

Notes:

1. THE AMPACITY OF CONDUCTORS SUPPLYING THE CONTROL PANEL TO BE ROUNDED UP TO THE NEXT SIZE LARGER STANDARD WIRE GAUGE.
2. MOP VALUES TO BE ROUNDED DOWN TO THE NEAREST STANDARD RATING OF THE OVERCURRENT PROTECTION DEVICE.
3. SHORT CIRCUIT CURRENT RATING (SCCR): 65 kA

AUTO OPERATION:

THE MASTER PCB WILL CONTROL THE ADAPTIVE FUNCTIONALITY OF THE SYSTEM. THE ADAPTIVE CONTROL CAUSES THE VACUUM PUMPS TO START BASED ON THE VACUUM LEVEL. THE SIGNAL TO STOP IS BASED ON THE LENGTH OF TIME THE VACUUM SYSTEM WAS NOT RUNNING. THE MASTER PCB DETERMINES THE MINIMUM RUN TIME OF A PUMP ONCE IT HAS STOPPED. IF THE VACUUM SYSTEM IS STOPPED FOR A LONG PERIOD OF TIME, THE MINIMUM RUN TIME AFTER A RESTART WILL BE SHORT. IF THE VACUUM SYSTEM IS STOPPED FOR A SHORT PERIOD OF TIME, THE MINIMUM RUN TIME WILL BE LONGER. SEE O&M MANUAL FOR SPECIFIC VARIATIONS. IF DURING OPERATION THE SECOND VACUUM PUMP IS REQUIRED TO TURN ON, THE MASTER CONTROLLER WILL SET A LAG ALARM CONDITION.

PUMP PCB S1 POSITION:

POSITION (A) – AUTO (DEFAULT):

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

POSITION (X) – OFF:

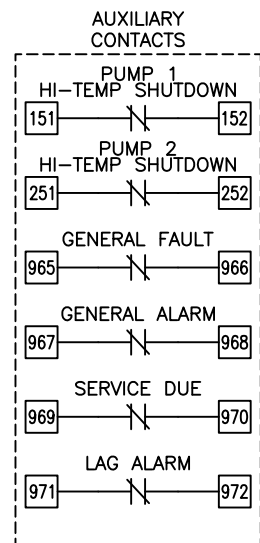
THE PUMP IS DISABLED FROM RUNNING.

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.

MINIMUM CIRCUIT AMPACITY (MCA)

SYSTEM HP	208 V	230 V	380 V	460 V
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
4 & 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

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380 V	460 V
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
4 & 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

INDIVIDUAL MOTOR NAMEPLATE FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	460 V	S.F.	380V/50Hz	S.F.
2 HP	6.2 AMPS	5.6 AMPS	2.8 AMPS	1.25	2.6 AMPS	1.15
3 HP	9.4 AMPS	8.4 AMPS	4.2 AMPS	1.15	3.8 AMPS	1.15
4 HP	10.0 AMPS	9.2 AMPS	4.6 AMPS	1.25	5.0 AMPS	1.15
5.4 HP	12.4 AMPS	11.4 AMPS	5.7 AMPS	1.25	5.1 AMPS	1.15
6.4 HP	16.0 AMPS	15.8 AMPS	7.9 AMPS	1.25	8.6 AMPS	1.15
7.5 HP	22.0 AMPS	17.8 AMPS	8.9 AMPS	1.25	9.3 AMPS	1.15
8.7 HP	22.2 AMPS	21.2 AMPS	10.6 AMPS	1.25	11.3 AMPS	1.15
10 HP	27.2 AMPS	23.6 AMPS	11.8 AMPS	1.15	10.5 AMPS	1.15
15 HP	40.5 AMPS	35.0 AMPS	17.5 AMPS	1.15	14.5 AMPS	1.15

INDIVIDUAL OPERATING FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
2 HP	6.6 AMPS	6.0 AMPS	2.8 AMPS	3.0 AMPS
3 HP	9.0 AMPS	8.0 AMPS	3.6 AMPS	4.0 AMPS
4 HP	9.3 AMPS	8.5 AMPS	4.6 AMPS	4.3 AMPS
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

DUPLEX SYSTEM FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V	460 V
2 HP	14.6 AMPS	13.3 AMPS	6.6 AMPS	6.8 AMPS
3 HP	20.2 AMPS	18.1 AMPS	8.6 AMPS	9.2 AMPS
4 HP	21.4 AMPS	19.7 AMPS	11.0 AMPS	10.0 AMPS
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

DEFAULT VACUUM SETTINGS ("HgV)

ALTITUDE	LEAD CUT-OFF		LAG CUT-ON		MAXIMUM LIMITS				MINIMUM LIMITS			
	15HP O2A		15HP O2A		15HP O2A		15HP O2A		15HP O2A		15HP O2A	
0-1000'	21	19	16	15	24	18	24	17	17	15	16	15
1001-2000'	20	18	16	15	23	18	23	17	17	15	16	15
2001-3000'	19	17	16	15	22	18	22	17	17	15	16	15
3001-4000'	18	17	16	15	21	18	21	17	17	15	16	15
>4000'	CONSULT FACTORY											

OVERLOAD SETTINGS

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
2 HP	7.3 AMPS	6.6 AMPS	3.1 AMPS	3.3 AMPS
3 HP	10.3 AMPS	9.2 AMPS	4.2 AMPS	4.6 AMPS
4 HP	11.0 AMPS	10.1 AMPS	5.5 AMPS	5.1 AMPS
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)

ALTITUDE	O2 ASSURED PUMPS			
	2-5.4HP	6.4-8.7HP	10-15HP	15HP
0-1000'	N/A	24	23	23
1001-2000'	N/A	23	22	22
2001-3000'	N/A	22	21	21
3001-4000'	N/A	21	20	20
>4000'	CONSULT FACTORY			

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

SYSTEM HP	FUSES	208 V	230 V	380 V	460 V
2 HP	FL1/FL2/FL3	20 AMPS	17.5 AMPS	12 AMPS	12 AMPS
3 HP		30 AMPS	25 AMPS	12 AMPS	12 AMPS
4 HP		30 AMPS	25 AMPS	15 AMPS	15 AMPS
5.4 HP		---	---	17.5 AMPS	17.5 AMPS
6.4 HP		---	---	25 AMPS	25 AMPS
7.5 HP		---	---	30 AMPS	30 AMPS
8.7 HP		---	---	---	---
10 HP		---	---	---	---
15 HP		---	---	---	---
ALL		F1/F2/F4/F5	6.0 AMPS	6.0 AMPS	6.0 AMPS
	F3/F6	---	---	6.0 AMPS	6.0 AMPS
	F21/F22	2.5 AMPS	2.5 AMPS	2.5 AMPS	2.5 AMPS
	F33	1.0 AMP	1.0 AMP	1.0 AMP	1.0 AMP
	F35	0.5 AMP	0.5 AMP	0.5 AMP	0.5 AMP

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

BACKUP VACUUM SWITCH ("HgV)		15HP O2A	
BVS-1	CUT-ON	15	14

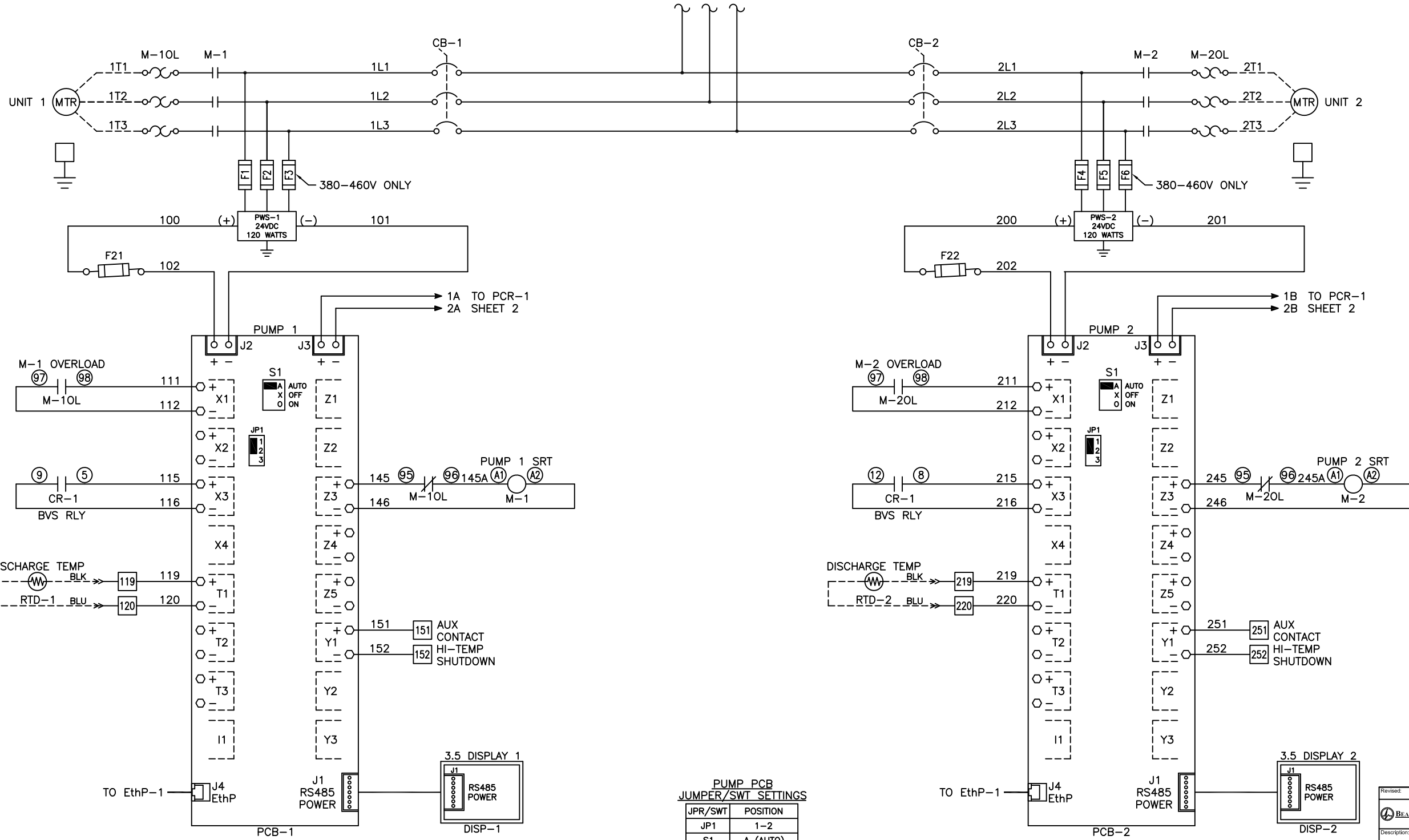
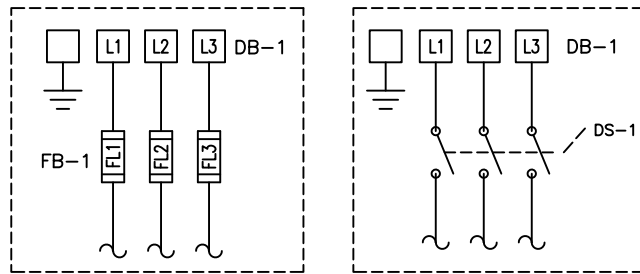
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Description:		Part Number:			
DWG WIRING CONTROL		4107 8568 43			
DX CLAW 2-15HP		DN:	HOP 180863	Rev:	00
208-460/3/50-60, 65KA		Sheet 1 of 3		DO NOT SCALE THIS DOCUMENT	

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.

2-4HP 208-460V
5.4-7.5HP 380-460V
SCCR: 65 kA

5.4-7.5HP 208-230V
8.7-15HP 208-460V
SCCR: 65 kA



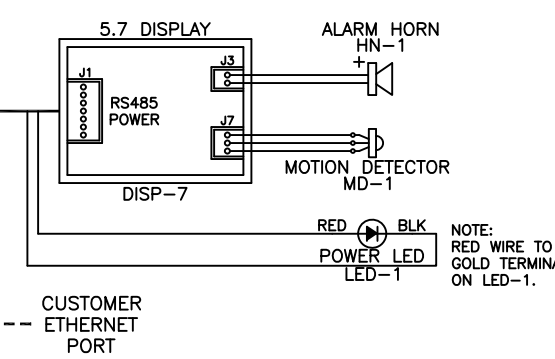
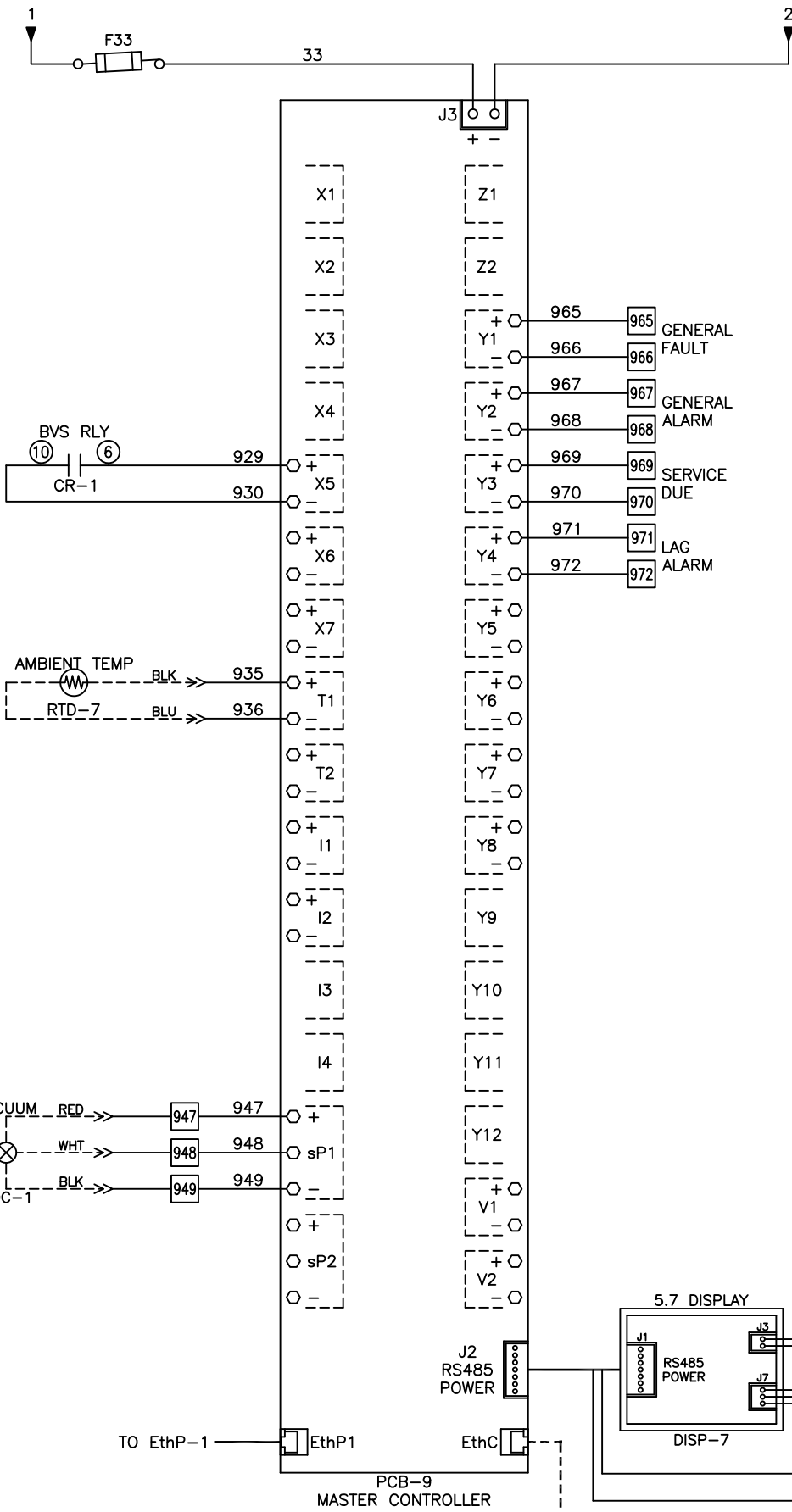
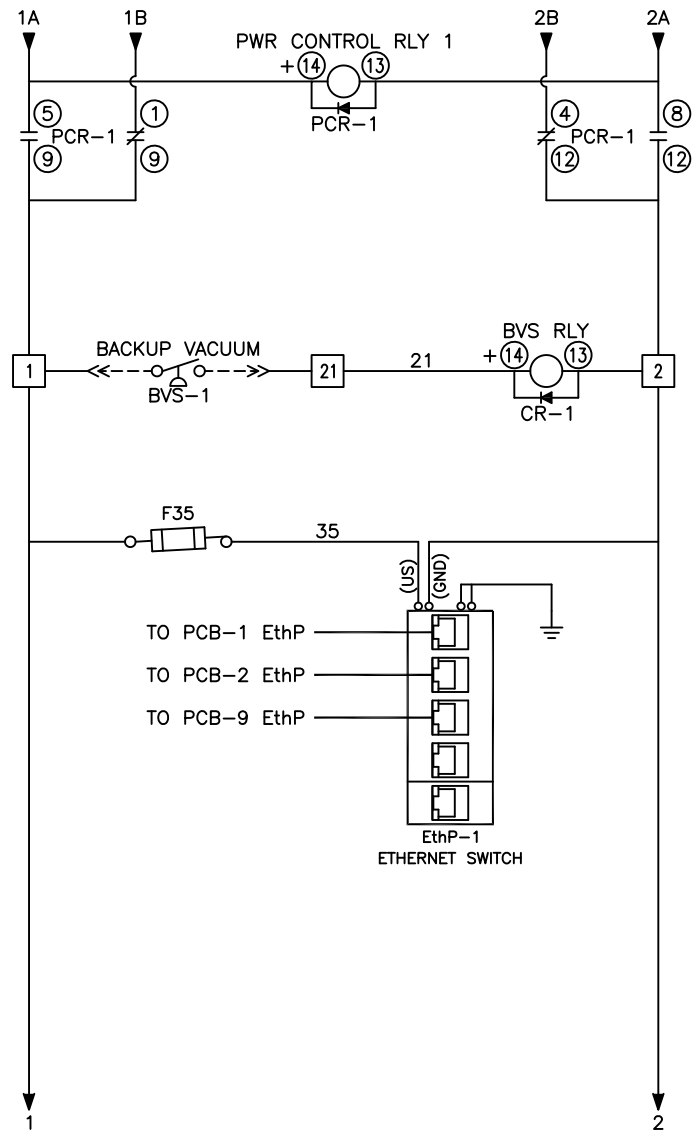
PUMP PCB
JUMPER/SWT SETTINGS

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

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Description: DWG WIRING CONTROL DX CLAW 2-15HP 208-460/3/50-60, 65kA		Part Number: 4107 8568 43		Scale: NTS	
Sheet 2 of 3		DN: HOP 180863		Rev: 00	
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D		Part Number: 4107 8568 43	
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