

ABP–3000 BLOWER PURGE
HEATED DESICCANT AIR DRYER
ELECTRICAL SCHEMATICS

WIRING METHODS
POWER 460V = BLACK THHN
120VAC = RED 16AWG
NEUTRAL = WHITE 16AWG
24VDC = BLUE 18AWG
24V COMMON = WHITE/BLUE 18AWG
GROUND = GREEN

SCHEMATIC TYPICAL INDEX
POWER DISTRIBUTION/BRANCH CIRCUITS
PLC BASE UNIT INPUT/OUTPUTS
PLC OUTPUT CARD
PLC THERMOCOUPLE CARD
TERMINAL LAYOUTS
ENCLOSURE

MAX VOLTAGE_____460_____

TOTAL MCA_____128 AMP_____

LARGEST MOTOR FLA____21____

NUMBER OF PHASES_____3_____

FREQUENCY_____60HZ_____

CUSTOMER SERIAL
NO._____

UNDERWRITERS LAB SERIAL
NO.____



Test Wire Size Installed In Connector AWG or MCM (mm ²)		Tightening Torque, Pound-Inches (N.m)			
		Slotted Head No. 10 and Larger ¹		Hexagonal Head - External Drive Socket Wrench	
		Slot Width - 0.047 Inch (1.2 mm) or Less and Slot Length - 1/4 Inch (6.4 mm) or Less	Slot Width - Over 0.047 Inch (1.2 mm) or Slot Length - Over 1/4 Inch (6.4 mm)	Split-Bolt Connectors	Other Connectors
18-10	(.082-5.3)	20 (2.3)	35 (4.0)	80 (9.0)	75 (8.5)
8	(8.4)	25 (2.8)	40 (4.5)	80 (9.0)	75 (8.5)
6-4	(13.3-21.2)	35 (4.0)	45 (5.1)	165 (18.6)	110 (12.4)
3	(26.7)	35 (4.0)	50 (5.6)	275 (31.1)	150 (16.9)
2	(33.6)	40 (4.5)	50 (5.6)	275 (31.1)	150 (16.9)
1	(42.4)	-	50 (5.6)	275 (31.1)	150 (16.9)
1/0-2/0	(53.5-67.4)	-	50 (5.6)	385 (43.5)	180 (20.3)
3/0-4/0	(85.0-107.2)	-	50 (5.6)	500 (56.5)	250 (28.2)
250-350	(127-177)	-	50 (5.6)	650 (73.4)	325 (36.7)
400	(203)	-	50 (5.6)	825 (93.2)	325 (36.7)
500	(253)	-	50 (5.6)	825 (93.2)	375 (42.4)
600-750	(304-380)	-	50 (5.6)	1000 (113.0)	375 (42.4)
800-1000	(406-508)	-	50 (5.6)	1000 (124.3)	500 (56.5)
1250-2000	(635-1010)	-	-	1100 (124.3)	600 (67.8)

TABLE 7.4:

¹ For values of slot width or length not corresponding to those specified, select the largest torque value associated with the

conductor size. Slot width is the nominal design value. Slot length is measured at the bottom of the slot.

NOTES:

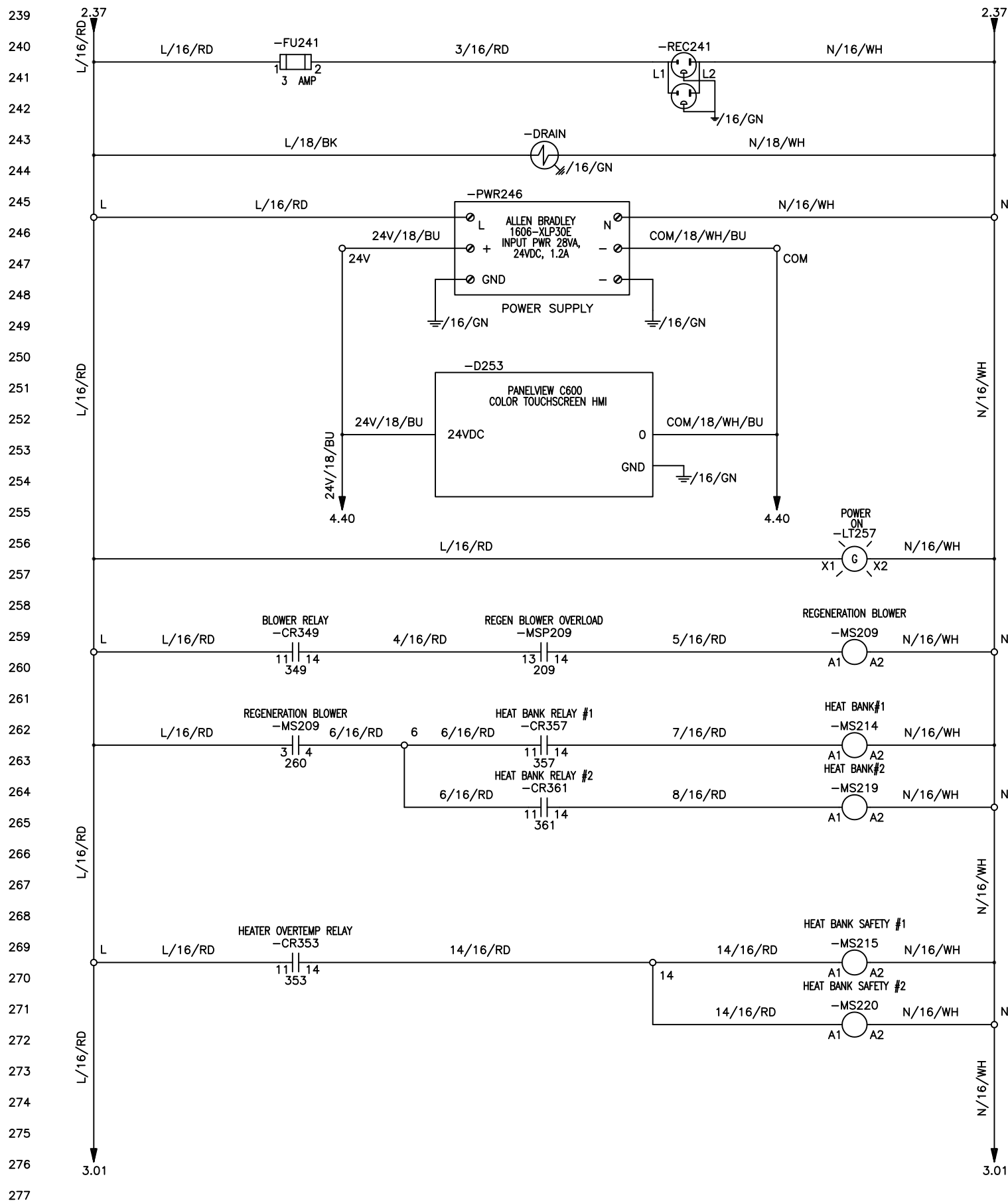
REV	REVISION DESCRIPTION	APPROVAL/DATE
1	PRODUCTION REDLINES	08/20/2015
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Maryville, TN 37801

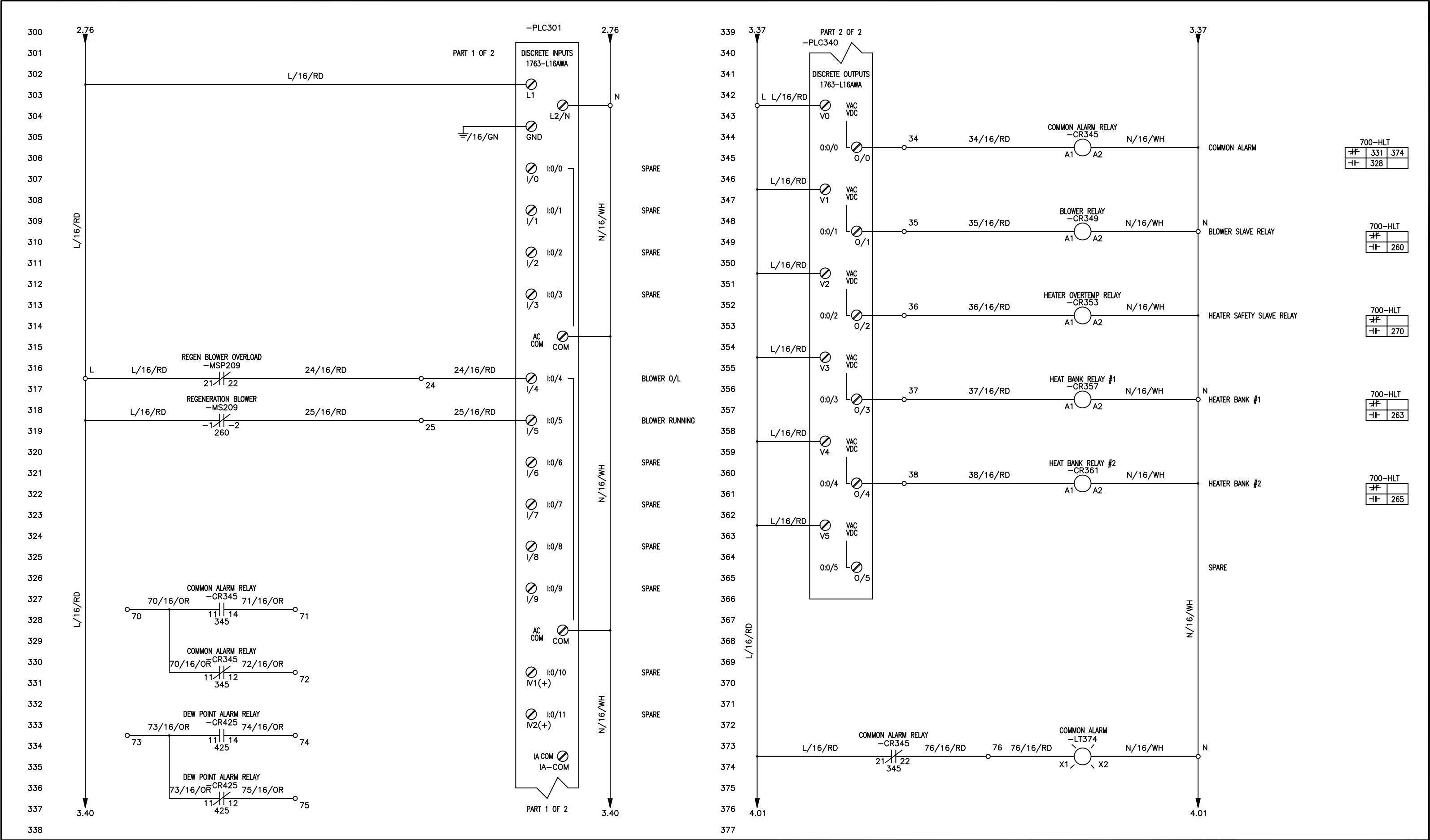
PROJECT ABP–3000	DRAWN BY TRAVIS.RYAN	DATE 02/14/13
TITLE DESCRIPTION	CHK'D BY MICHAEL.SCWEER	DATE 02/14/13
PAGE DESCRIPTION TORQUE TABLE	JOB No. ABP–E8	DRAWING No. AG3935967 - 1 of 8
PAGE DESCRIPTION		



DATE
02/12/2013

DATE
02/12/2013

DRAWING No.
AG3935967 - 2 of 8



#	331	374
-I-	328	

#	
-I-	260

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-I-	270

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-I-	263

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-I-	265

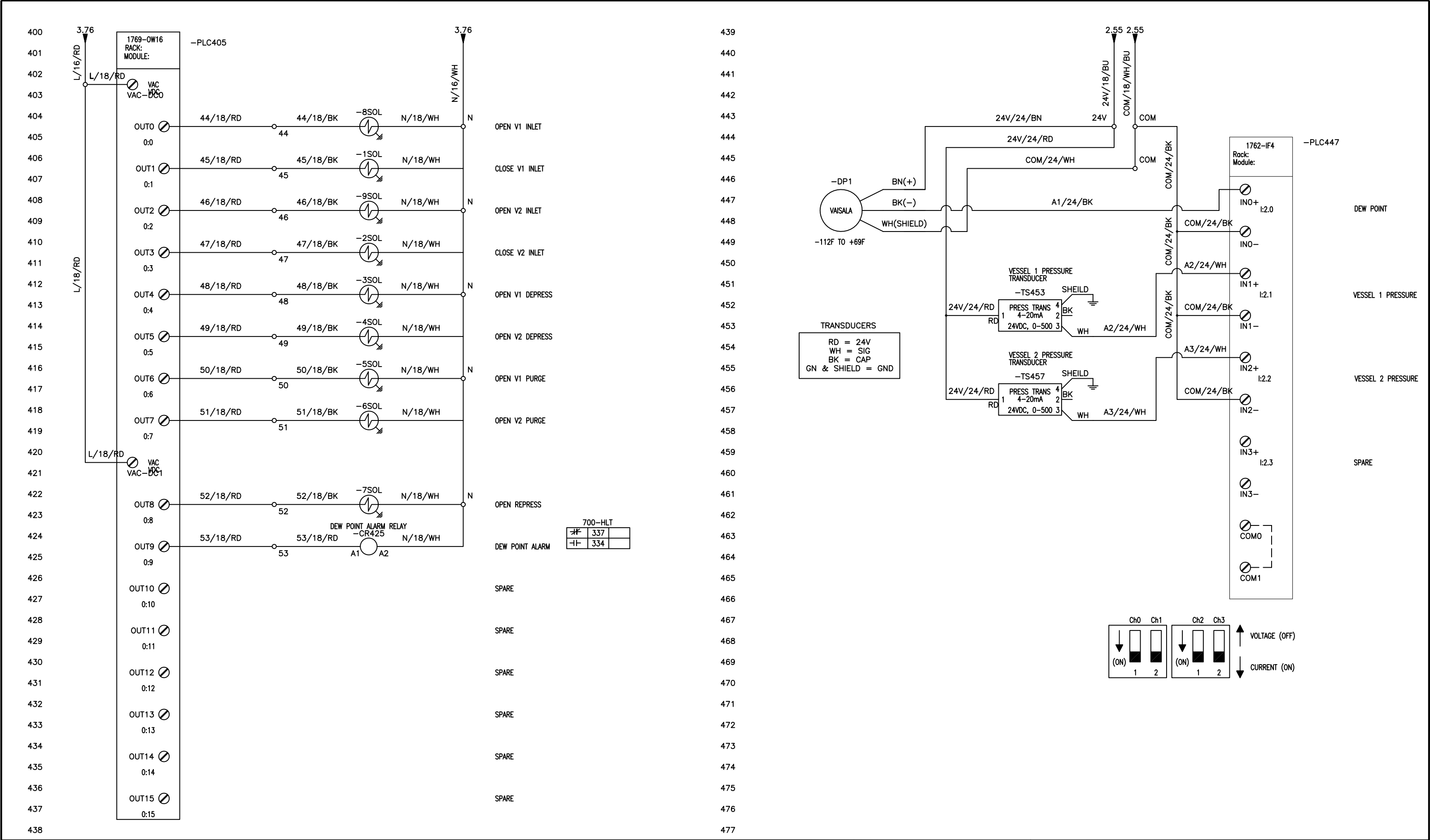
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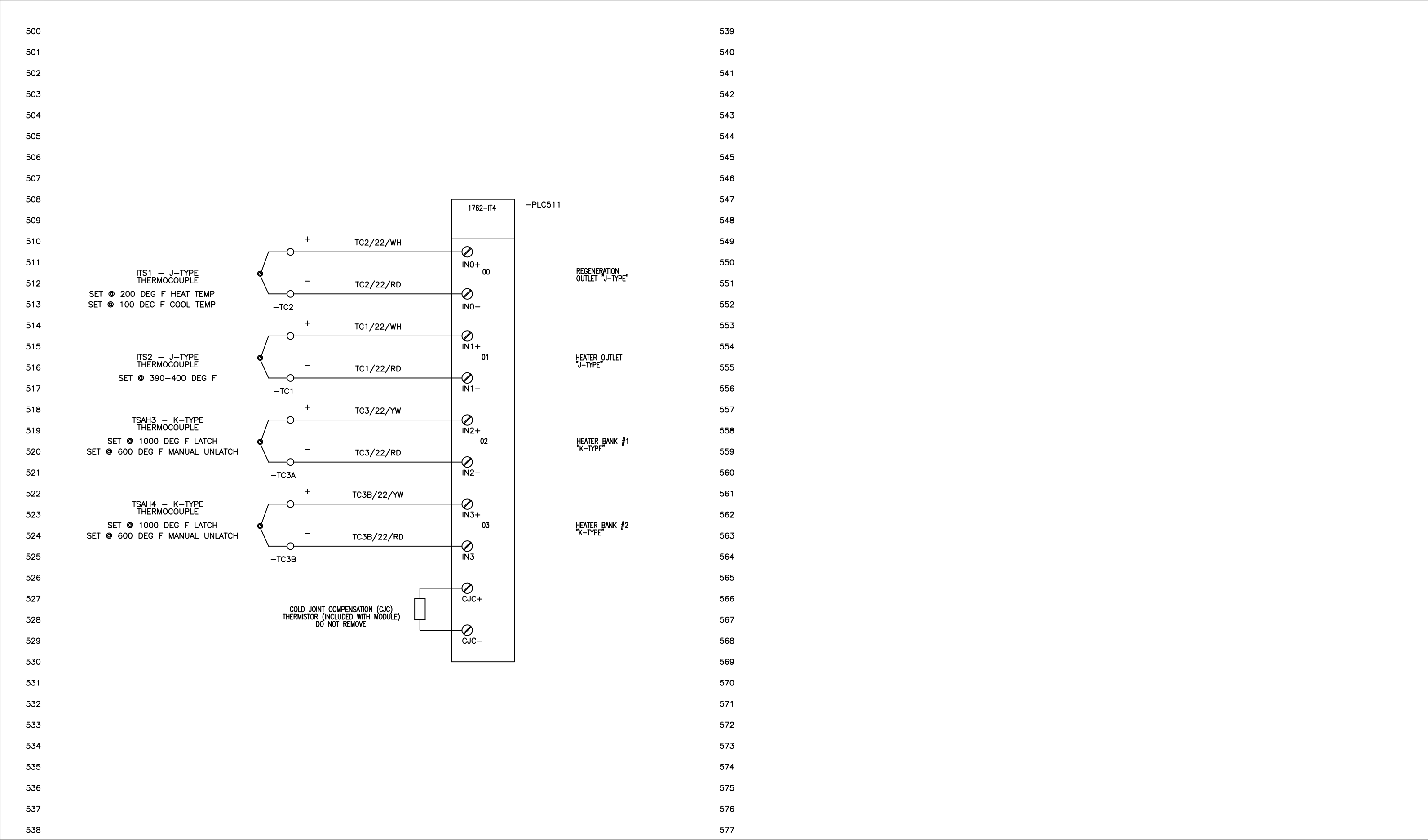
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TITLE DESCRIPTION	CHK'D BY MICHAEL.SCHWEER	DATE 02/12/2013
PAGE DESCRIPTION ELECTRICAL SCHEMATICS	JOB No.	DRAWING No.
PAGE DESCRIPTION PLC BASE INPUTS	ABP-E8	AG3935967 - 3 of 8



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	2	DMT SENSOR CHANGED	08/01/2016		PAGE DESCRIPTION ELECTRICAL SCHEMATICS	JOB No.	DRAWING No.
			/		PAGE DESCRIPTION PLC BASE OUTPUTS	ABP-E8	AG3935967 - 4 of 8



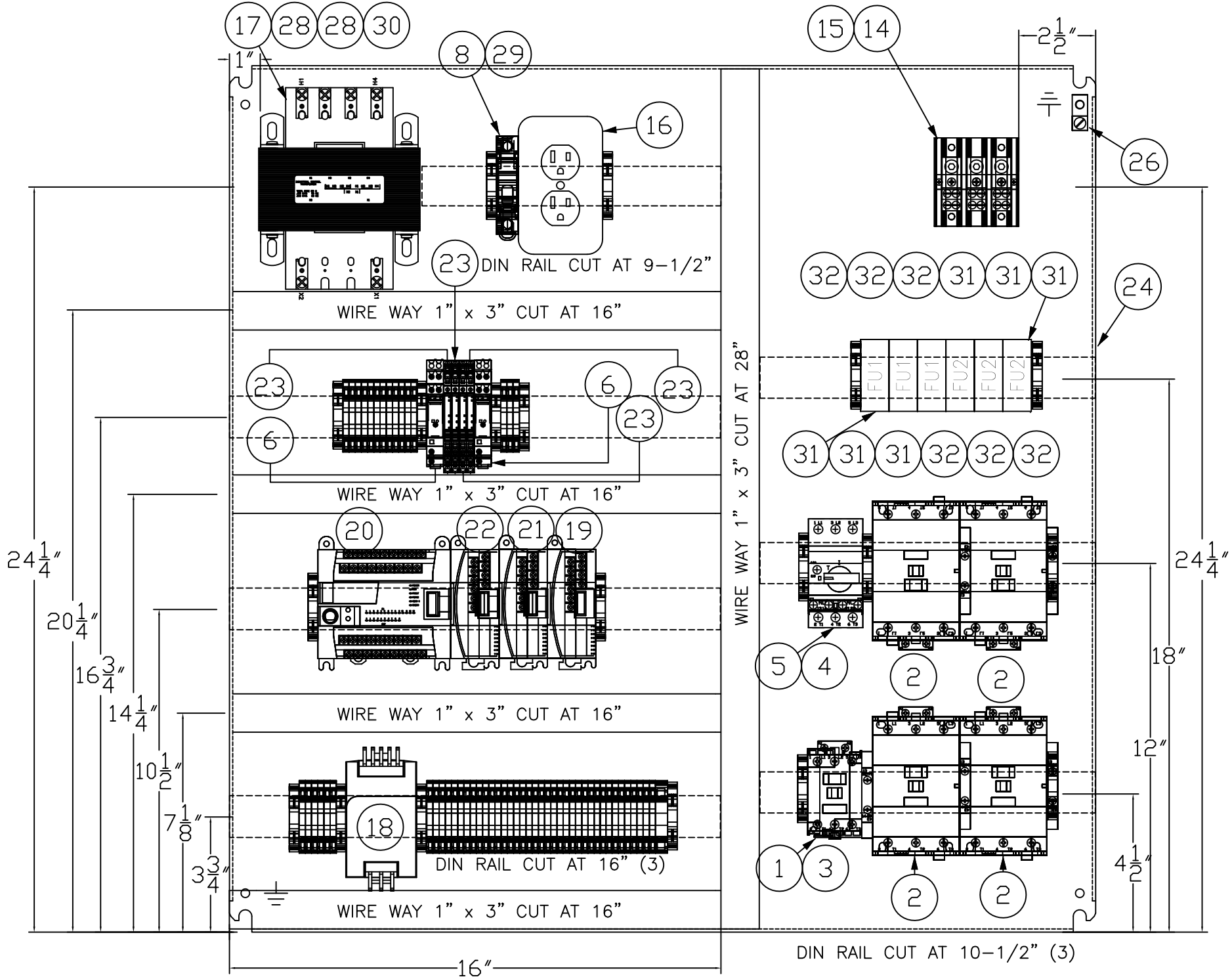
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			/		PAGE DESCRIPTION	ELECTRICAL SCHEMATICS				
			/		PAGE DESCRIPTION	PLC THERM INPUTS		JOB No. ABP-E8	DRAWING No. AG3935967 - 5	of 8

TOP ROW TERMINALS

BOTTOM ROW TERMINALS

END ANCHOR	N	N	N	N	N	N	L	L	L	L	24	25	END ANCHOR	RELAY	RELAY	RELAY	RELAY	RELAY	END ANCHOR	GND-J3	GND-J3	GND-J3	END ANCHOR	
END ANCHOR	24V	24V	24V	COM	COM	COM	END ANCHOR	PWR SUPPLY	END ANCHOR	N	N	N	N	N	N	L	L	L	L	2	6	14	34	35

BOND L's AND N's



ITEM#	AIRCEL PART NUMBER	DESCRIPTION	QTY
1	AG3948913	CONTACTOR, 15HP @460V	1
2	AG3939572	CONTACTOR, 40HP @ 460V	4
3	AG3948852	CONTACTOR, SIDE MOUNT, AUXILLA	1
4	AG3948844	SWITCH, AUXILLARY, FRONT MOUNT	1
5	AG3948914	MOTOR STARTER PROTECTOR, 18-25 AMPS	1
6	AG3948855	RELAY, SCREW TYPE, DPDT	2
7	AG3251901	ANCHOR, SCREW END, GRAY	21
8	AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1
9	AG3933345	TERMINAL BLK,GRAY, J3	36
10	AG3933672	TERMINAL BLOCK, BLUE, J3	11
11	AG3480613	TERMINAL BLOCK, GREEN/YELLOW, J10	1
12	AG3933346	TERMINAL BLOCK, GREEN/YELLOW, J3	7
14	AG3933254	POWER BLOCK COVER	1
15	AG3933253	POWER BLOCK, 600VAC,335A,	1
16	AG3939627	RECEPTACLE GFCI, STRAIGHT	1
17	AG3939554	TRANSFORMER,500VA,PRIM-230,460	1
18	AG3934654	POWER SUPPLY, 24VDC	1
19	AG3480143	PLC, THERMOCOUPLE CARD, IT4	1
20	AG3480020	PLC, ML-1100	1
21	AG3480021	PLC, ANALOG CARD, IF4	1
22	AG3954507	PLC, OUTPUT CARD, OW16	1
23	AG3948856	RELAY, SCREW TYPE, SPDT	4
24	AG3939364	BACK PLATE, FITS 30x30 CONCEPT	1
25	AG3480590	COVER, WHITE DUCT, 1"	8
26	AG3482390	GROUND LUG	1
27	AG3480591	DUCT, WHITE, 1" x 3"	8
28	AG3443601	FUSE, 2-1/2 AMP	2
29	AG3329701	FUSE, 3 AMP	1
30	AG3443701	FUSE, 7 AMP	1
31	AG3112701	FUSE ,CUBE, 600VAC ,50 AMP,	6
32	AG3205401	FUSE HOLDER ,FOR CUBE FUSE, 1-	6

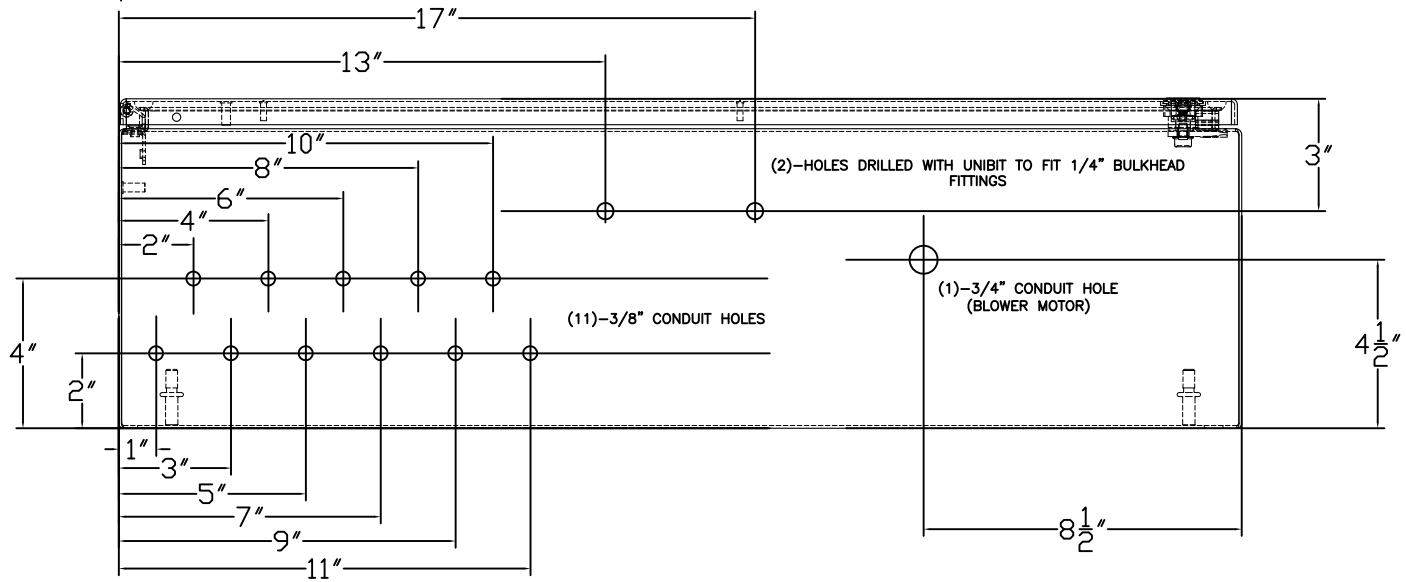
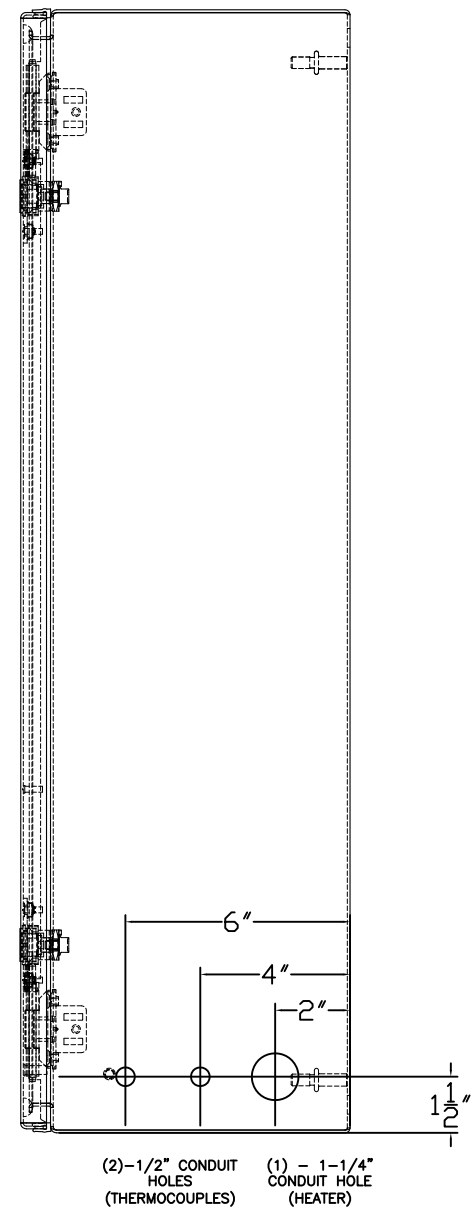
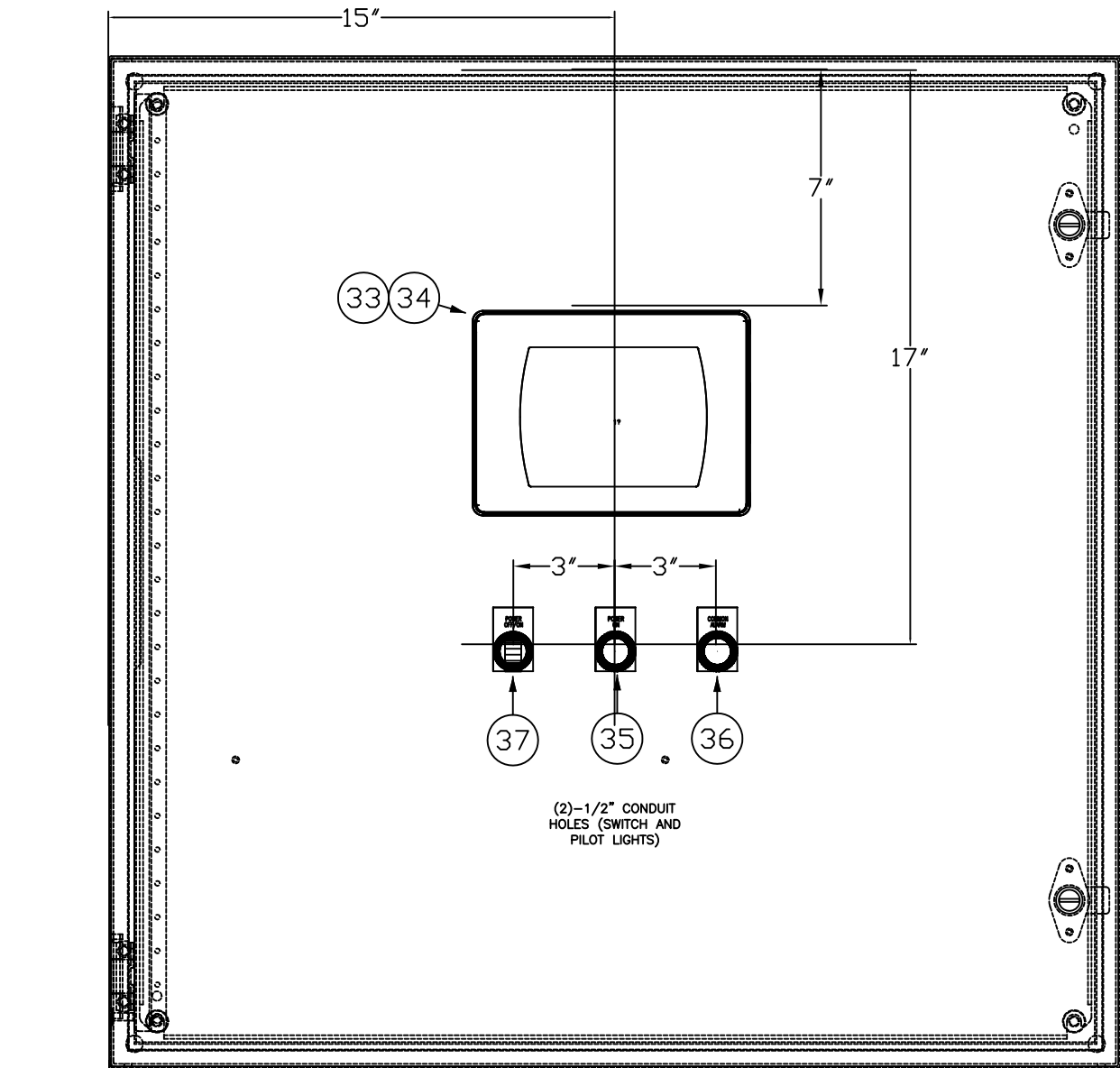
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TITLE DESCRIPTION		CHK'D BY	MICHAEL.SCHWEER	DATE	02/12/2013
PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.	ABP-E8	DRAWING No.	AG3935967 - 6 of 8
PAGE DESCRIPTION	PANEL LAYOUT				



ITEM#	AIRCEL PART NUMBER	DESCRIPTION	QTY
33	1C932208-US	CABLE, RS-232, 8-PIN MINI DIN	1
34	AG3992110	HMI, AB PANELVIEW C800, TOUCH SCREEN	1
35	AG3939623	LIGHT, GREEN, PLASTIC, 120VAC	1
36	AG3939624	LIGHT, RED, PLASTIC, 120VAC	1
37	AG3939622	SWITCH, 2-POS, PLASTIC	1
38	AG3481487	ENCLOSURE, CONCEPT, 30x30x8	1

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			/		PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.		DRAWING No.	
			/		PAGE DESCRIPTION	ENCLOSURE LAYOUT	ABP-E8		AG3935967 - 7	of 8

AIRCEL PART NUMBER	DESCRIPTION	QTY
AG3939572	CONTACTOR, 40HP @ 460V	4.0
AG3948852	CONTACTOR, SIDE MOUNT, AUXILLA	1.0
AG3948844	SWITCH, AUXILLARY, FRONT MOUNT	1.0
AG3948914	MOTOR STARTER PROTECTOR, 18-25 AMPS	1.0
AG3251901	ANCHOR, SCREW END, GRAY	21.0
AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1.0
AG3933345	TERMINAL BLOCK, GRAY, J3	41.0
AG3933672	TERMINAL BLOCK, BLUE, J3	12.0
AG3480613	TERMINAL BLOCK, GREEN/YELLOW, J10	1.0
AG3933346	TERMINAL BLOCK, GREEN/YELLOW, J3	6.0
AG3933254	POWER DISTRIBUTION BLOCK COVER	1.0
AG3933253	POWER DISTRIBUTION BLOCK, 600VAC,335A,	1.0
AG3939627	RECEPTACLE GFCI, STRAIGHT	1.0
AG3939554	TRANSFORMER,500VA,PRIM-230,460	1.0
AG3934654	POWER SUPPLY, 24 VDC	1.0
1C932208-US	CABLE, RS-232, 8 PIN MINI DIN	1.0
AG3480143	PLC, THERMOCOUPLE CARD, IT4	1.0
AG3480020	PLC, ML-1100	1.0
AG3480021	PLC, ANALOG CARD, IF4	1.0
AG3954507	PLC, OUTPUT CARD, OW16	1.0
1C932146-US	SOLENOID 1/8" 4/2 115/120V 50	9.0
AG3992110	HMI, AB PANEVIEW C800, TOUCH SCREEN	1.0
AG3948856	RELAY, SCREW TYPE TERMINAL, SPDT	4.0
AG3939623	LIGHT, GREEN, NEMA-4X, 120VAC	1.0
AG3939624	LIGHT, RED, NEMA-4X, 120VAC	1.0
AG3939622	SWITCH, 2-POS, NEMA-4X	1.0
AG3481487	ENCLOSURE, ELECTRICAL, 30x30x8	1.0
AG3939364	PANEL, BACK PLATE, FITS 30x30	1.0
AG3480590	COVER, WHITE DUCT, 1"	8.0
AG3480591	DUCT, WHITE, NARROW, SLOT, 1"x 3"	8.0
AG3443601	FUSE, 2-1/2 AMPS	2.0
AG3329701	FUSE, 3 AMPS	1.0
AG3443701	FUSE, 7 AMPS	1.0
AG3112701	FUSE ,CUBE, 600VAC ,50 AMP,	6.0
AG3205401	FUSE HOLDER ,FOR CUBE FUSE, 1-	6.0
AG3936238	TRANSDUCER,PRESS,0-500PSI,	2.0
AG3948855	RELAY, SCREW TYPE TERMINAL, DPDT	2.0
AG3482390	GROUND LUG	1.0

NOTES:

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AIRCEL PART NUMBER	DESCRIPTION	QTY
AG3481092	CONDUIT, RIGID, 1/2"	10.0
AG3324101	ELBOW, PULLING, 1/2"	3.0
AG3481089	UNION, 1/2" FEMALE, CONDUIT,	3.0
AG3163401	CONDUIT RED DOT BODY "T"	1.0
AG3480859	CONDUIT, SEALTITE, FLEXIBLE, 3/4"	5.0
AG3313701	CONNECTOR 90 LIQUID TIGHT 3/4"	1.0
AG3314001	CONNECTOR STRAIGHT LIQUID TIGHT, 3/4"	1.0
AG3948913	CONTACTOR, 15HP @460V,	1.0
0900806	BOLT, 3/8" x 1-1/2"	4.0
AG3344601	NUT, KEEP, 3/8"	4.0
AG3342801	NIPPLE, CONDUIT, 1/2 x CLOSE	3.0
AG3296601	BUSHING, CONDUIT, 3/4" x 1/2"	2.0
AG3313601	CONNECTOR, ELBOW, 3/4"	4.0
AG3371501	WIRE, #6, BLACK	73.0
AG3352801	STRAP, 1-HOLE, 1-1/4"	1.0
AG3301501	BOLT, 5/16" x 1/2"	1.0
AG3370501	WASHER, 5/16", FLAT	4.0
AG3422801	WIRE, #8, BLACK	30.0
AG3372201	WIRE, #10, GREEN	25.0
AG3462801	WIRE, K-TYPE THERMOCOUPLE	20.0
AG3353101	CONDUIT CLAMP, 3/4"	1.0
AG3480860	CONDUIT, FLEX, 1/2"	20.0
AG3374301	WIRE, J-TYPE THERMOCOUPLE	53.0
AG3481460	CORD, 18/3	65.0
AG3372301	WIRE, #16, GREEN	16.0
AG3373901	WIRE, #16, ORANGE	10.0
AG3480947	WIRE, #18, RED	20.0
AG3275301	WIRE, #14, BLACK	4.0
AG3374201	WIRE, #16, RED	110.0
AG3374901	WIRE, #16, WHITE	28.0
AG3480463	WIRE, #18, BLUE	8.0
AG3480991	WIRE, #18, WHITE/BLUE	8.0
AG3465601	WIRE, 3CONDUCTOR, #24	10.0
AG3284101	WASHER, 3/8", FLAT	4.0
AG3481168	STRAIN RELIEF, 3/8"	11.0
AG3481158	LOCK NUT, 3/8"	11.0
AG3481159	RING SEAL, 3/8"	11.0
AG3163001	CONNECTOR, CONDUIT, STRAIGHT, 3/8"	1.0
AG3287701	CONNECTOR, CONDUIT, 90°, 3/8"	3.0
AG3480861	CONDUIT, FLEX, 3/8"	16.0
AG3480633	CONNECTOR, CONDUIT, 90°, 1-1/4"	2.0
AG3480863	CONDUIT, FLEX, 1-1/4"	6.0
AG3481252	TERMINAL LUG, ALUMINIUM	1.0

PROJECT	ABP-3000	DRAWN BY	TRAVIS.RYAN	DATE	03/11/13
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PAGE DESCRIPTION	EBOM	JOB No.	ABP-E8	DRAWING No.	AG3935967 - 8 of 8
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