

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:

DURING NORMAL OPERATION THE MASTER 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 MASTER 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:

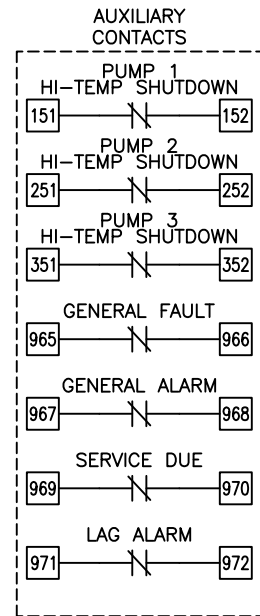
THE PUMP IS DISABLED FROM RUNNING.

POSITION (O) – MANUAL:

THE PUMP WILL RUN CONTINUOUSLY.

PCB FAULT:

IF A PUMP PCB 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) CLOSING AND STOP WHEN BVS-1 OPENS AND THE RUN TIMER EXPIRES.



NOTE:
AUXILIARY CONTACTS 151-152, 251-252, 351-352, & 965-972 ARE "CLASS 1 CONTROL CIRCUITS. USE CLASS 1 CONDUCTORS."

AUX CONTACTS ARE RATED 0.7A_{dc}/0.7A_{rms} @ 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
5.4 HP	56.9 AMPS	51.8 AMPS	33.4 AMPS	26.2 AMPS
6.4 & 7.5 HP	81.3 AMPS	73.9 AMPS	47.4 AMPS	37.3 AMPS
8.7 & 10 HP	102.7 AMPS	93.4 AMPS	60.4 AMPS	47.0 AMPS
15 HP	152.8 AMPS	138.9 AMPS	89.6 AMPS	69.8 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380 V	460 V
5.4 HP	71.0 AMPS	64.6 AMPS	41.2 AMPS	32.3 AMPS
6.4 & 7.5 HP	102.9 AMPS	93.5 AMPS	59.5 AMPS	46.8 AMPS
8.7 & 10 HP	130.9 AMPS	119.0 AMPS	76.5 AMPS	59.5 AMPS
15 HP	196.4 AMPS	178.5 AMPS	114.8 AMPS	89.3 AMPS

INDIVIDUAL MOTOR NAMEPLATE FULL LOAD AMPERES

SYSTEM HP	208 V				380V/50Hz	
	230 V	460 V	S.F.	380V/50Hz	S.F.	
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
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

TRIPLEX SYSTEM FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
5.4 HP	43.2 AMPS	39.7 AMPS	18.3 AMPS	20.1 AMPS
6.4 HP	54.3 AMPS	53.5 AMPS	29.7 AMPS	27.0 AMPS
7.5 HP	74.7 AMPS	60.7 AMPS	32.1 AMPS	30.6 AMPS
8.7 HP	77.4 AMPS	73.9 AMPS	39.9 AMPS	37.2 AMPS
10 HP	83.7 AMPS	72.7 AMPS	43.5 AMPS	36.6 AMPS
15 HP	123.6 AMPS	106.9 AMPS	45.0 AMPS	53.7 AMPS

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

SYSTEM HP	FUSES	208 V	230 V	380 V	460 V
5.4 HP	FL1/FL2/FL3	60 AMPS	50 AMPS	25 AMPS	25 AMPS
6.4 HP		---	---	35 AMPS	35 AMPS
7.5 HP		---	---	40 AMPS	40 AMPS
8.7 HP		---	---	50 AMPS	45 AMPS
10 HP		---	---	60 AMPS	45 AMPS
15 HP		---	---	---	---
ALL	F1/F2/F4/F5 F7/F8	6.0 AMPS	6.0 AMPS	6.0 AMPS	6.0 AMPS
	F3/F6/F9	---	---	6.0 AMPS	6.0 AMPS
	F21/F22/F23	2.5 AMPS	2.5 AMPS	2.5 AMPS	2.5 AMPS
	F33	1.0 AMPS	1.0 AMPS	1.0 AMPS	1.0 AMPS
	F34 F35	0.4 AMPS 0.5 AMPS	0.4 AMPS 0.5 AMPS	0.4 AMPS 0.5 AMPS	0.4 AMPS 0.5 AMPS

FL1/FL2/FL3 ARE LITTELFUSE JTD 600V TYPE
F1-F9 ARE LITTELFUSE KLDR 600V TYPE
F21-F23/F33-F35 ARE LITTELFUSE 2AG 250V TYPE

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

DEFAULT VACUUM SETPOINT ("HgV)

ALTITUDE	15HP O2A
0-1000'	20
1001-2000'	19
2001-3000'	18
3001-4000'	17
>4000'	CONSULT FACTORY

RELIEF VALVE SETTINGS ("HgV)

ALTITUDE	5.4HP				O2 ASSURED PUMPS			
	6.4-8.7HP	10-15HP	5.4HP	6.4-8.7HP	10HP	15HP		
0-1000'	N/A	24	23	N/A	24	23	20	
1001-2000'	N/A	23	22	N/A	23	22	19	
2001-3000'	N/A	22	21	N/A	22	21	18	
3001-4000'	N/A	21	20	N/A	21	20	18	
>4000'	CONSULT FACTORY							

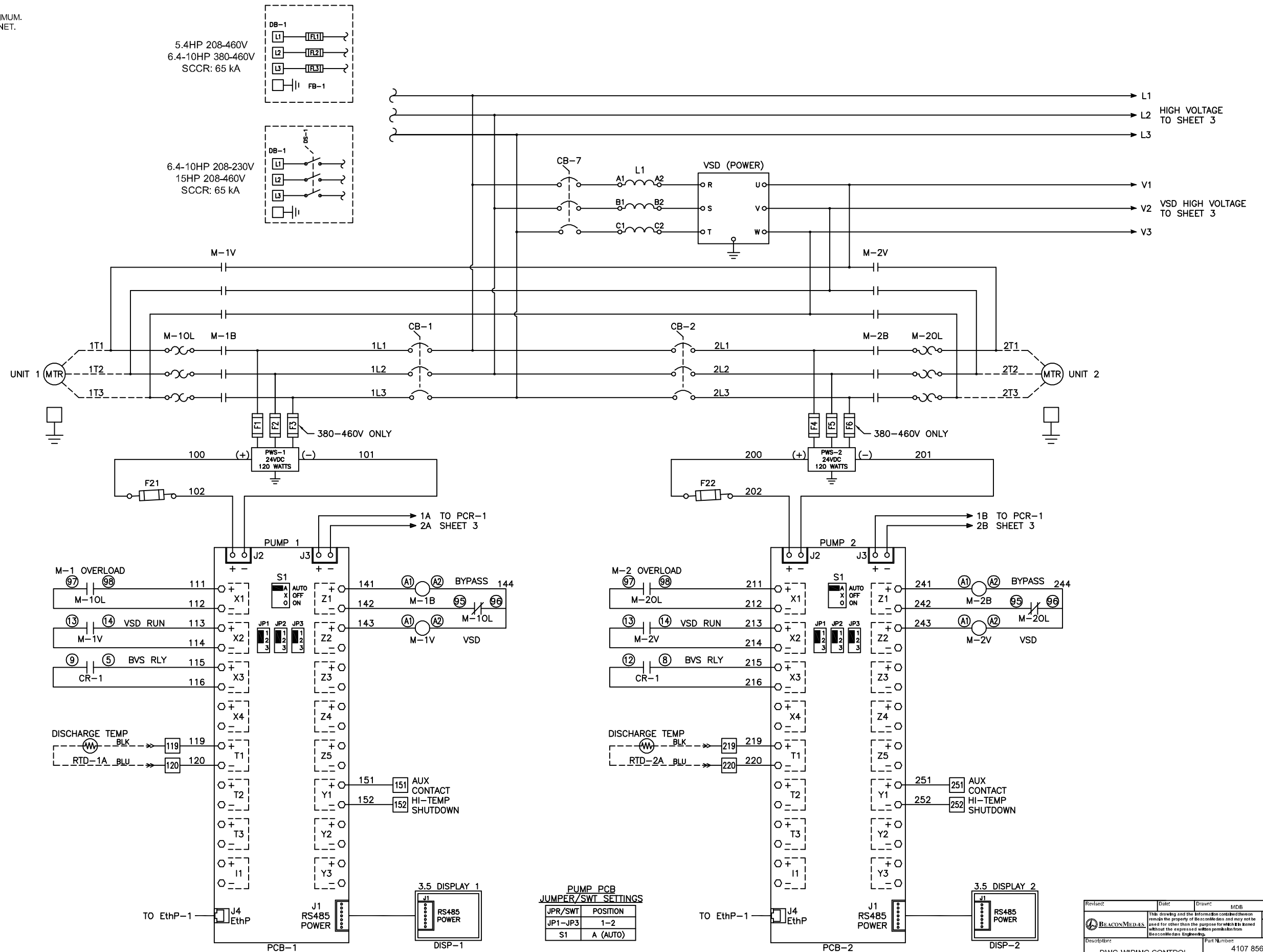
BACKUP VACUUM SWITCH ("HgV)

BVS-1	CUT-ON	15HP O2A
15	14	

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Description:		Part Number:			
DWG WIRING CONTROL TX CLAW VSD 5-15HP 208-460/3/50-60, 65KA		4107 8568 49			
DN:	HOP 180863	Rev:	00		
Sheet 1 of 4	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.



5.4HP 208-460V
6.4-10HP 380-460V
SCCR: 65 kA

6.4-10HP 208-230V
15HP 208-460V
SCCR: 65 kA

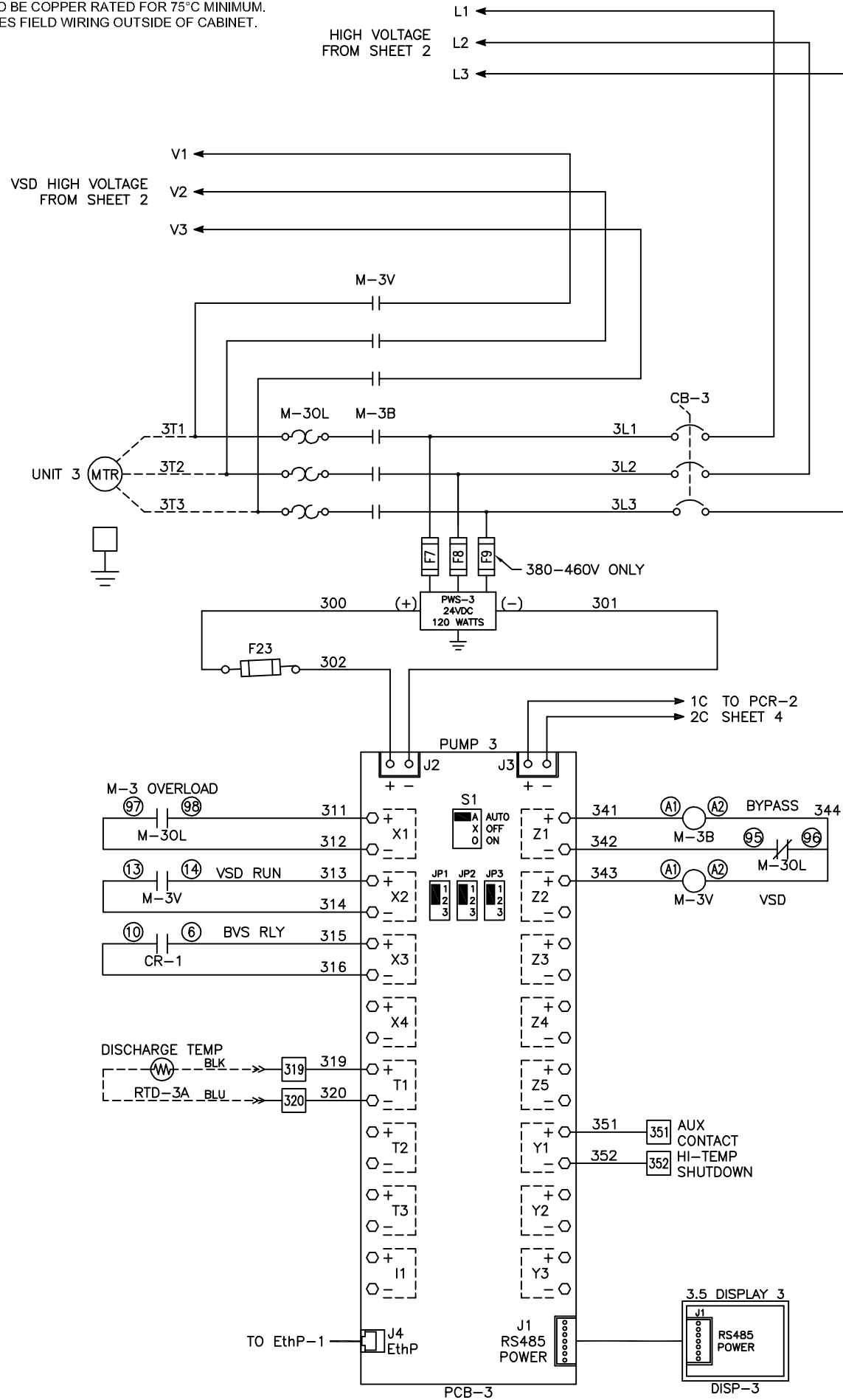
PUMP PCB
JUMPER/SWT SETTINGS

JPR/SWT	POSITION
JP1-JP3	1-2
S1	A (AUTO)

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Description:		Part Number:		Rev:	
DWG WIRING CONTROL TX CLAW VSD 5-15HP 208-460/3/50-60, 65kA		4107 8568 49		00	
Sheet 2 of 4		HOP 180863		DO NOT SCALE THIS DOCUMENT	

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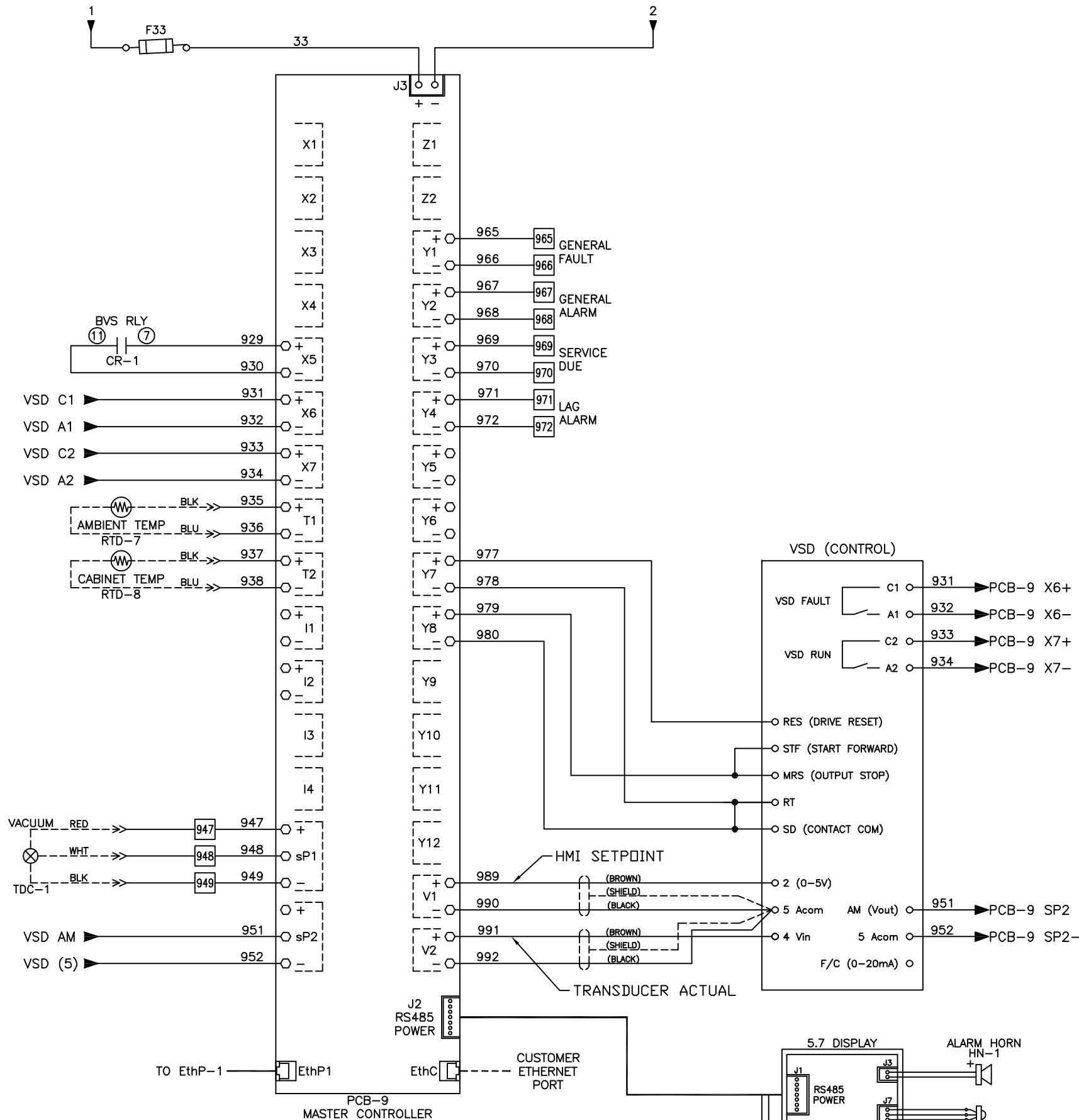
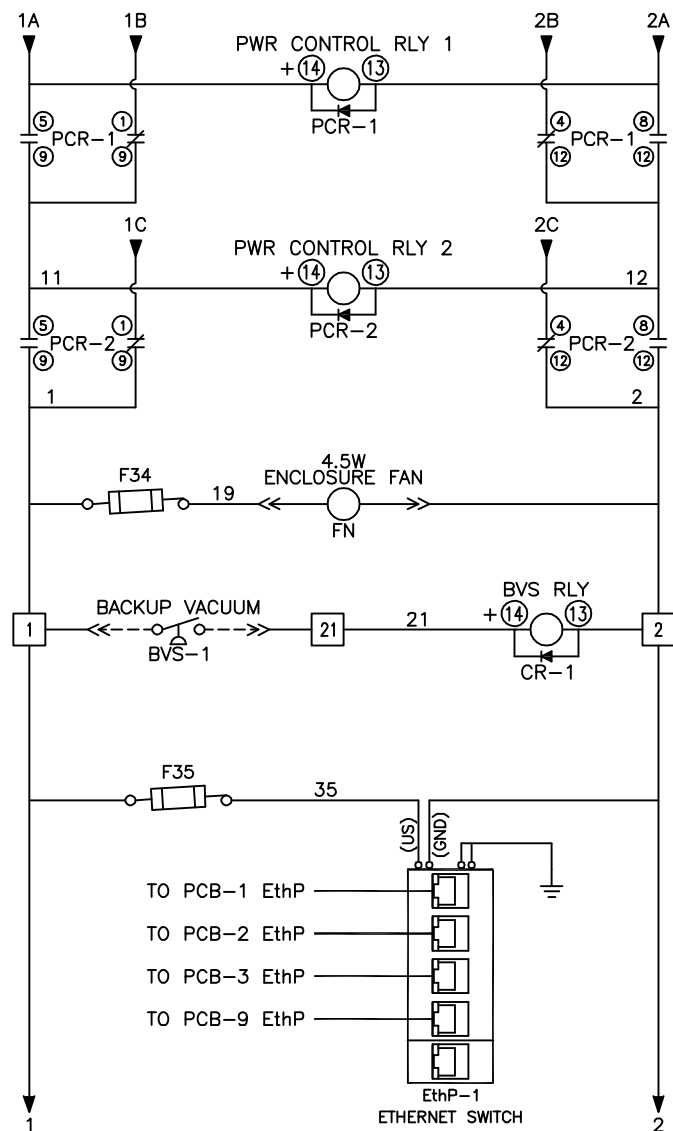


**PUMP PCB
JUMPER/SWT SETTINGS**

JPR/SWT	POSITION
JP1-JP3	1-2
S1	A (AUTO)

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Description: DWG WIRING CONTROL TX CLAW VSD 5-15HP 208-460/3/50-60, 65KA			Part Number: 4107 8568 49		
DNE HOP 180863		Rev: 00		Sheet 3 of 4 <small>DO NOT SCALE THIS DOCUMENT</small>	

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Description		Part Number			
DWG WIRING CONTROL TX CLAW VSD 5-15HP 208-460/3/50-60, 65KA		4107 8568 49			
Drawn	HOP 180863	Rev	00		
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NOTE:
 RED WIRE TO GOLD TERMINAL ON LED-1.