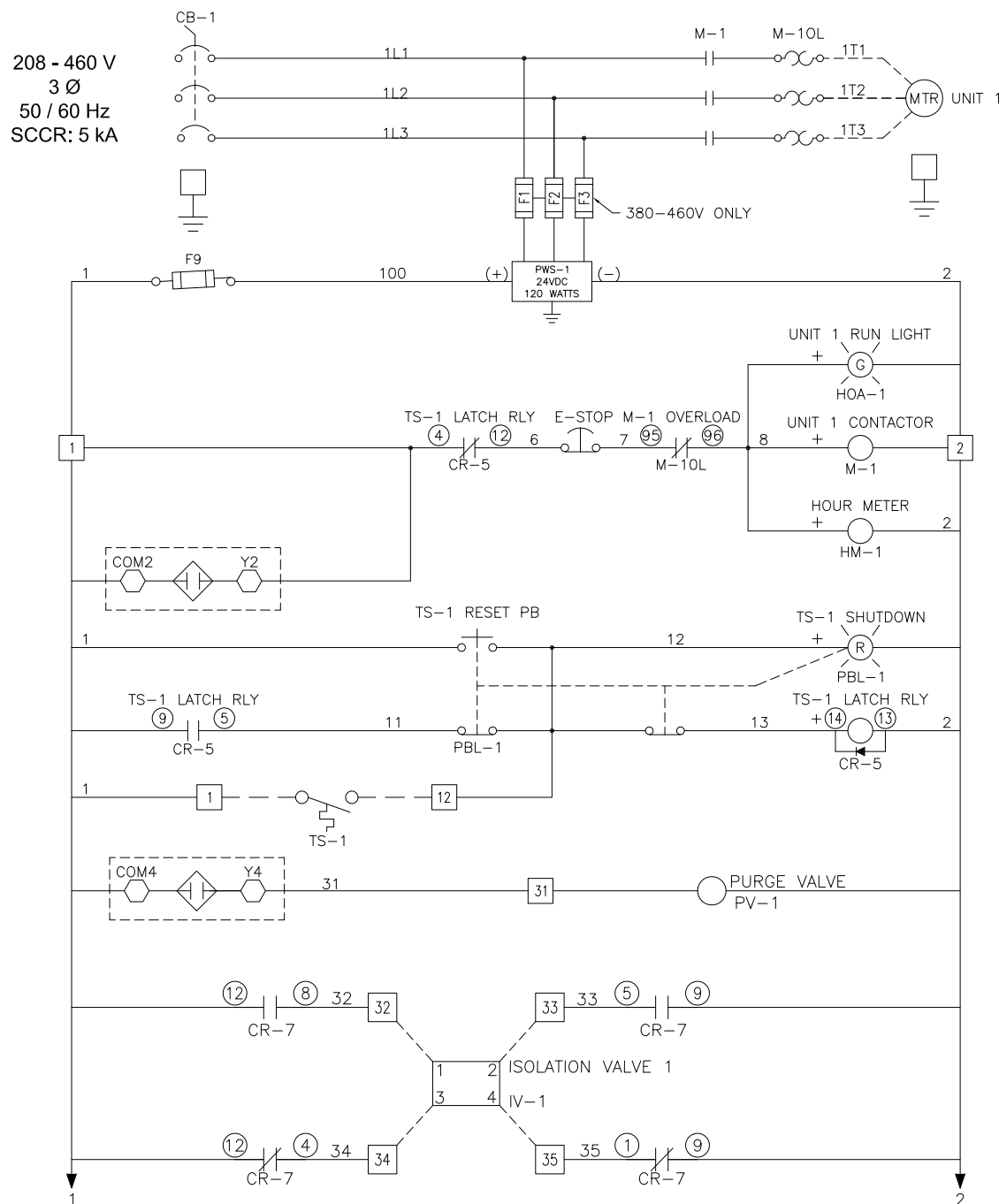
**AUXILIARY CONTACTS**



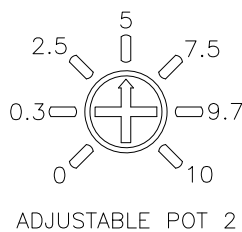
NOTE:  
AUXILIARY CONTACTS 70-73 ARE "CLASS 1 CONTROL CIRCUITS.  
USE CLASS 1 CONDUCTORS."

AUX CONTACTS ARE RATED  
10A @ 120VAC UNLESS OTHERWISE NOTED.

AUX CONTACTS CLOSED DURING NORMAL OPERATION.



PLC WITH COVER REMOVED

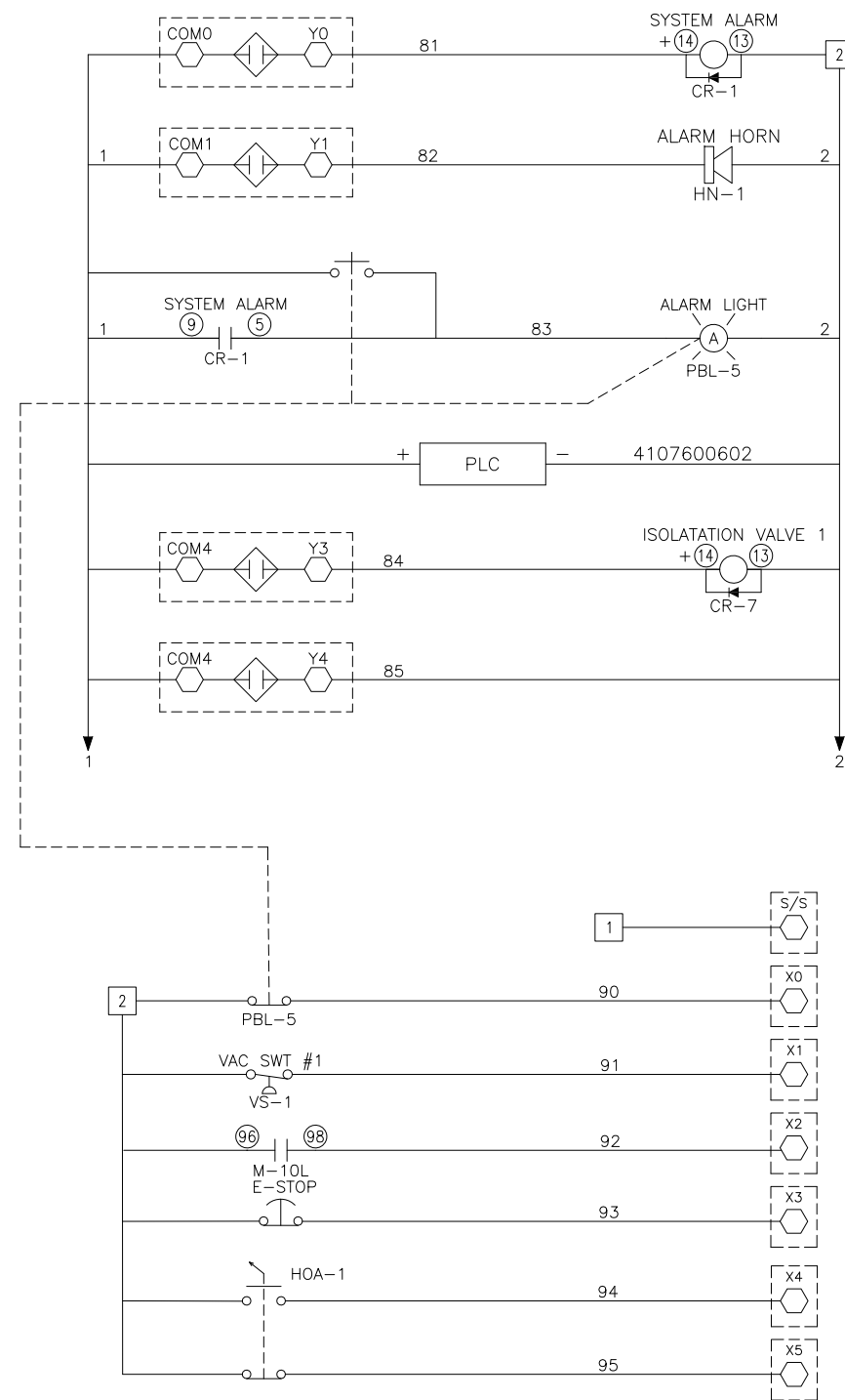


ADJUSTABLE POT 2

\*ADJUSTABLE POT 1 NOT USED

**PURGE RUN TIMER**

RANGE	SETTING
0-15 MIN	5



Revised:	Date:	Drawn:	MDB	Date:	11/28/17
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Description:		Part Number:		Scale:	
DWG WIRING CONTROL		4107 8563 48		NTS	
SX LAB LUBE 1.5-2HP BASIC		HOP170817		Rev: 00	
208-460/3/50-60		Sheet 1 of 1		DO NOT SCALE THIS DOCUMENT	