

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): 5 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:

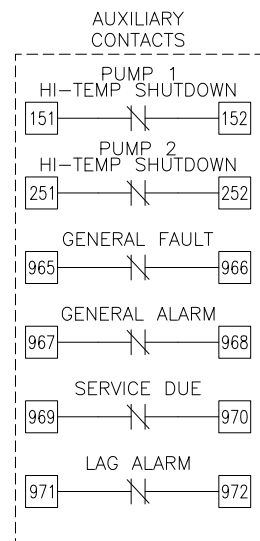
THE PUMP IS DISABLED FROM RUNNING.

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	380/400 V	460 V
2 HP	18.7 AMPS	16.9 AMPS	11.0 AMPS	8.8 AMPS
3 HP	25.7 AMPS	23.2 AMPS	15.1 AMPS	11.9 AMPS
4 HP	39.4 AMPS	35.8 AMPS	23.2 AMPS	18.2 AMPS
5.4-7.5 HP	56.3 AMPS	51.1 AMPS	32.8 AMPS	25.9 AMPS
8.7-10 HP	71.1 AMPS	64.6 AMPS	41.8 AMPS	32.6 AMPS
15 HP	105.8 AMPS	96.1 AMPS	62.1 AMPS	48.4 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380/400 V	460 V
2 HP	24.3 AMPS	22.1 AMPS	13.9 AMPS	11.0 AMPS
3 HP	34.4 AMPS	31.2 AMPS	19.8 AMPS	15.6 AMPS
4 HP	54.2 AMPS	34.2 AMPS	31.5 AMPS	24.7 AMPS
5.4-7.5 HP	78.6 AMPS	71.5 AMPS	45.5 AMPS	35.7 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	87.7 AMPS	68.2 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	14.0 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/50Hz	460 V
2 HP	14.6 AMPS	13.3 AMPS	6.6 AMPS	6.9 AMPS
3 HP	20.2 AMPS	18.1 AMPS	8.6 AMPS	9.3 AMPS
4 HP	21.4 AMPS	19.7 AMPS	11.0 AMPS	10.1 AMPS
5.4 HP	28.8 AMPS	26.5 AMPS	12.2 AMPS	13.5 AMPS
6.4 HP	36.2 AMPS	35.7 AMPS	19.8 AMPS	18.1 AMPS
7.5 HP	49.8 AMPS	40.5 AMPS	21.4 AMPS	20.5 AMPS
8.7 HP	51.6 AMPS	49.3 AMPS	26.6 AMPS	24.9 AMPS
10 HP	55.8 AMPS	48.5 AMPS	29.0 AMPS	24.5 AMPS
15 HP	82.4 AMPS	71.3 AMPS	30.0 AMPS	35.9 AMPS

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

FUSES	208 V	230 V	380 V	460 V
F1/F2/F4/F5	6.0 AMPS	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

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

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

DEFAULT VACUUM SETTINGS ("HgV)

ALTITUDE	LEAD CUT-OFF		LAG CUT-ON		MAXIMUM LIMITS			MINIMUM LIMITS				
	21	15HP O2A	16	15HP O2A	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											

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			

BACKUP VACUUM SWITCH ("HgV)

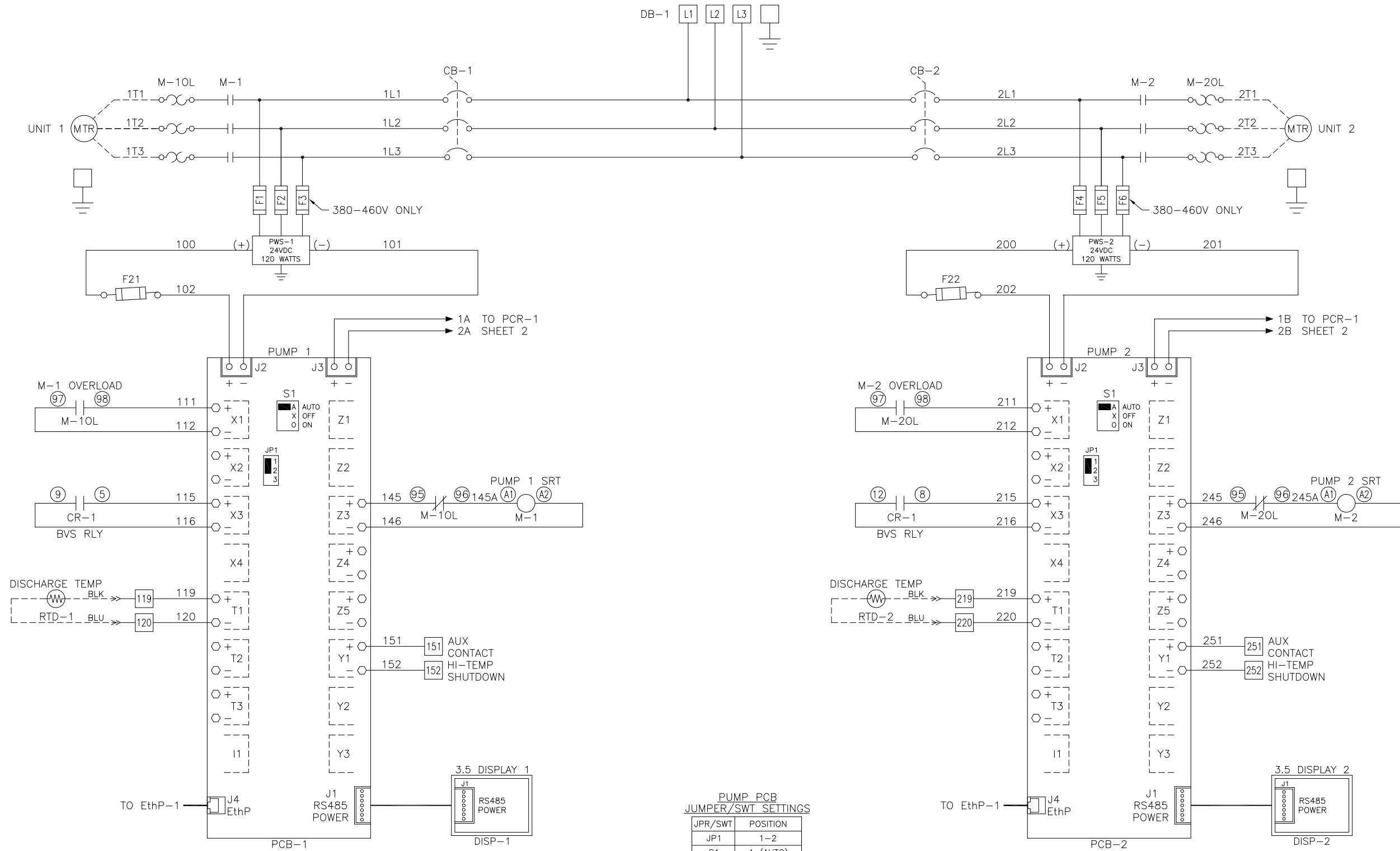
BVS-1	CUT-ON	15HP O2A
	15	14

Revised: DAG	Date: 04/28/17	Drawn: JAH	Date: 02/01/11
		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 loaned without the expressed written permission from BeaconMedics Engineering.	
Description: DWG WIRING CONTROL DX CLAW 2-15HP 208-460/3/50-60		Part Number: 4107 8527 05	
Sheet 1 of 3		Rev: 12	Scale: NTS

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.

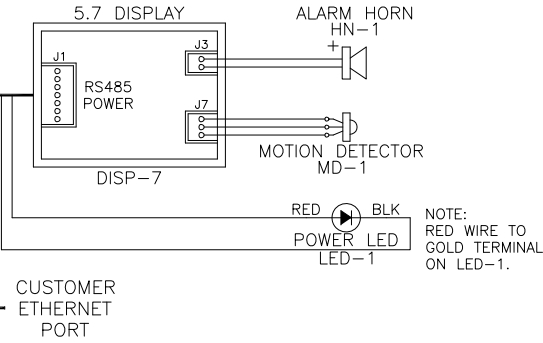
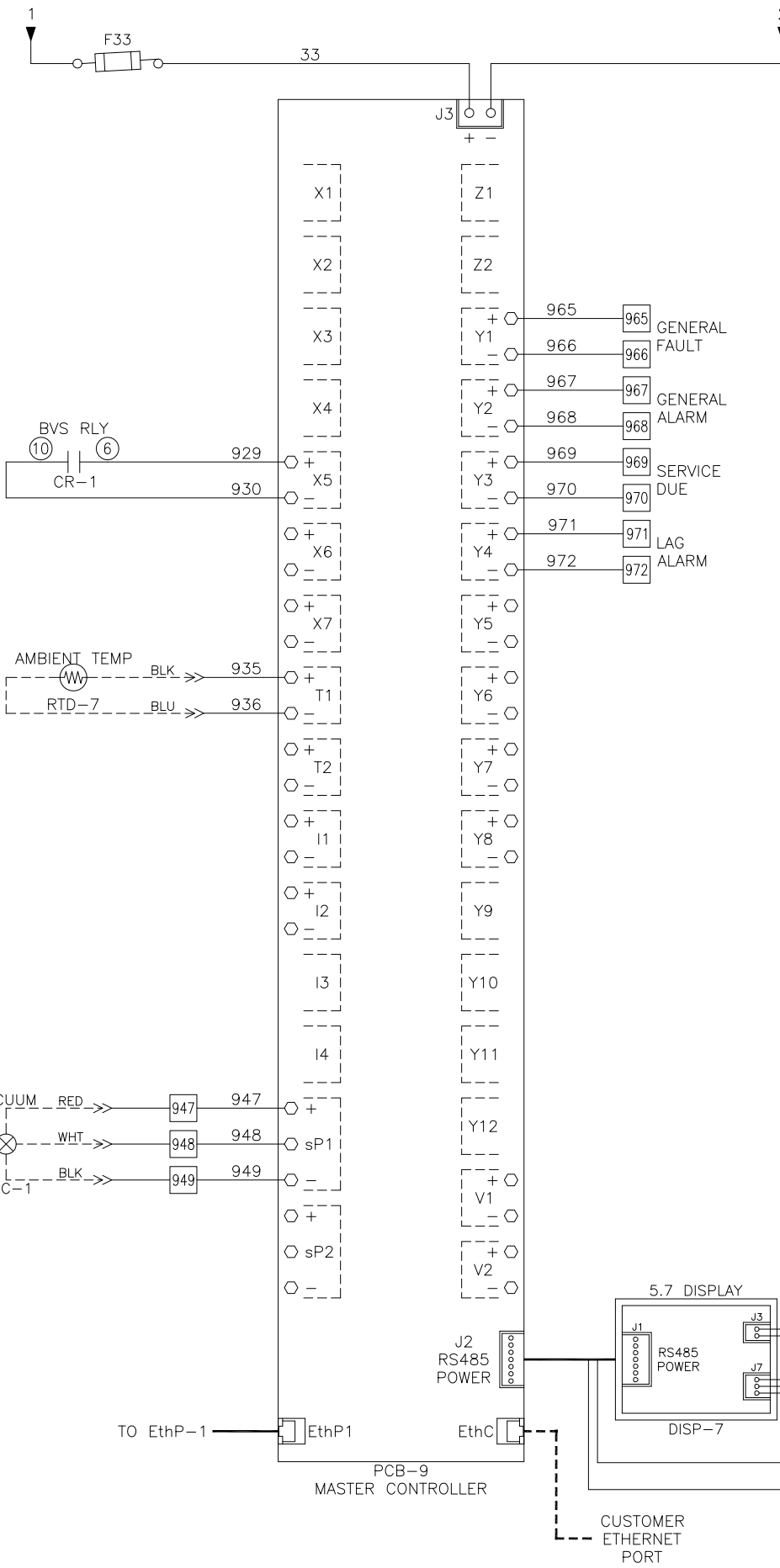
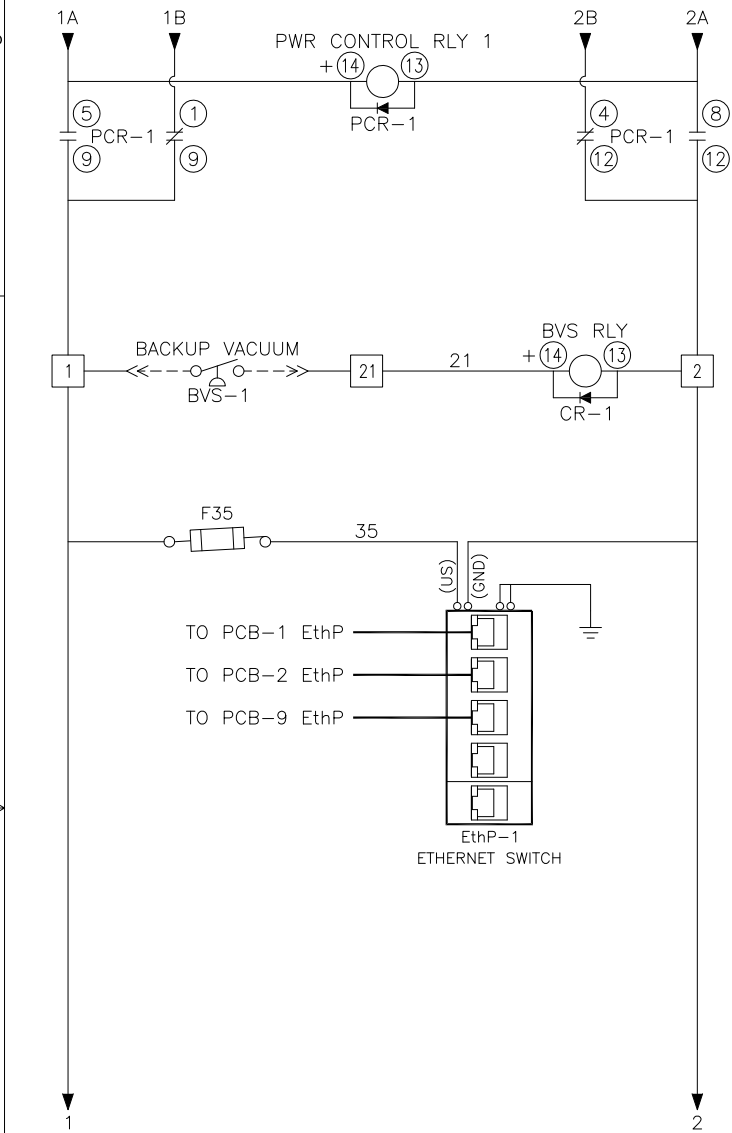
208 - 460 V
 3 Ø
 50 / 60 Hz
 SCCR: 5 kA



Revised: DAG	Date: 04/28/17	Drawn: JAH	Date: 02/01/11
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.			Scale: NTS
Description: DWG WIRING CONTROL DX CLAW 2-15HP 208-460/3/50-60		Part Number: 4107 8527 05 DN: HOP 170417 00 Rev: 12 Sheet 2 of 3	

Notes:

- 1. FIELD WIRING TO BE COPPER RATED FOR 75°C MINIMUM.
- 2. - - - - - INDICATES FIELD WIRING OUTSIDE OF CABINET.



Revised: DAG	Date: 04/28/17	Drawn: JAH	Date: 02/01/11
			Scale: NTS
Description: DWG WIRING CONTROL DX CLAW 2-15HP 208-460/3/50-60			Part Number: 4107 8527 05 DN: HOP 170417 00 Rev: 12 Sheet 3 of 3