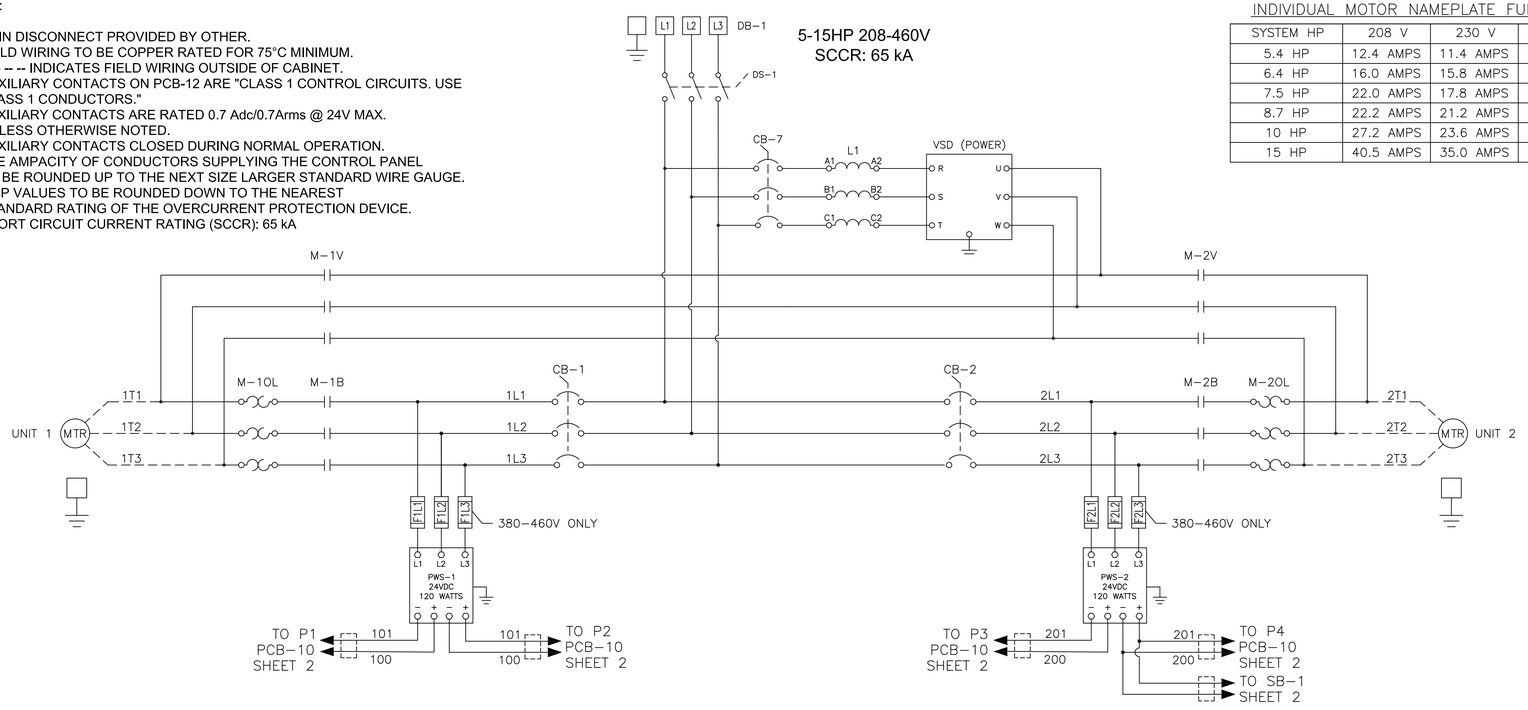
Notes:

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. AUXILIARY CONTACTS ON PCB-12 ARE "CLASS 1 CONTROL CIRCUITS. USE CLASS 1 CONDUCTORS."
5. AUXILIARY CONTACTS ARE RATED 0.7 Adc/0.7Arms @ 24V MAX. UNLESS OTHERWISE NOTED.
6. AUXILIARY CONTACTS CLOSED DURING NORMAL OPERATION.
7. THE AMPACITY OF CONDUCTORS SUPPLYING THE CONTROL PANEL TO BE ROUNDED UP TO THE NEXT SIZE LARGER STANDARD WIRE GAUGE.
8. MOP VALUES TO BE ROUNDED DOWN TO THE NEAREST STANDARD RATING OF THE OVERCURRENT PROTECTION DEVICE.
9. SHORT CIRCUIT CURRENT RATING (SCCR): 65 kA



INDIVIDUAL MOTOR NAMEPLATE FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	460 V	S.F.
5.4 HP	12.4 AMPS	11.4 AMPS	5.7 AMPS	1.25
6.4 HP	16.0 AMPS	15.8 AMPS	7.9 AMPS	1.25
7.5 HP	22.0 AMPS	17.8 AMPS	8.9 AMPS	1.25
8.7 HP	22.2 AMPS	21.2 AMPS	10.6 AMPS	1.25
10 HP	27.2 AMPS	23.6 AMPS	11.8 AMPS	1.15
15 HP	40.5 AMPS	35.0 AMPS	17.5 AMPS	1.15

380V/50Hz	S.F.
5.1 AMPS	1.15
8.6 AMPS	1.15
9.3 AMPS	1.15
11.3 AMPS	1.15
10.5 AMPS	1.15
14.5 AMPS	1.15

INDIVIDUAL OPERATING FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
5.4 HP	13.7 AMPS	12.6 AMPS	5.6 AMPS	6.3 AMPS
6.4 HP	17.4 AMPS	17.2 AMPS	9.4 AMPS	8.6 AMPS
7.5 HP	24.2 AMPS	19.6 AMPS	10.2 AMPS	9.8 AMPS
8.7 HP	25.1 AMPS	24.0 AMPS	12.8 AMPS	12.0 AMPS
10 HP	27.2 AMPS	23.6 AMPS	14.0 AMPS	11.8 AMPS
15 HP	40.5 AMPS	35.0 AMPS	14.5 AMPS	17.5 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380 V	460 V
5.4 HP	54.3 AMPS	49.4 AMPS	31.5 AMPS	24.7 AMPS
6.4 & 7.5 HP	78.7 AMPS	71.5 AMPS	45.5 AMPS	35.8 AMPS
8.7 & 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

MINIMUM CIRCUIT AMPACITY (MCA)

SYSTEM HP	208 V	230 V	380 V	460 V
5.4 HP	39.3 AMPS	35.8 AMPS	23.1 AMPS	18.1 AMPS
6.4 & 7.5 HP	56.2 AMPS	51.1 AMPS	32.8 AMPS	25.8 AMPS
8.7 & 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

DUPLEX SYSTEM FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
5.4 HP	28.8 AMPS	26.5 AMPS	12.2 AMPS	13.4 AMPS
6.4 HP	36.2 AMPS	35.7 AMPS	19.8 AMPS	18.0 AMPS
7.5 HP	49.8 AMPS	40.5 AMPS	21.4 AMPS	20.4 AMPS
8.7 HP	51.6 AMPS	49.3 AMPS	26.6 AMPS	24.8 AMPS
10 HP	55.8 AMPS	48.5 AMPS	29.0 AMPS	24.4 AMPS
15 HP	82.4 AMPS	71.3 AMPS	30.0 AMPS	35.8 AMPS

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

SYSTEM HP	FUSES	208 V	230 V	380 V	460 V
ALL	F1L1-F2L1 F1L2-F2L2	6.0 AMPS	6.0 AMPS	6.0 AMPS	6.0 AMPS
	F1L3-F2L3	---	---	6.0 AMPS	6.0 AMPS
	F1/F2/F3/F4 F5/F6	4.0 AMPS	4.0 AMPS	4.0 AMPS	4.0 AMPS
	F7/F8/F9/F10 F11/F12/F13	1.0 AMP	1.0 AMP	1.0 AMP	1.0 AMP
	F14	3.0 AMP	3.0 AMP	3.0 AMP	3.0 AMP

F1L1-F2L1/F1L2-F2L2/F1L3-F2L3 ARE LITTLEFUSE KLDR 600V TYPE
F1-F13 ARE SCHURTER UMT 250 TIME-LAG 250 VAC TYPE
F14 IS LITTELFUSE 2AG 250V TYPE

AUTO OPERATION:

DURING NORMAL OPERATION, THE SYSTEM PCB WILL SIGNAL THE LEAD VACUUM PUMP TO START WHEN THE VACUUM FALLS BELOW THE SET-POINT. IF ONE PUMP CAN CARRY THE LOAD, THEN THE VACUUM WILL RISE TO THE SET-POINT. THE PUMP PCB WILL THEN TURN OFF THE LEAD VACUUM PUMP WHEN ITS RUN TIMER EXPIRES. WHEN THE SYSTEM VACUUM FALLS AGAIN, THE SYSTEM PCB WILL SEQUENCE THE LEAD ROLE TO THE NEXT PUMP PCB AND IT WILL START. IF DURING OPERATION THE SYSTEM VACUUM FALLS BELOW 15"Hg, THE LAG PUMP WILL START AND A LAG ALARM WILL OCCUR.

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 FAULT OR A TRANSDUCER FAULT OCCURS, THE PUMP PCB WILL AUTOMATICALLY SWITCH TO MANUAL MODE. COMPRESSORS WILL START WHEN BVS-1 (BACKUP VACUUM SWITCH) CLOSES AND STOP WHEN IT OPENS AND THE RUN TIMER EXPIRES.

DEFAULT VACUUM SETPOINT ("HgV)

ALTITUDE		15HP 02A
0-1000'	20	18
1001-2000'	19	17
2001-3000'	18	16
3001-4000'	17	16
>4000'	CONSULT FACTORY	

SYSTEM/PUMP/DRYER PCB JUMPER/SWT SETTINGS

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

OVERLOAD SETTINGS

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
5.4 HP	15.1 AMPS	13.9 AMPS	6.2 AMPS	6.9 AMPS
6.4 HP	19.1 AMPS	18.9 AMPS	10.3 AMPS	9.5 AMPS
7.5 HP	26.6 AMPS	21.6 AMPS	11.2 AMPS	10.8 AMPS
8.7 HP	27.6 AMPS	26.4 AMPS	14.1 AMPS	13.2 AMPS
10 HP	29.9 AMPS	26.0 AMPS	15.4 AMPS	13.0 AMPS
15 HP	44.6 AMPS	38.5 AMPS	16.0 AMPS	19.3 AMPS

RELIEF VALVE SETTINGS ("HgV)

					02 ASSURED PUMPS				
ALTITUDE	2-5.4HP	6.4HP	7.5-8.7HP	10-15HP	2-5.4HP	6.4HP	7.5-8.7HP	10HP	15HP
0-1000'	N/A	25	24	23	N/A	25	24	23	20
1001-2000'	N/A	24	23	22	N/A	24	23	22	19
2001-3000'	N/A	23	22	21	N/A	23	22	21	18
3001-4000'	N/A	22	21	20	N/A	22	21	20	18
>4000'	CONSULT FACTORY								

BACKUP VACUUM SWITCH ("HgV)

			15HP 02A
BVS-1	CUT-ON	15	14

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Description: DWG WIRING CONTROL DX CLAW VSD 5-15HP GEN2 208-460/3/50-60, 65kA		Part Number: 4107 8581 32	
		DN: HOP230423	Rev: 00
		Sheet 1 of 3	DO NOT SCALE THIS DOCUMENT

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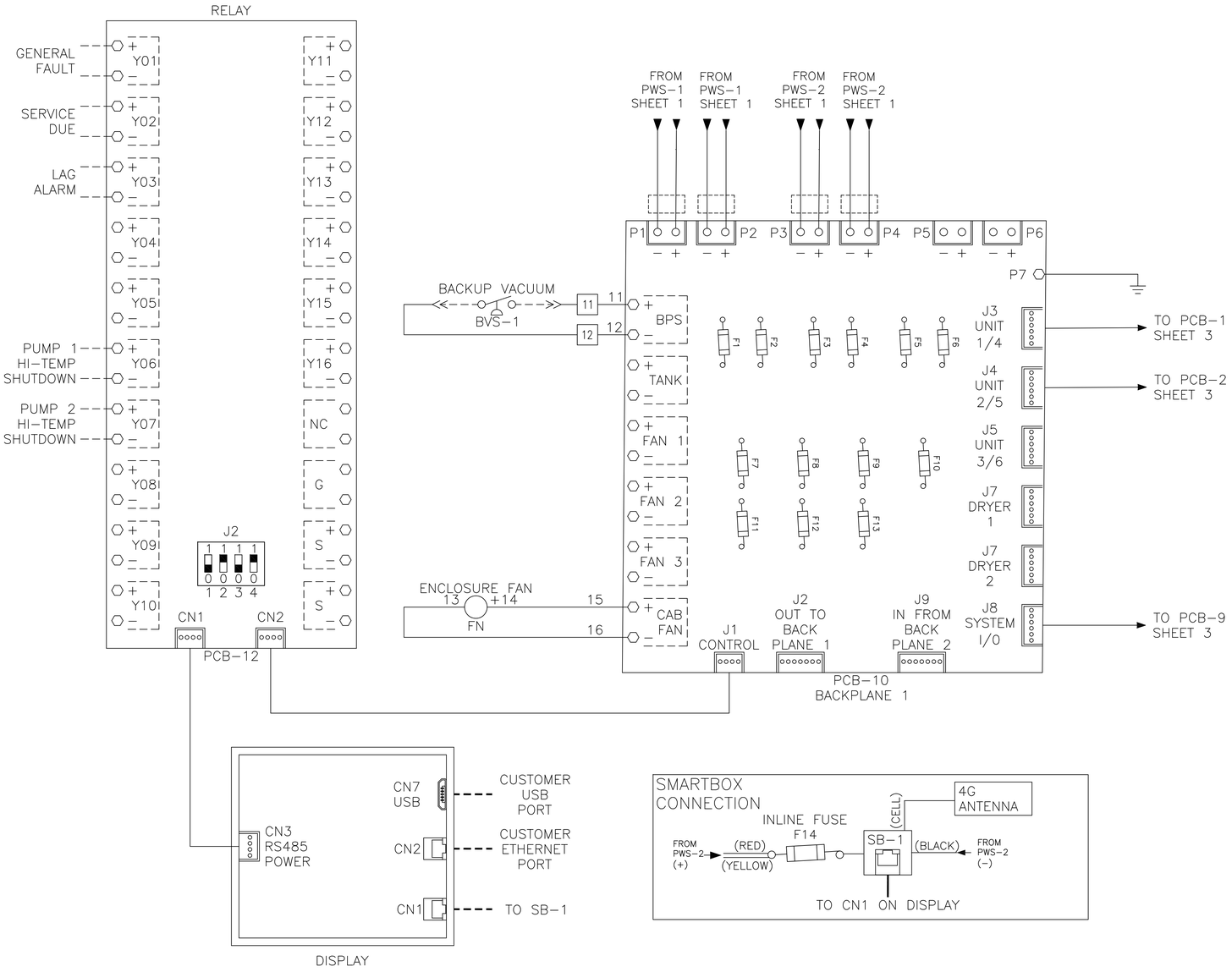

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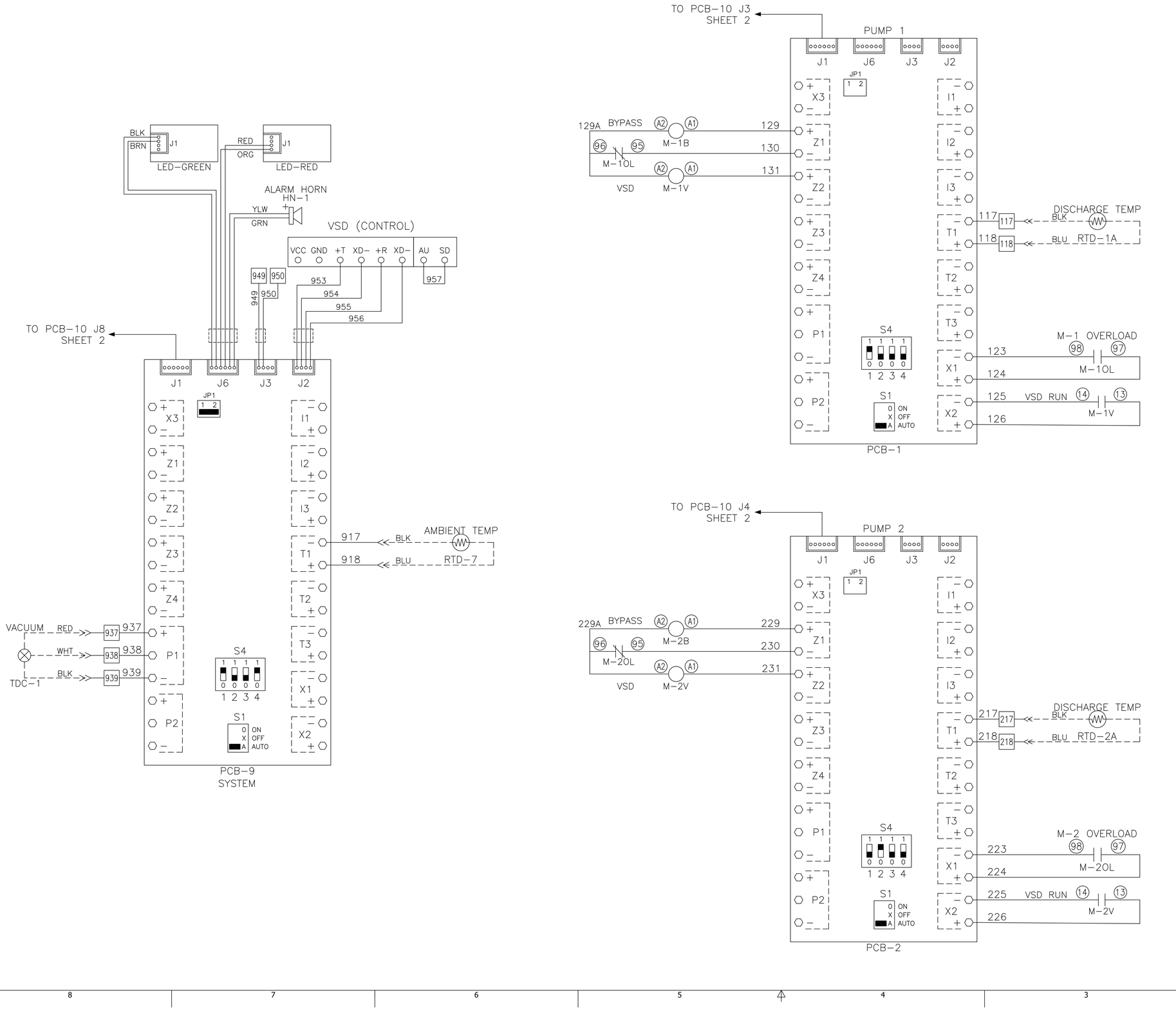

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