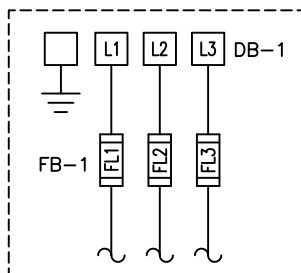


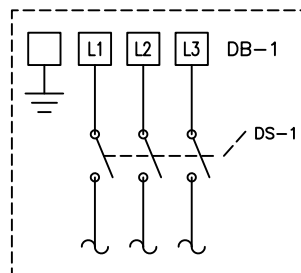
Notes:

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. * RA0100 PUMPS ONLY.
5. THE AMPACITY OF CONDUCTORS SUPPLYING THE CONTROL PANEL TO BE ROUNDED UP TO THE NEXT SIZE LARGER STANDARD WIRE GAUGE.
6. MOP VALUES TO BE ROUNDED DOWN TO THE NEAREST STANDARD RATING OF THE OVERCURRENT PROTECTION DEVICE.
7. SHORT CIRCUIT CURRENT RATING (SCCR): 65 kA
8. POWER TO TERMINAL BLOCKS 32 & 33 OPENS ISOLATION VALVE 1
POWER TO TERMINAL BLOCKS 34 & 35 CLOSSES ISOLATION VALVE 1
POWER TO TERMINAL BLOCKS 42 & 43 OPENS ISOLATION VALVE 2
POWER TO TERMINAL BLOCKS 44 & 45 CLOSSES ISOLATION VALVE 2

1.5-3HP 208-460V
5HP 380-460V
SCCR: 65 kA



5HP 208-230V
SCCR: 65 kA



MINIMUM CIRCUIT AMPACITY (MCA)

SYSTEM HP	208 V	230 V	380 V	460 V
1.5 HP	16.6 AMPS	15.1 AMPS	8.7 AMPS	7.8 AMPS
2 HP	18.6 AMPS	16.9 AMPS	10.9 AMPS	8.7 AMPS
3 HP	25.6 AMPS	23.2 AMPS	15.0 AMPS	11.8 AMPS
5 HP	39.3 AMPS	35.8 AMPS	23.1 AMPS	18.1 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380/400 V	460 V
1.5 HP	21.5 AMPS	19.5 AMPS	10.7 AMPS	9.8 AMPS
2 HP	24.4 AMPS	22.1 AMPS	14.0 AMPS	11.1 AMPS
3 HP	34.5 AMPS	31.2 AMPS	19.8 AMPS	15.6 AMPS
5 HP	54.3 AMPS	49.4 AMPS	31.5 AMPS	24.7 AMPS

DUPLEX SYSTEM FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
1.5 HP	11.8 AMPS	10.1 AMPS	6.0 AMPS	5.2 AMPS
2 HP	14.2 AMPS	12.1 AMPS	7.2 AMPS	6.2 AMPS
3 HP	19.4 AMPS	16.9 AMPS	10.2 AMPS	8.6 AMPS
5 HP	29.0 AMPS	27.7 AMPS	15.6 AMPS	14.0 AMPS

INDIVIDUAL FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
1.5 HP	5.2 AMPS	4.4 AMPS	2.5 AMPS	2.2 AMPS
2 HP	6.4 AMPS	5.4 AMPS	3.1 AMPS	2.7 AMPS
3 HP	9.0 AMPS	7.8 AMPS	4.6 AMPS	3.9 AMPS
5 HP	13.8 AMPS	13.2 AMPS	7.3 AMPS	6.6 AMPS

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

SYSTEM HP	FUSES	208 V	230 V	380 V	460 V
1.5 HP	FL1/FL2/FL3	15 AMPS	15 AMPS	12 AMPS	12 AMPS
2 HP		20 AMPS	17.5 AMPS	12 AMPS	12 AMPS
3 HP		25 AMPS	25 AMPS	15 AMPS	12 AMPS
5 HP		---	---	20 AMPS	20 AMPS
ALL	F1/F2/F4/F5	6.0 AMPS	6.0 AMPS	6.0 AMPS	6.0 AMPS
	F3/F6	---	---	6.0 AMPS	6.0 AMPS
	F9/F10	4.0 AMPS	4.0 AMPS	4.0 AMPS	4.0 AMPS
	F13	0.7 AMPS	0.7 AMPS	0.7 AMPS	0.7 AMPS

FL1/FL2/FL3 ARE LITTELFUSE JTD 600V TYPE
F1-F6 ARE LITTELFUSE KLDR 600V TYPE
F9-F10/F13 ARE LITTELFUSE 2AG 250V TYPE

VACUUM SWITCH SETTINGS

ALTITUDE	VS-1	VS-2
0-3000'	20"-25"Hg	18"-24"Hg
3001'-4000'	19"-24"Hg	17"-23"Hg
4001'-5000'	18"-23"Hg	16"-22"Hg
5001'-6000'	17"-22"Hg	15"-21"Hg
6001'-7000'	17"-21"Hg	15"-20"Hg
7001'-8000'	16"-20"Hg	14"-19"Hg
8001'-9000'	16"-19"Hg	14"-18"Hg
9001'-10000'	16"-18"Hg	14"-17"Hg

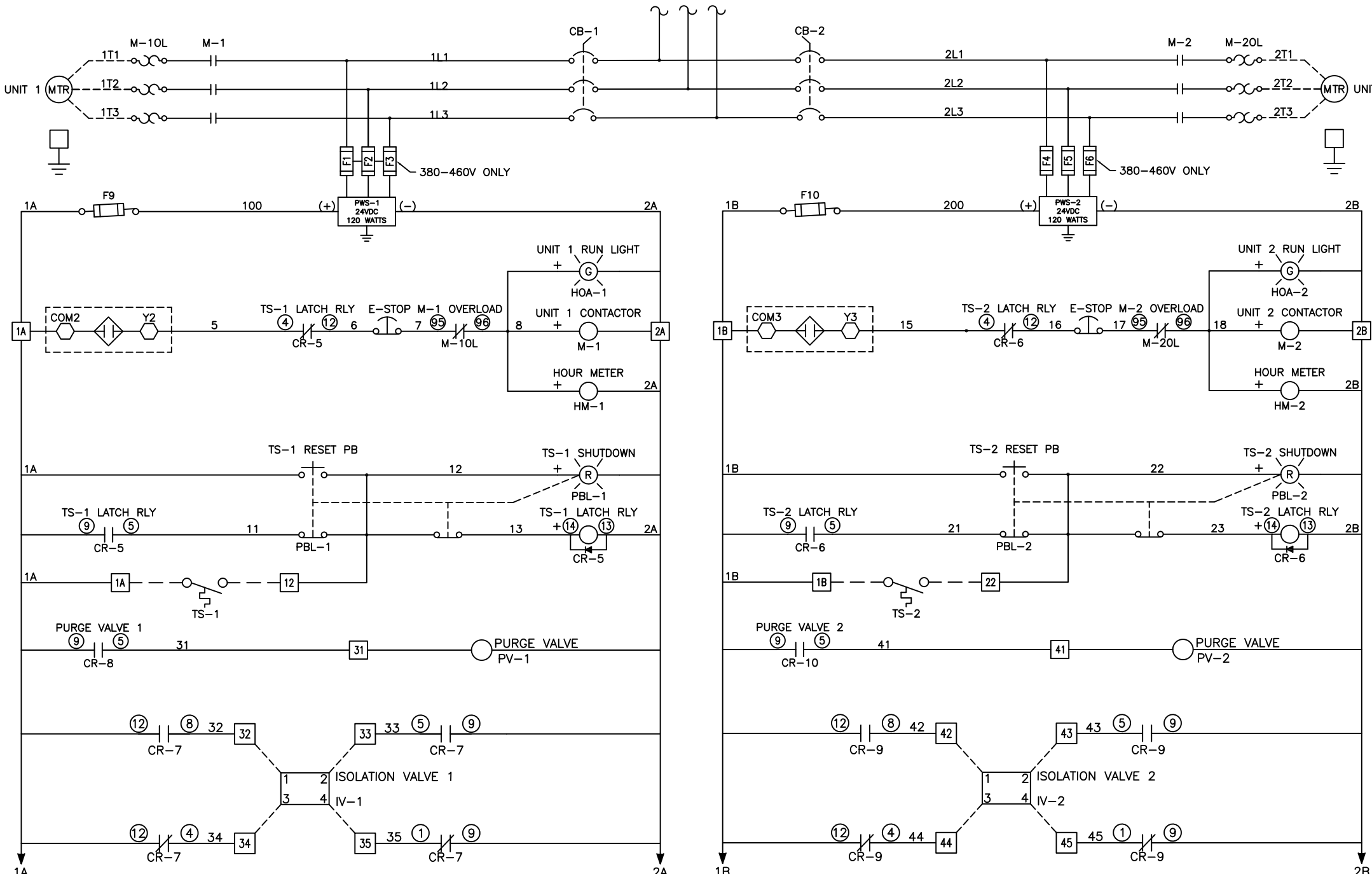
OPERATION:

DURING NORMAL OPERATION, THE HOA SWITCHES SHOULD BE IN THE AUTO POSITION. THE PLC WILL SIGNAL THE LEAD 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. WHEN VS-1 CLOSSES AGAIN, THE PLC WILL SEQUENCE THE LEAD ROLE TO THE OTHER PUMP.

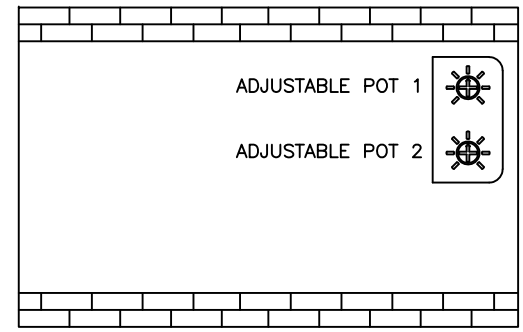
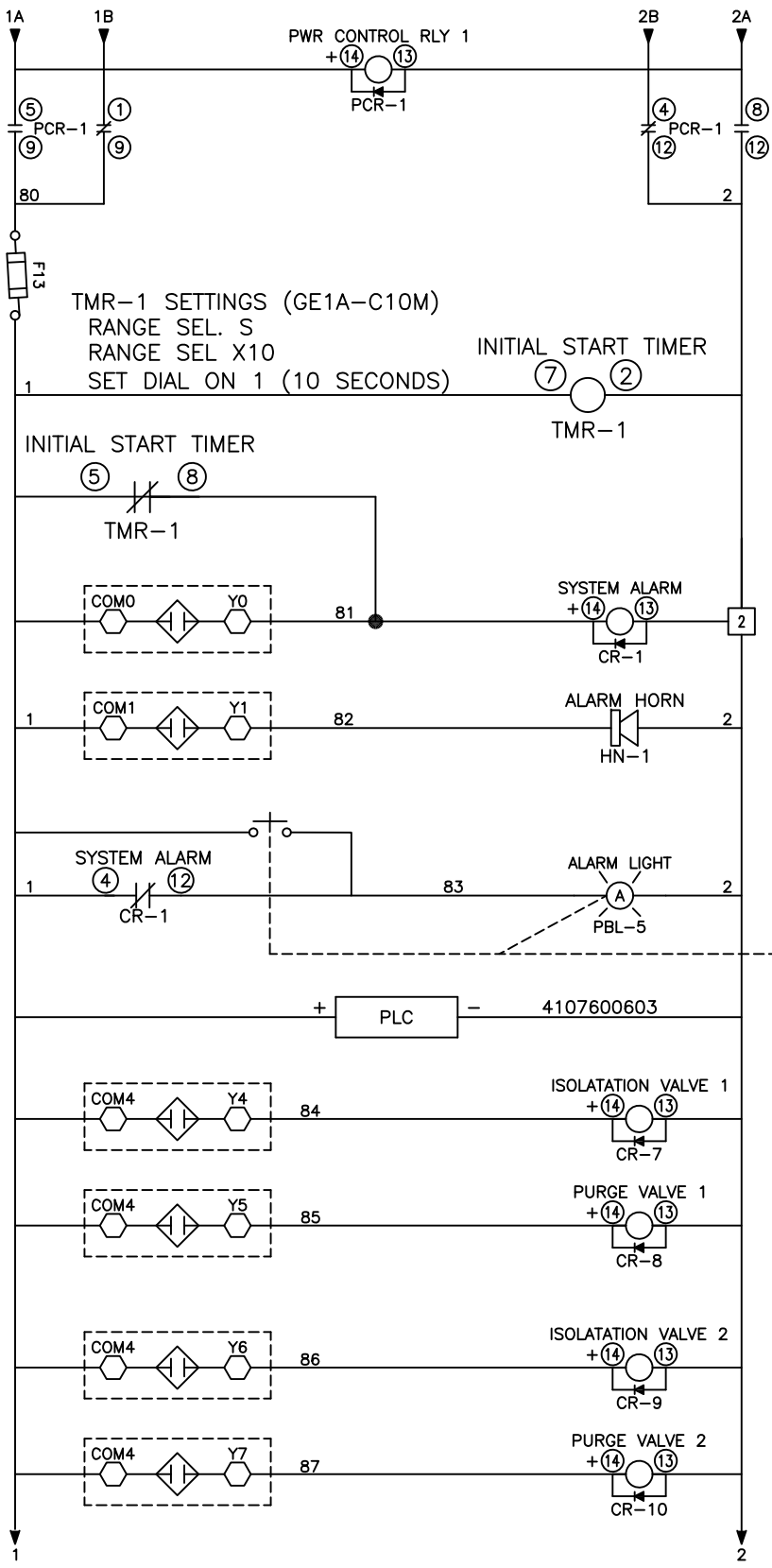
HAND OPERATION; (EMERGENCY/TROUBLE SHOOTING MODE ONLY)

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

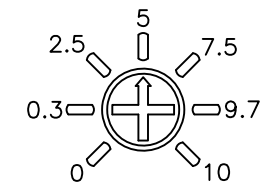
PURGE OPERATION: DURING PURGE OPERATION, THE PUMP ISOLATION VALVE WILL CLOSE AND THE PURGE VALVE WILL OPEN. WHEN THE MINIMUM PURGE TIME HAS EXPIRED, THE PURGE VALVE WILL CLOSE, AND THE ISOLATION VALVE WILL REMAIN CLOSED AND THE PUMP WILL TURN OFF.



Revised:	Date:	Drawn:	MOB	Date:	10/30/18
		<small>This drawing and the information contained therein remain the property of BeaconMedics and may not be used for other than the purpose for which it is issued without the expressed written permission from BeaconMedics Engineering.</small>		Scale:	NTS
Description:		Part Number:			
DWG WIRING CONTROL DX LAB LUBE 1-5HP BASIC 208-460/3/50-60, 65kA		4107 8568 64 Dwg: HOP 180863 Rev: 00		Sheet 1 of 2 DO NOT SCALE THIS DOCUMENT	



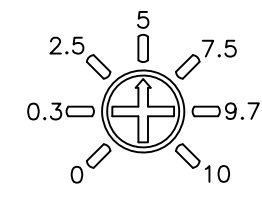
PLC WITH COVER REMOVED



ADJUSTABLE POT 1

PUMP RUN TIMER

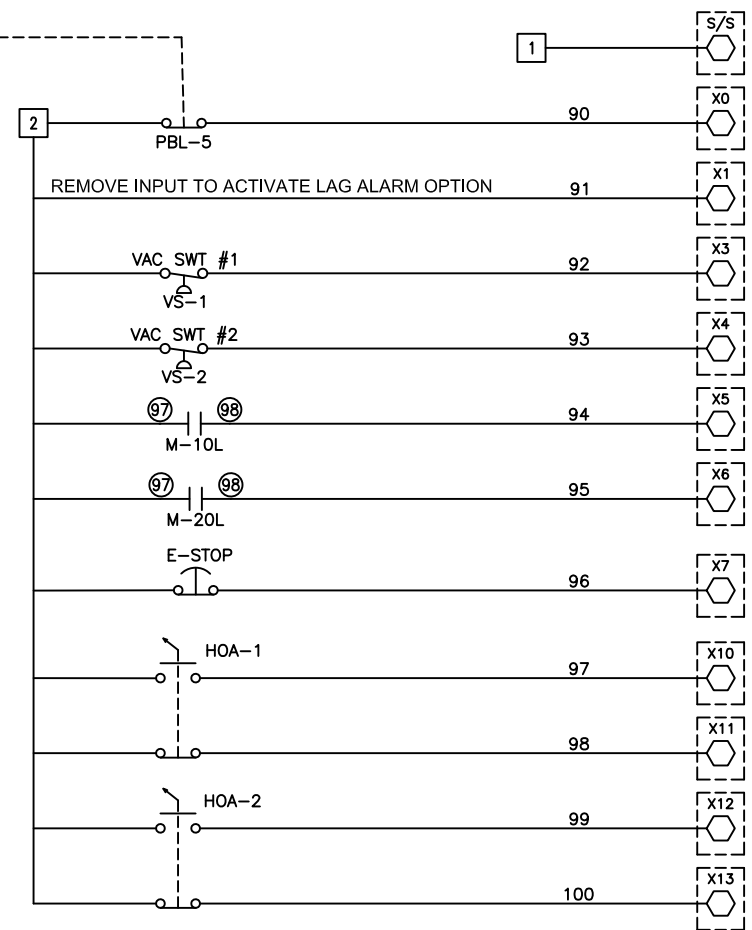
RANGE	SETTING
4-24 HRS	7.5



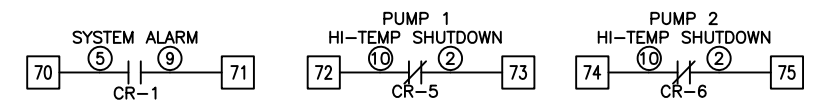
ADJUSTABLE POT 2

PURGE RUN TIMER

RANGE	SETTING
1-15 MIN	5



AUXILIARY CONTACTS



NOTE:
AUXILIARY CONTACTS 70-75 ARE "CLASS 1 CONTROL CIRCUITS.
USE CLASS 1 CONDUCTORS."

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

AUX CONTACTS CLOSED DURING NORMAL OPERATION.

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Description: DWG WIRING CONTROL DX LAB LUBE 1-5HP BASIC 208-460/3/50-60, 65kA		Part Number: 4107 8568 64	Scale: NTS D
Sheet 2 of 2		Rev: HOP 180863 00	DO NOT SCALE THIS DOCUMENT