

Notes:

1. MAIN DISCONNECT PROVIDED BY OTHERS.
2. FIELD WIRING TO BE COPPER RATED FOR 75°C MINIMUM.
3. - - - - INDICATES FIELD WIRING OUTSIDE OF BOX.
4. * INDICATES DATA FOR HORIZONTAL TANK MOUNT SYSTEMS.
5. AUXILIARY CONTACTS LIST AND OPERATION NOTES ON SHEET 2.
6. THE AMPACITY OF CONDUCTORS SUPPLYING THE CONTROL PANEL TO BE ROUNDED UP TO THE NEXT SIZE LARGER STANDARD WIRE GAUGE.
7. MOP VALUES TO BE ROUNDED DOWN TO THE NEAREST STANDARD RATING OF THE OVERCURRENT PROTECTION DEVICE.
8. SHORT CIRCUIT CURRENT RATING (SCCR): 65kA
9. POWER TO TERMINAL BLOCKS 3 & 4 OPENS ISOLATION VALVE 1
POWER TO TERMINAL BLOCKS 5 & 6 CLOSES ISOLATION VALVE 1
POWER TO TERMINAL BLOCKS 13 & 14 OPENS ISOLATION VALVE 2
POWER TO TERMINAL BLOCKS 15 & 16 CLOSES ISOLATION VALVE 2

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
7.5 HP	56.2 AMPS	51.1 AMPS	32.8 AMPS	25.8 AMPS
10 HP	71.1 AMPS	64.6 AMPS	41.8 AMPS	32.5 AMPS
15 HP	105.7 AMPS	96.1 AMPS	62.0 AMPS	48.3 AMPS
20 HP	135.4 AMPS	123.1 AMPS	77.8 AMPS	61.8 AMPS
25 HP	170.1 AMPS	154.6 AMPS	100.3 AMPS	77.5 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380 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
7.5 HP	78.7 AMPS	71.5 AMPS	45.5 AMPS	35.8 AMPS
10 HP	100.1 AMPS	91.0 AMPS	58.5 AMPS	45.5 AMPS
15 HP	150.2 AMPS	136.5 AMPS	87.8 AMPS	68.3 AMPS
20 HP	193.1 AMPS	175.5 AMPS	110.5 AMPS	87.8 AMPS
25 HP	243.1 AMPS	221.0 AMPS	143.0 AMPS	110.5 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
5 HP	31.0 AMPS	27.1 AMPS	16.5 AMPS	13.7 AMPS
7.5 HP	48.2 AMPS	44.9 AMPS	23.8 AMPS	22.6 AMPS
10 HP	68.2 AMPS	53.7 AMPS	27.6 AMPS	27.0 AMPS
15 HP	101.4 AMPS	76.1 AMPS	45.6 AMPS	38.2 AMPS
20 HP	125.4 AMPS	105.3 AMPS	57.0 AMPS	52.8 AMPS
25 HP	145.4 AMPS	125.3 AMPS	75.0 AMPS	62.8 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
5 HP	14.8 AMPS	12.9 AMPS	7.7 AMPS	6.5 AMPS
7.5 HP	23.4 AMPS	21.8 AMPS	11.4 AMPS	10.9 AMPS
10 HP	33.4 AMPS	26.2 AMPS	13.3 AMPS	13.1 AMPS
15 HP	50.0 AMPS	37.4 AMPS	22.3 AMPS	18.7 AMPS
20 HP	62.0 AMPS	52.0 AMPS	28.0 AMPS	26.0 AMPS
25 HP	72.0 AMPS	62.0 AMPS	37.0 AMPS	31.0 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
5 HP		---	---	25 AMPS	17.5 AMPS
7.5 HP		---	---	30 AMPS	30 AMPS
10 HP		---	---	---	---
15 HP		---	---	---	---
20 HP		---	---	---	---
25 HP		---	---	---	---
ALL	F1/F2/F4/F5	6 AMPS	6 AMPS	6 AMPS	6 AMPS
	F3/F6	---	---	6 AMPS	6 AMPS
	F21/F22	4.0 AMPS	4.0 AMPS	4.0 AMPS	4.0 AMPS
	F33	1.0 AMPS	1.0 AMPS	1.0 AMPS	1.0 AMPS
	F35	0.5 AMPS	0.5 AMPS	0.5 AMPS	0.5 AMPS

FL1/FL2/FL3 ARE LITTELFUSE JTD 600V TYPE
F1-F6 ARE LITTELFUSE KLDK 600V TYPE
F21/F22/F33/F35 ARE LITTELFUSE 2AG 250V TYPE

DEFAULT VACUUM SETTINGS

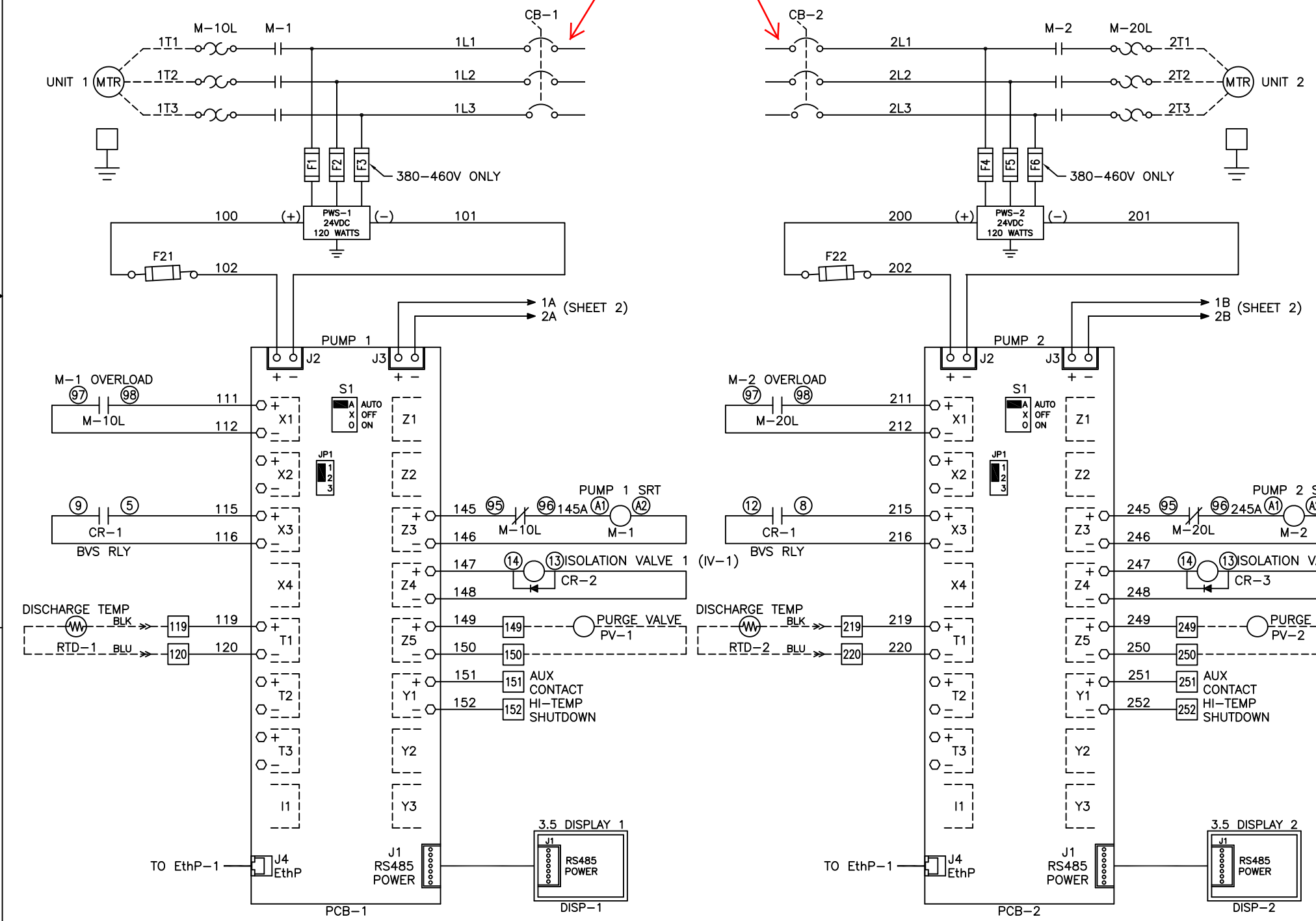
ALTITUDE	LEAD CUT-OFF ("Hg)	LAG CUT-ON ("Hg)	Maximum Limits ("Hg)	Minimum Limits ("Hg)
0'-3000'	25"	19"	25"	22"
3001'-4000'	24"	19"	25"	22"
4001'-5000'	23"	18"	25"	22"
5001'-6000'	22"	18"	24"	21"
6001'-7000'	21"	17"	23"	20"
7001'-8000'	20"	17"	22"	20"
8001'-9000'	19"	16"	21"	19"
9001'-10,000'	18"	16"	20"	19"
>10,000'	CONSULT FACTORY			

BACKUP VACUUM SWITCH
BVS-1 CUT-ON 15"

FOR DUAL POWER FEEDS
CUSTOMER CAN WIRE DIRECTLY
TO CIRCUIT BREAKERS

PUMP PCB
JUMPER/SWT SETTINGS

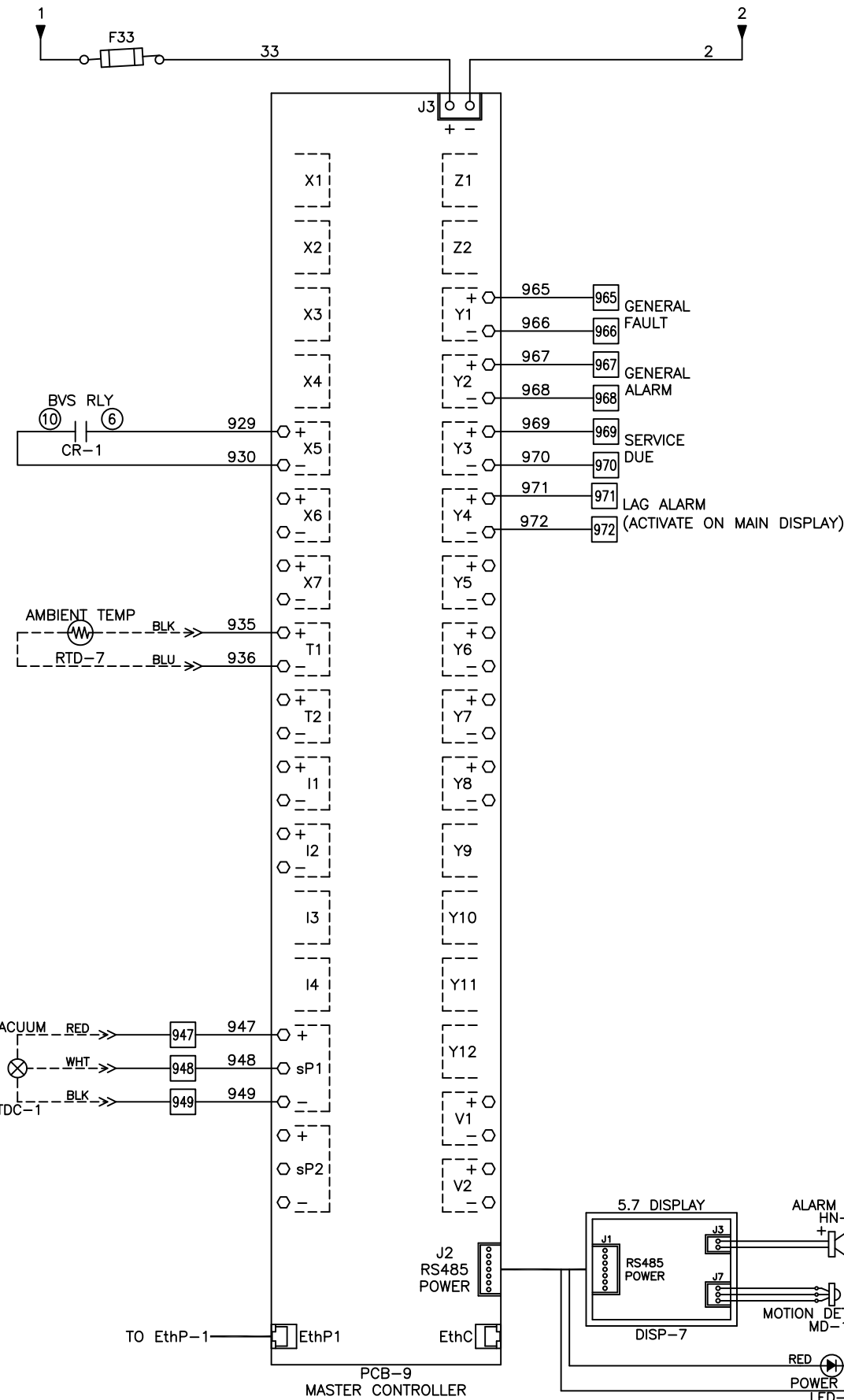
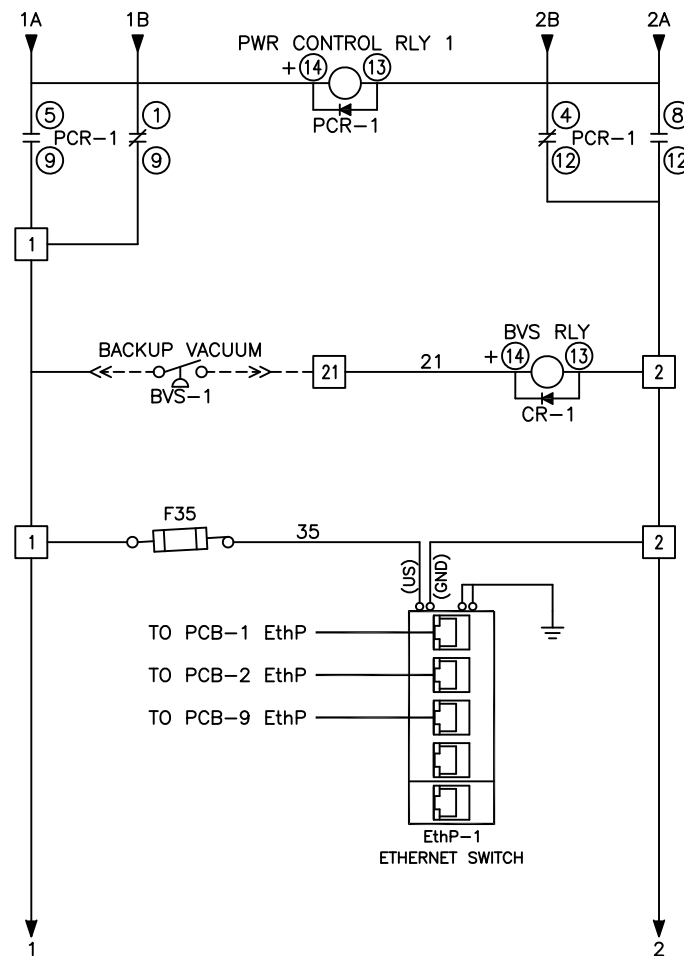
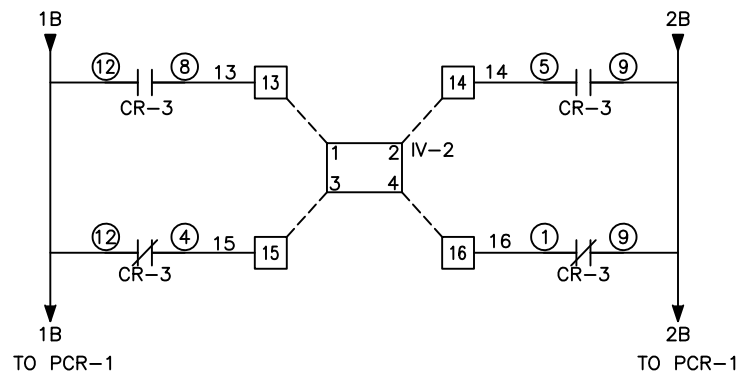
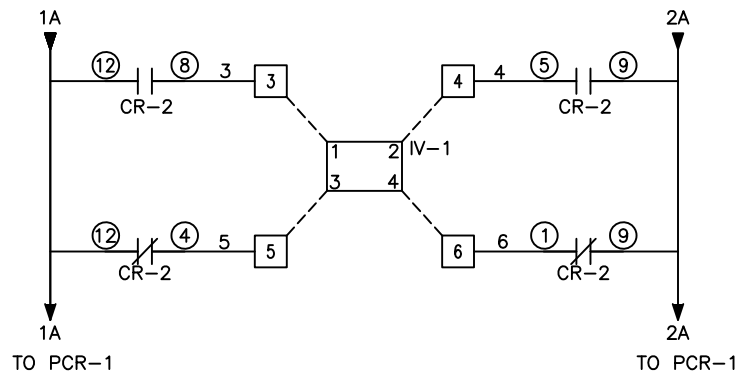
JPR/SWT	POSITION
JP1	1-2
S1	A (AUTO)



Revised: _____ Date: _____ Drawn: MDB Date: 10/30/18
Scale: NTS
Description: DWG WIRING CONTROL DX LAB LUBE 1.5-25HP 208-460V/3/50-60, 65KA
Part Number: 4107 8568 65
Rev: 00
Sheet 1 of 2

Notes:

1. FIELD WIRING TO BE COPPER RATED FOR 75°C MINIMUM.



AUTO OPERATION:

THE PUMP PCB WILL SIGNAL THE LEAD PUMP TO START AND THE ISOLATION VALVE TO OPEN WHEN THE VACUUM FALLS BELOW THE SET POINT. THE PUMP WILL CONTINUE TO RUN UNTIL THE VACUUM LEVEL SET POINT IS REACHED AND THE PUMP PCB WILL SIGNAL THE ISOLATION VALVE TO CLOSE AND THE PURGE VALVE TO OPEN. THE PUMP WILL THEN PURGE UNTIL THE PURGE TIMER EXPIRES. AFTER THE PURGE TIMER EXPIRES, THE PUMP PCB WILL SIGNAL THE PURGE VALVE TO CLOSE AND THE PUMP TO TURN OFF. IF THE VACUUM LEVEL FALLS BELOW THE SET POINT DURING THE PURGE CYCLE THE PCB WILL SIGNAL THE PURGE VALVE TO CLOSE, THE ISOLATION VALVE TO OPEN AND THE PUMP WILL RUN UNTIL THE VACUUM LEVEL SET POINT IS REACHED AND THEN BEGIN THE PURGE PROCESS AGAIN.

THE LEAD PUMP WILL ALTERNATE WHEN THE PUMP ALTERNATION TIME COMPLETES, FACTORY SET AT 10 HOURS. IF THE LEAD PUMP FAILS THE NEXT AVAILABLE PUMP WILL BECOME LEAD.

PUMP PCB S1 POSITION:

POSITION (A) – AUTO (DEFAULT):

THE PUMP WILL OPERATE NORMALLY AS DESCRIBED ABOVE IN "AUTO OPERATION".

POSITION (X) – OFF:

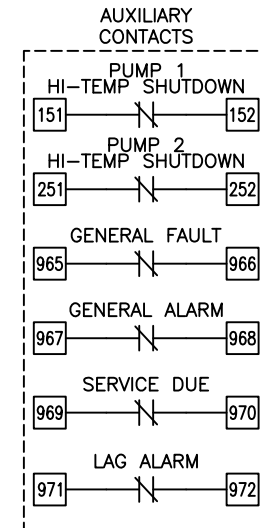
THE PUMP IS DISABLED FROM RUNNING.

POSITION (O) – MANUAL:

THE PUMP WILL RUN CONTINUOUSLY.

PCB FAULT:

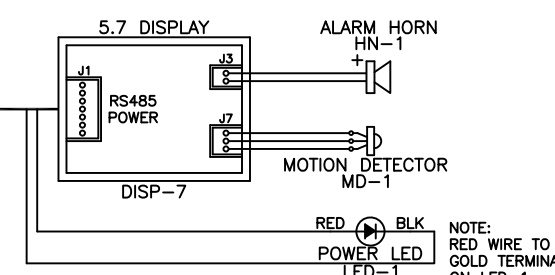
IF A PUMP PCB ETHERNET FAULT OR A TRANSDUCER FAULT OCCURS, THE PUMP PCB WILL AUTOMATICALLY SWITCH TO EMERGENCY MANUAL MODE. VACUUM PUMPS WILL START WHEN BVS-1 (BACKUP VACUUM SWITCH) CLOSSES AND STOP WHEN THE RUN TIMER EXPIRES.



NOTE:
AUXILIARY CONTACTS 151-152, 251-252, & 965-972 ARE "CLASS 1 CONTROL CIRCUITS. USE CLASS 1 CONDUCTORS."

AUX CONTACTS ARE RATED 0.7Adc/0.7Arms @ 24V MAX. UNLESS OTHERWISE NOTED.

AUX CONTACTS CLOSED DURING NORMAL OPERATION.



NOTE: RED WIRE TO GOLD TERMINAL ON LED-1.

Revised:	Date:	Drawn:	MDB	Date:	10/30/18
		<small>This drawing and the information contained thereon remain the property of BeaconMedes and may not be used for other than the purpose for which it is loaned without the expressed written permission from BeaconMedes Engineering.</small>			
Description:		Part Number:			
DWG WIRING CONTROL		4107 8568 65			
DX LAB LUBE 1-25HP		DN:		HOP 180863	
208-460/3/50-60, 65kA		Rev:		00	
Sheet 2 of 2		DO NOT SCALE THIS DOCUMENT			