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:

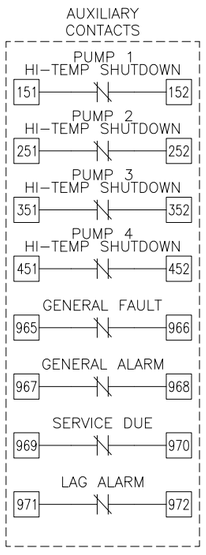
THE MASTER PCB WILL CONTROL THE ADAPTIVE FUNCTIONALITY OF THE SYSTEM. THE ADAPTIVE CONTROL CAUSES THE VACUUM PUMPS TO START BASED ON THE VACUUM LEVEL. THE SIGNAL TO STOP IS BASED ON THE LENGTH OF TIME THE VACUUM SYSTEM WAS NOT RUNNING. THE MASTER PCB DETERMINES THE MINIMUM RUN TIME OF A PUMP ONCE IT 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 FOURTH 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) CLOSES AND STOP WHEN THE RUN TIMER EXPIRES.



NOTE:
AUXILIARY CONTACTS 151–152, 251–252, 351–352, 451–452, & 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
5.4–7.5 HP	106.4 AMPS	96.7 AMPS	62.0 AMPS	48.9 AMPS
8.7–10 HP	134.4 AMPS	122.2 AMPS	79.0 AMPS	61.6 AMPS
15 HP	199.9 AMPS	181.7 AMPS	117.3 AMPS	91.4 AMPS

MAXIMUM OVERCURRENT PROTECTION (MOP)

SYSTEM HP	208 V	230 V	380/400 V	460 V
5.4–7.5 HP	127.0 AMPS	115.5 AMPS	73.5 AMPS	57.7 AMPS
8.7–10 HP	161.7 AMPS	147.0 AMPS	94.5 AMPS	73.5 AMPS
15 HP	242.5 AMPS	220.5 AMPS	141.7 AMPS	110.2 AMPS

INDIVIDUAL MOTOR NAMEPLATE FULL LOAD AMPERES

SYSTEM HP	208 V	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	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
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

QUADRAPLEX SYSTEM FULL LOAD AMPERES

SYSTEM HP	208 V	230 V	380V/50Hz	460 V
5.4 HP	57.6 AMPS	53.0 AMPS	24.4 AMPS	26.9 AMPS
6.4 HP	72.4 AMPS	71.4 AMPS	39.6 AMPS	36.1 AMPS
7.5 HP	99.6 AMPS	81.0 AMPS	42.8 AMPS	40.9 AMPS
8.7 HP	103.2 AMPS	98.6 AMPS	53.2 AMPS	49.7 AMPS
10 HP	111.6 AMPS	97.0 AMPS	58.0 AMPS	48.9 AMPS
15 HP	164.8 AMPS	142.6 AMPS	60.0 AMPS	71.7 AMPS

FUSE SELECTION CHART (MAX FUSE SIZES SHOWN)

FUSES	208 V	230 V	380 V	460 V
F1/F2/F4/F5/ F7/F8/F10/F11	6.0 AMPS	6.0 AMPS	6.0 AMPS	6.0 AMPS
F3/F6/F9/F12	---	---	6.0 AMPS	6.0 AMPS
F21–F24	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–F12 ARE LITTELFUSE KLDR 600V TYPE
F21–F24/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 SETTINGS ("HgV)

ALTITUDE	LEAD CUT–OFF		LAG CUT–ON		MAXIMUM LIMITS				MINIMUM LIMITS			
		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)

				O2 ASSURED PUMPS			
ALTITUDE	5.4HP	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)

			15HP O2A
BVS–1	CUT–ON	15	14

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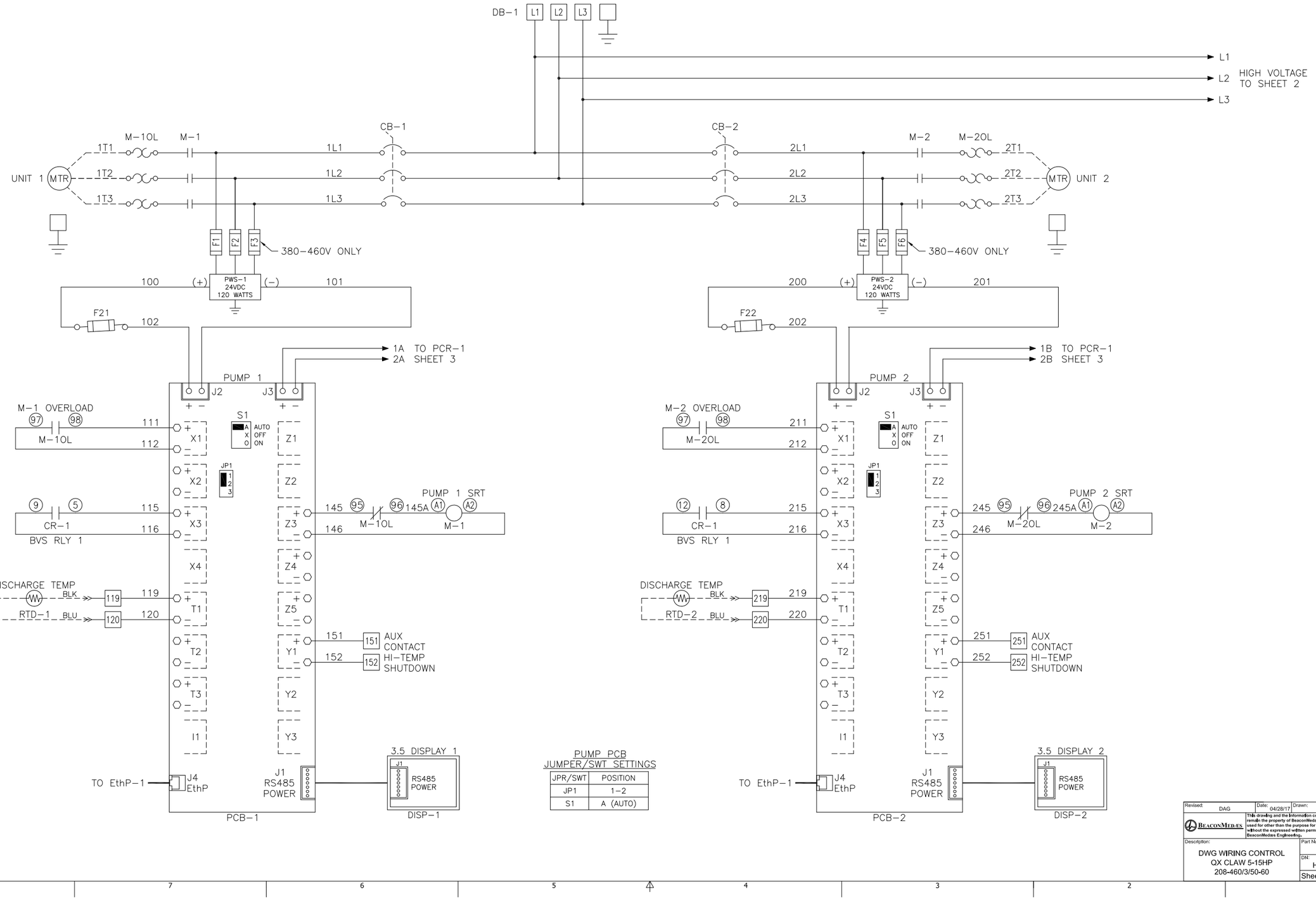
			D
Description: DWG WIRING CONTROL QX CLAW 5-15HP 208-460/3/50-60		Part Number: 4107 8527 13	
		DN: HOP 170417 00	Rev: 12
		Sheet 1 of 4	DO NOT SCALE THIS DOCUMENT

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.

208 - 460 V
3 Ø
50 / 60 Hz

SCCR: 5 kA



PUMP PCB
JUMPER/SWT SETTINGS

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

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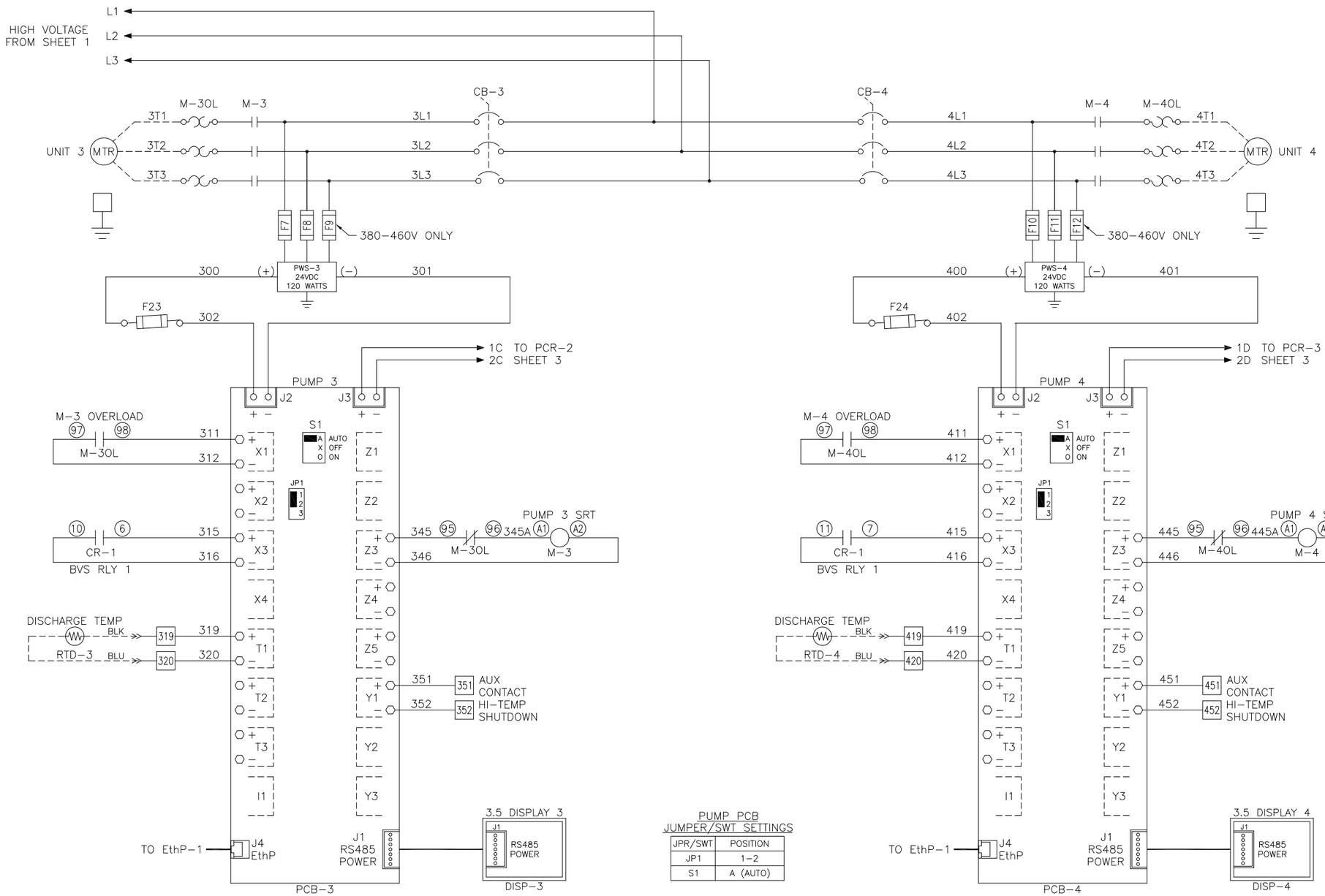

PUMP PCB JUMPER/SWT SETTINGS

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

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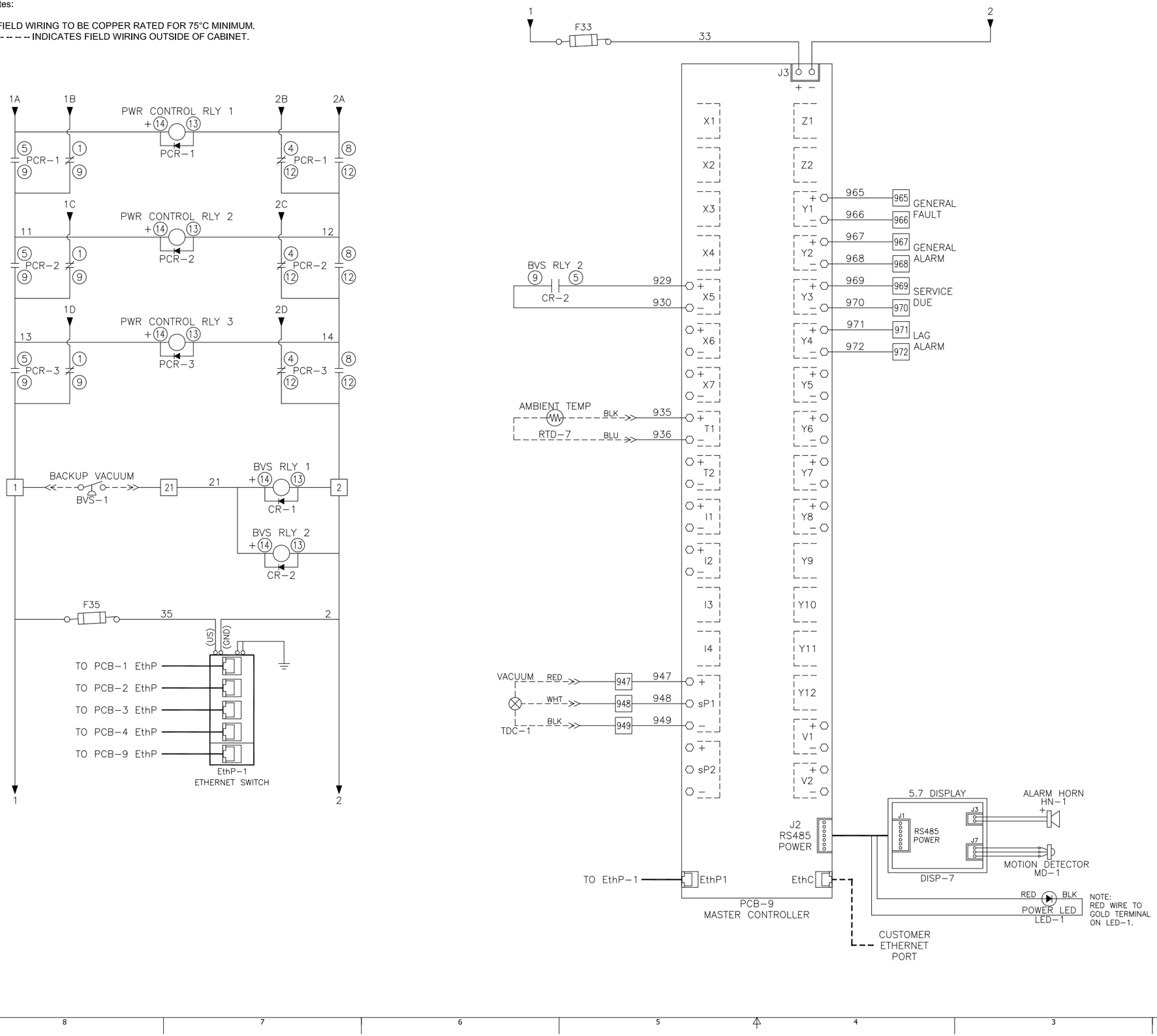

Revised:	Date:	Drawn:	Date:
DAG	04/28/17	JAH	02/01/11

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Scale: NTS

D

Description: DWG WIRING CONTROL QX CLAW 5-15HP 208-460/3/50-60

Part Number: 4107 8527 13

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