

ABP-4000 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_____168.8 AMP_____

LARGEST MOTOR FLA____17.5____

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.

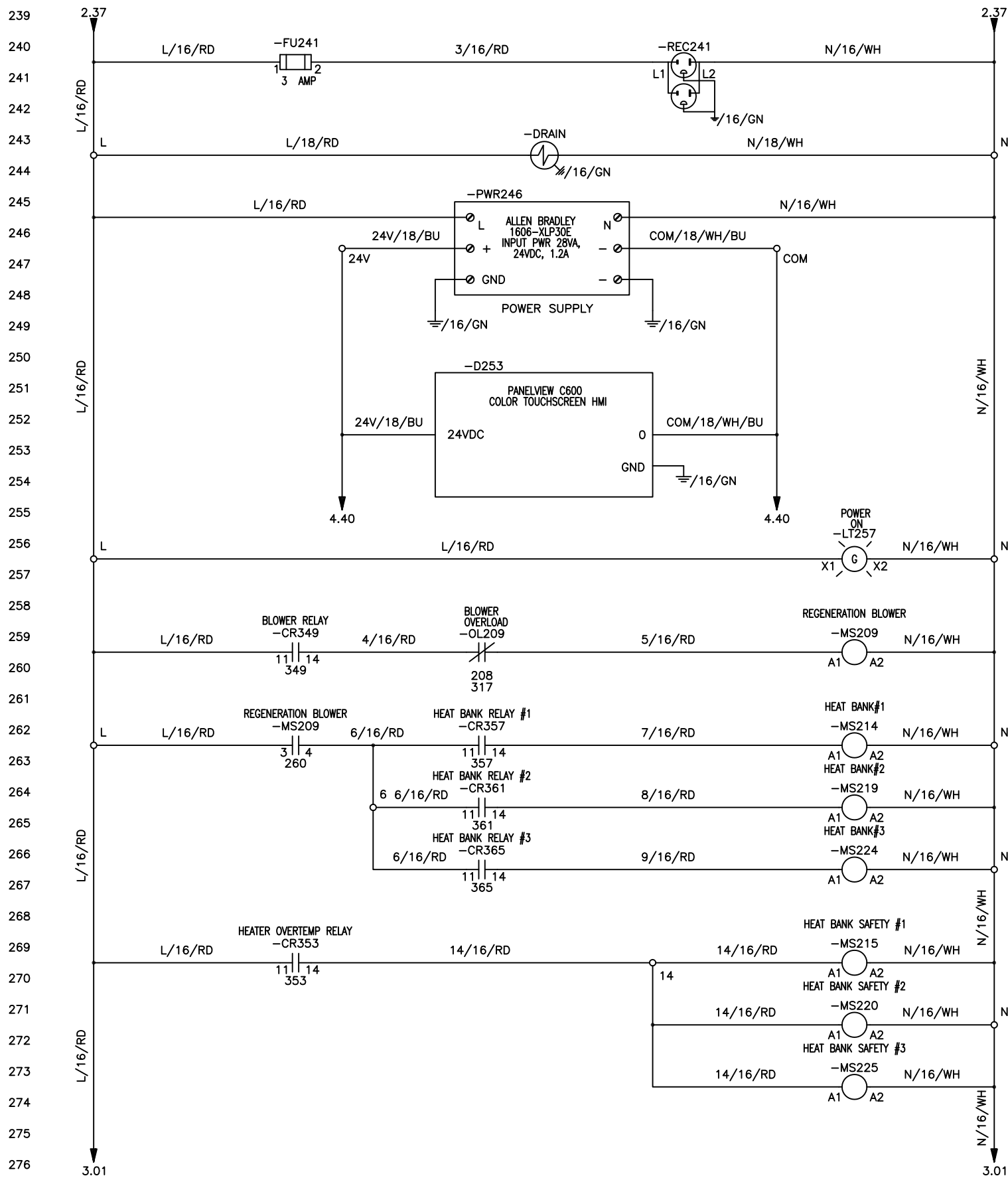
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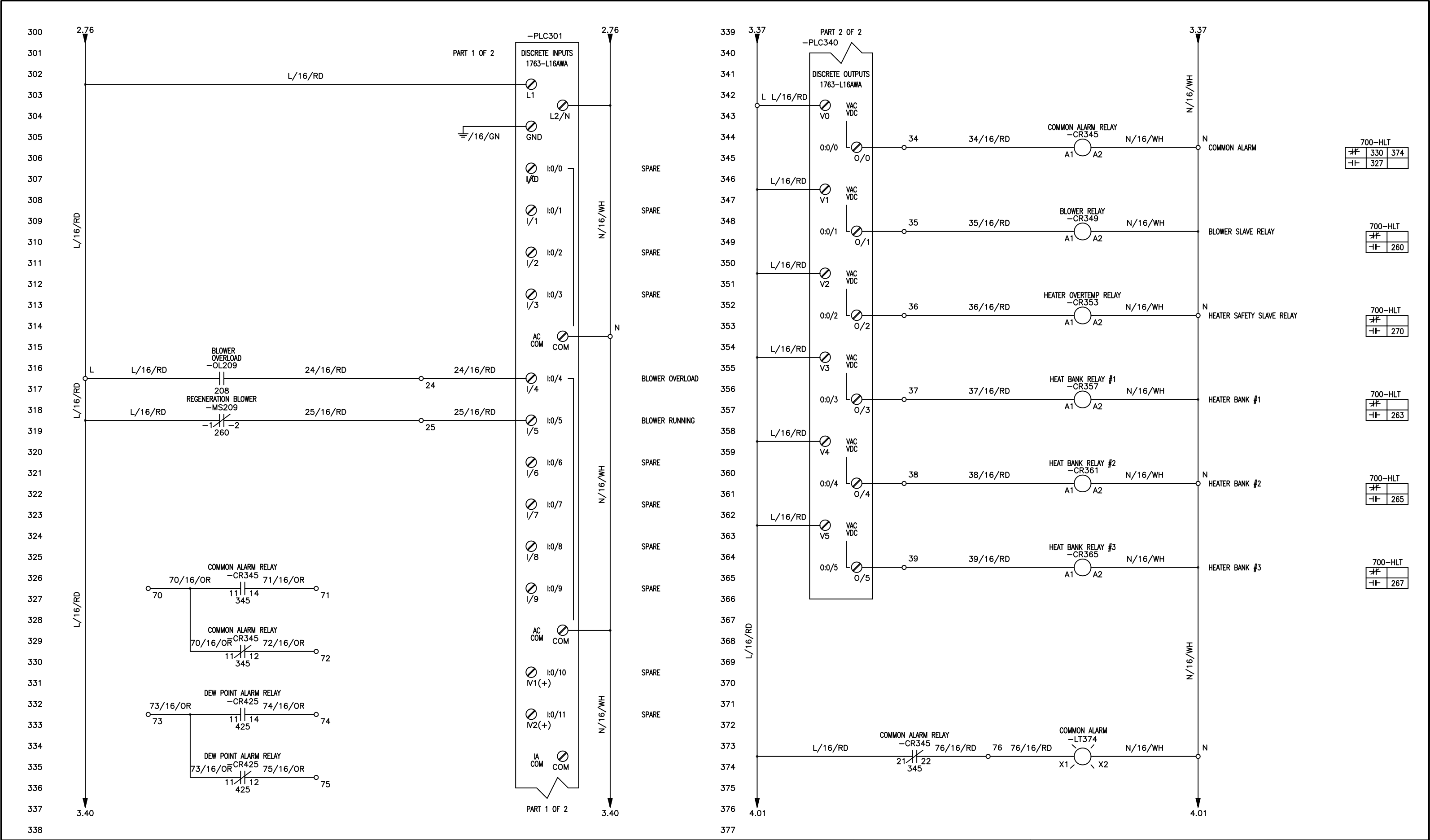
PROJECT ABP-4000	DRAWN BY TRAVIS.RYAN	DATE 02/14/13
TITLE DESCRIPTION	CHK'D BY MICHAEL.SCWEER	DATE 02/14/13
PAGE DESCRIPTION TORQUE TABLE	JOB No. ABP-E10	DRAWING No. AG3935969 - 1 of 8
PAGE DESCRIPTION		



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Aircel
323 Crisp Circle
Maryville, TN 37801

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PAGE DESCRIPTION	POWER DISTRIBUTION	ABP-E10	AG3935969 - 2 of 8		



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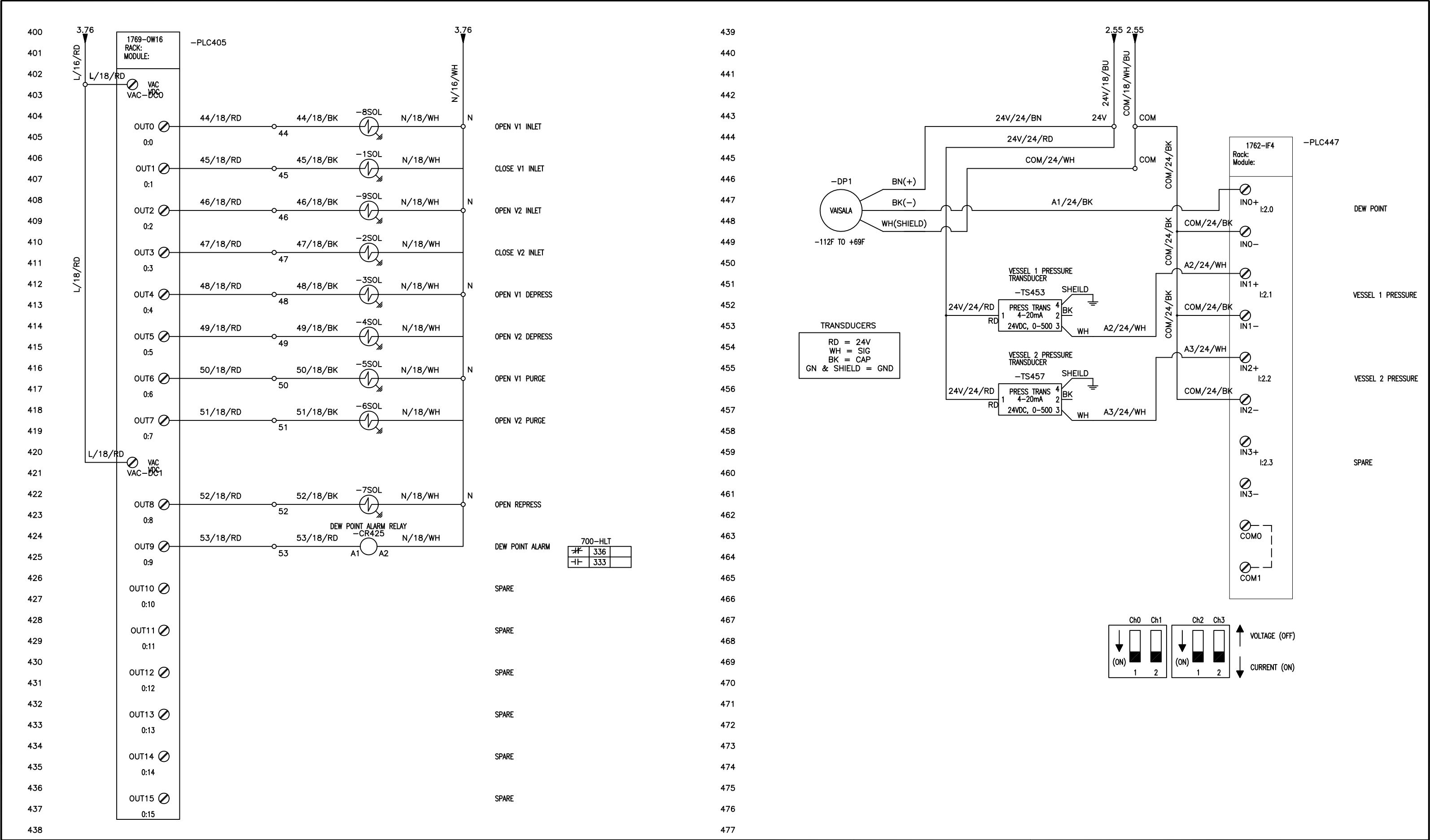
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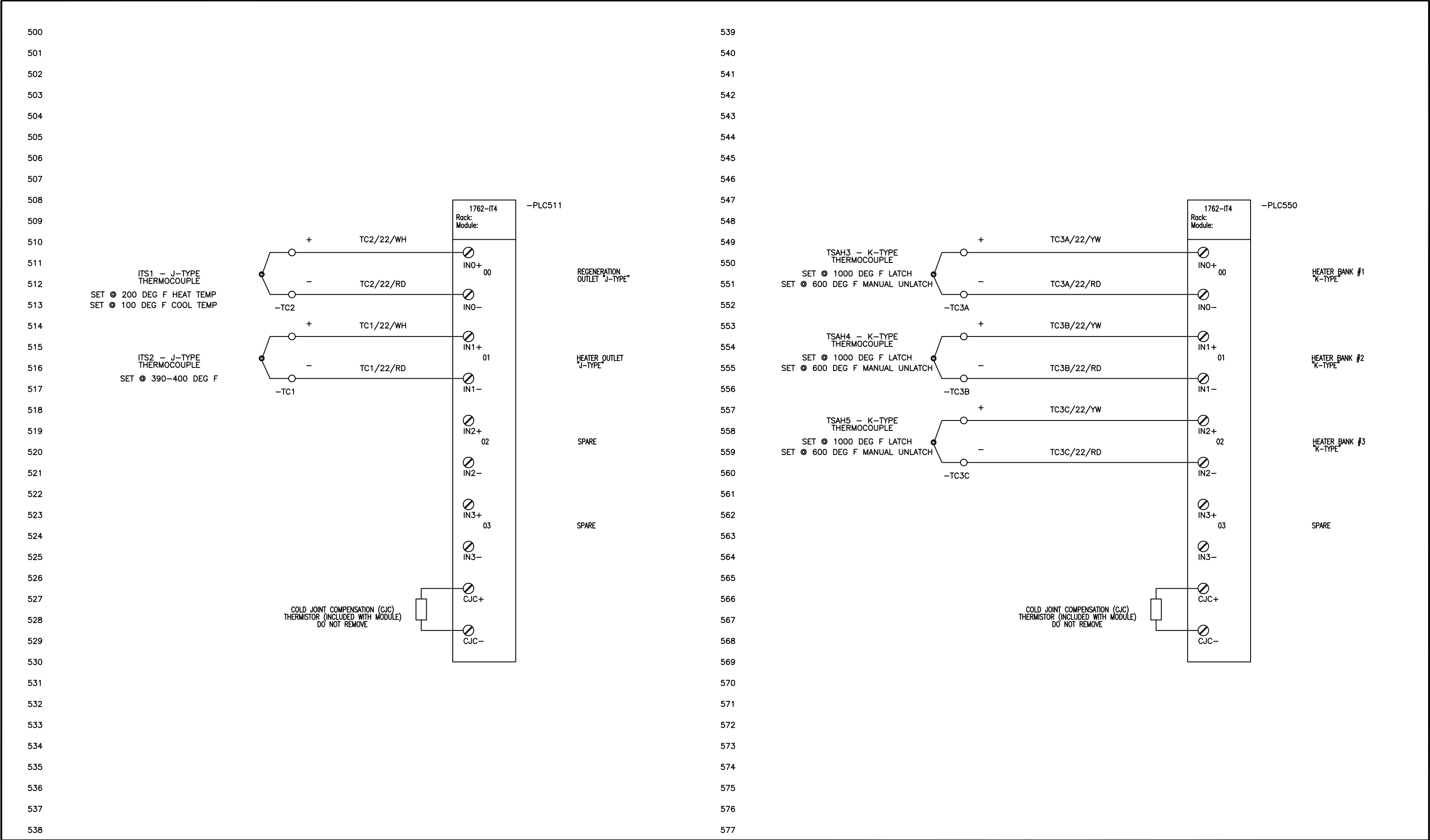
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			/		PAGE DESCRIPTION	PLC BASE INPUTS				

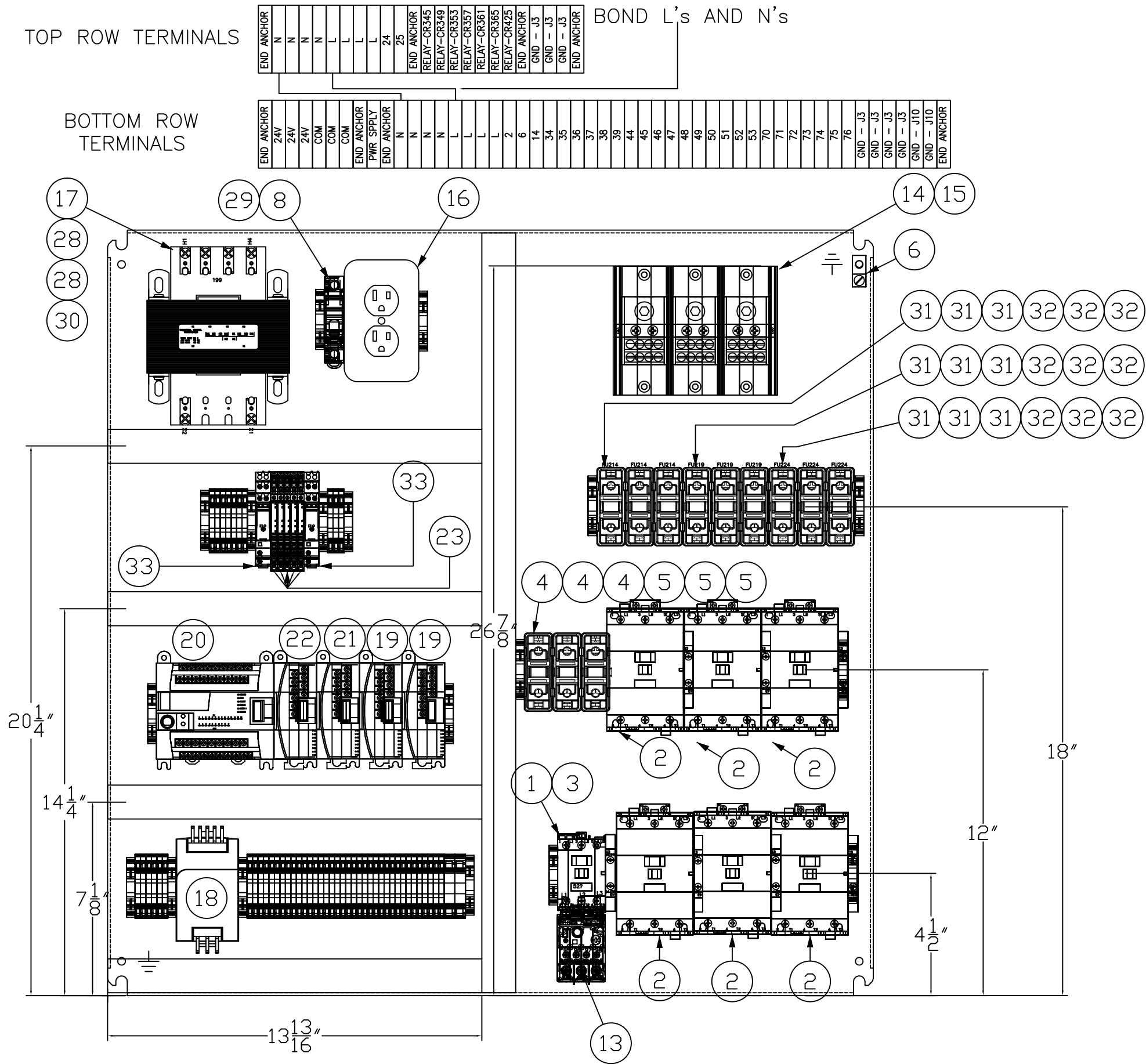




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			/		PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.	ABP–E10	DRAWING No.	AG3935969 - 5 of 8
			/		PAGE DESCRIPTION	PLC THERM INPUTS				

TOP ROW TERMINALS

BOTTOM ROW TERMINALS



ITEM#	AIRCEL PART NUMBER	DESCRIPTION	QTY
1	AG3948900	CONTACTOR, 15HP @ 460V	1
2	AG3939572	CONTACTOR, 40HP @ 460V	6
3	AG3948852	CONTACTOR, SIDE MOUNT, AUXILLARY	1
4	AG3478301	FUSE HOLDER, CUBE TYPE, SINGLE POLE	3
5	AG3948943	FUSE, 30 AMP, CUBE TYPE	3
6	AG3482390	GROUND LUG	1
7	AG3251901	ANCHOR, SCREW END, GRAY	19
8	AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1
9	AG3933345	TERMINAL BLOCK,GRAY, J3	40
10	AG3933672	TERMINAL BLOCK, BLUE, J3	8
11	AG3480613	TERMINAL BLOCK, GREEN/YELLOW, J10	2
12	AG3933346	TERMINAL BLOCK, GREEN/YELLOW, J3	7
13	AG3935829	OVERLOAD RELAY	1
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, 1.2 AMPS	1
19	AG3480143	PLC, THERMOCOUPLE CARD, IT4	2
20	AG3480020	PLC, MICROLOGIX-1100	1
21	AG3480021	PLC, ANALOG CARD, IF4	1
22	AG3954507	PLC, OUTPUT CARD, OW16	1
23	AG3948856	RELAY, SCREW TYPE, SPDT	5
24	AG3939364	BACK PLATE, FITS 30x30 CONCEPT	1
25	AG3480590	COVER, WHITE DUCT, 1"	8
27	AG3480591	DUCT, WHITE, NARROW, SLOT,	8
28	AG3443601	FUSE, 2-1/2 AMPS	2
29	AG3329701	FUSE, 3 AMPS	1
30	AG3443701	FUSE, 7 AMPS	1
31	AG3112701	FUSE ,CUBE, 600VAC ,50 AMP	9
32	AG3205401	FUSE HOLDER ,FOR CUBE FUSE	9
33	AG3948855	RELAY, SCREW TYPE, DPDT	2

NOTES:

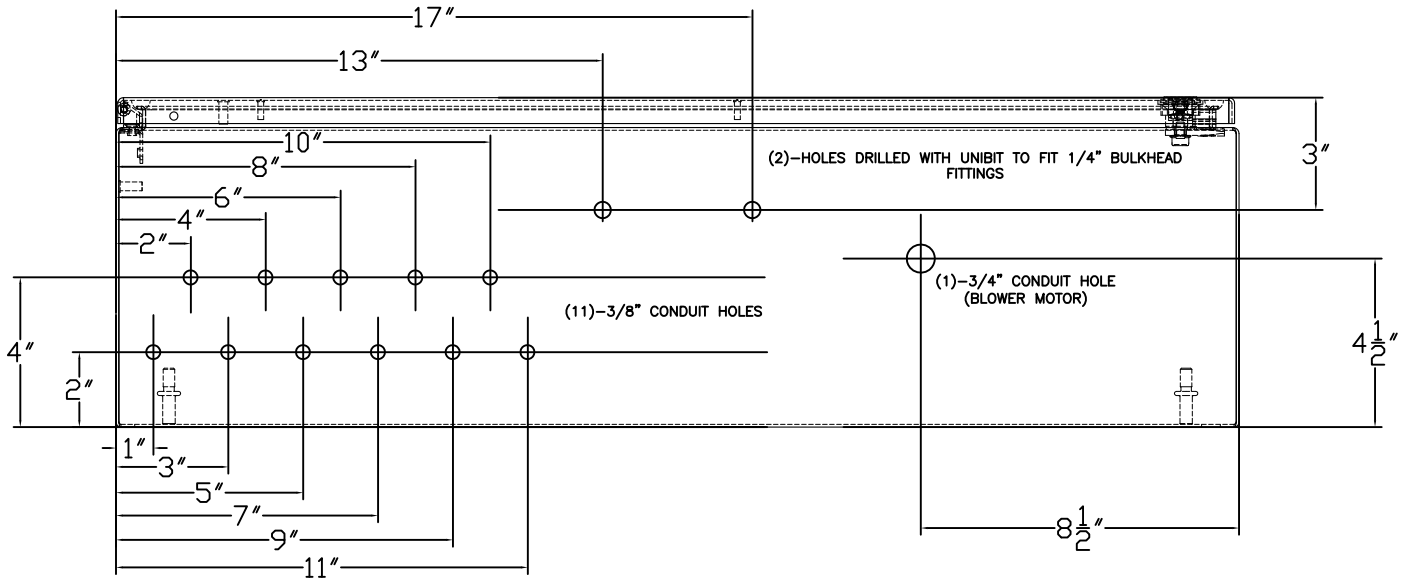
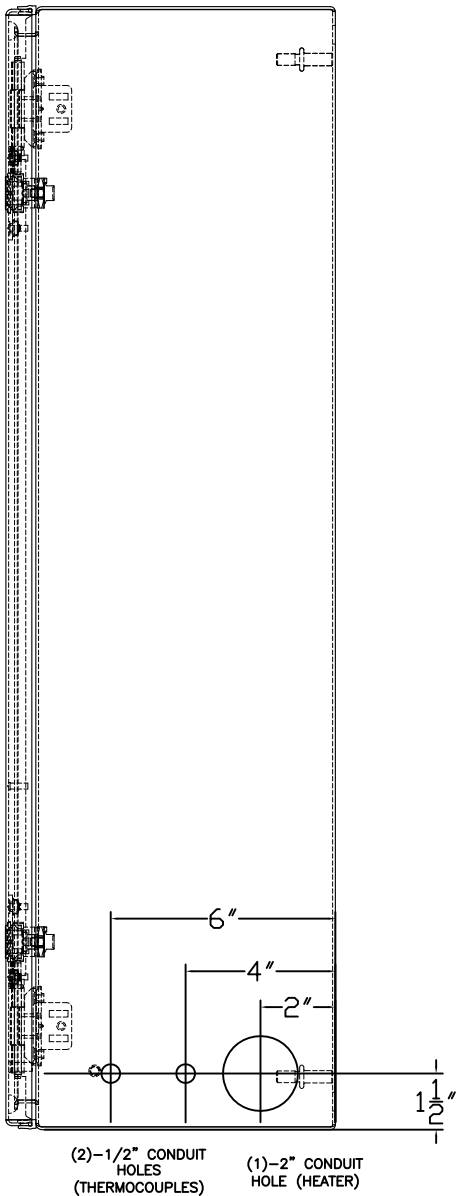
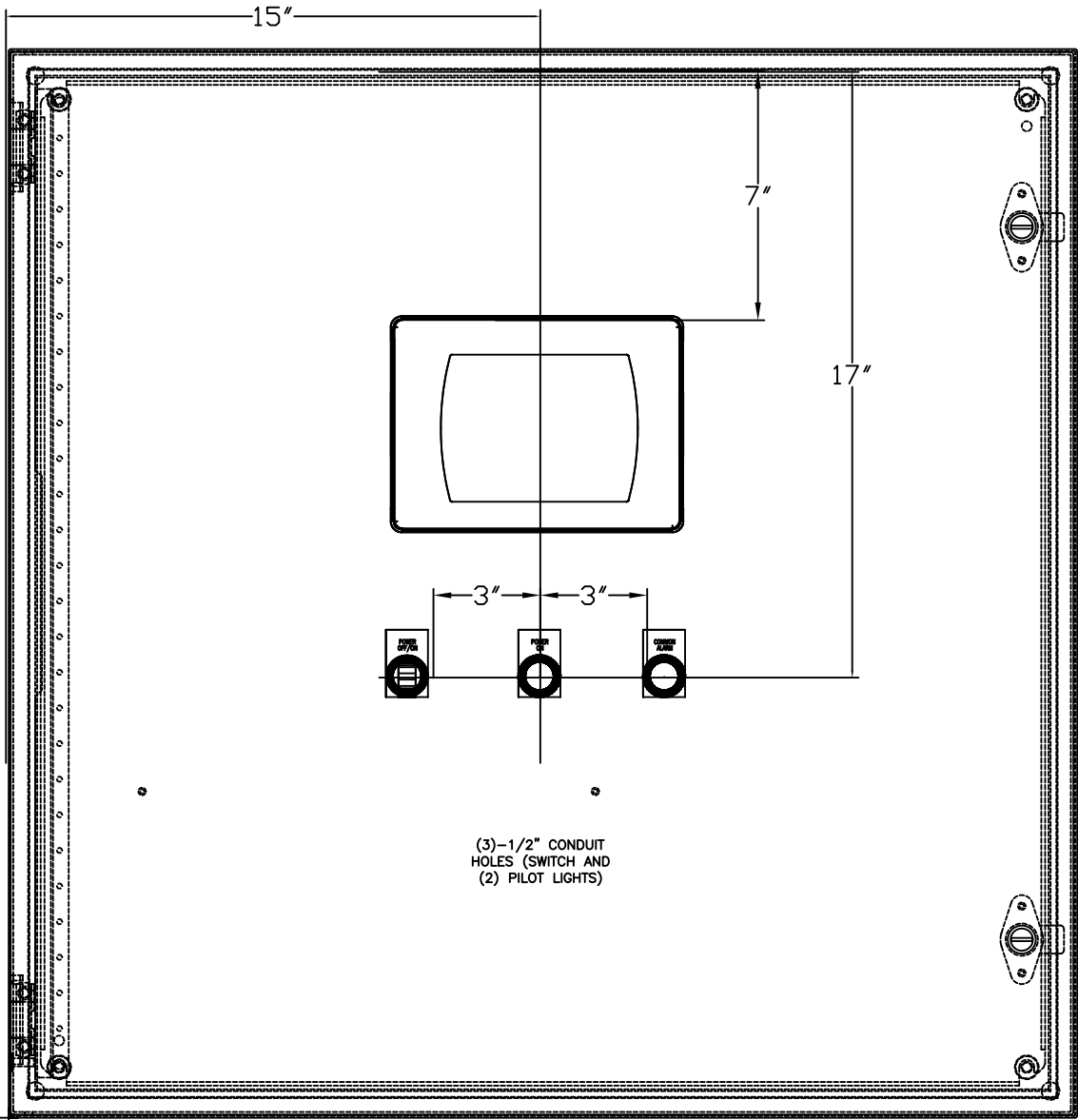
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PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.	ABP-E10	DRAWING No.	AG3935969 - 6 of 8
PAGE DESCRIPTION	PANEL LAYOUT				



ITEM#	AIRCEL PART NUMBER	DESCRIPTION	QTY
33	1C932208-US	CABLE, RS-232, 8 PIN MINI DIN	1
34	AG3992110	HMI, AB PANEVIEW C800	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, 30 X 30 X8	1

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PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.	ABP-E10	DRAWING No.	AG3935969 - 7 of 8
PAGE DESCRIPTION	ENCLOSURE LAYOUT				

AIRCEL PART NUMBER	DESCRIPTION	QTY
AG3939572	CONTACTOR, 40HP @ 460V	6.0
AG3948852	CONTACTOR, SIDE MOUNT, AUXILLARY	1.0
AG3478301	FUSE HOLDER, CUBE TYPE, SINGLE POLE	3.0
AG3948943	FUSE, 30 AMP, CUBE TYPE	3.0
AG3948912	CONTACTOR, 20HP @460V	1.0
AG3251901	ANCHOR, SCREW END, GRAY	19.0
AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1.0
AG3933345	TERMINAL BLOCK, GRAY, J3	40.0
AG3933672	TERMINAL BLOCK, BLUE, J3	8.0
AG3480613	TERMINAL BLOCK, GREEN/YELLOW, J10	2.0
AG3933346	TERMINAL BLOCK, GREEN/YELLOW, J3	7.0
AG3935829	OVERLOAD RELAY	1.0
AG3933254	POWER BLOCK COVER	1.0
AG3933253	POWER BLOCK, 600VAC,335A,	1.0
AG3939627	RECEPTACLE GFCI, STRAIGHT	1.0
AG3939554	TRANSFORMER,500VA,PRIM-230,460	1.0
AG3934654	POWER SUPPLY, 24VDC, 1.2 AMPS	1.0
1C932208-US	CABLE, RS-232, 8 PIN MINI DIN	1.0
AG3480143	PLC, THERMOCOUPLE CARD, IT4	2.0
AG3480020	PLC, MICROLOGIX-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	5.0
AG3948855	RELAY, SCREW TYPE TERMINAL, DPDT	2.0
AG3939623	LIGHT, GREEN, PLASTIC, 120VAC	1.0
AG3939624	LIGHT, RED, PLASTIC, 120VAC	1.0
AG3939622	SWITCH, 2-POS, PLASTIC	1.0
AG3481487	ENCLOSURE, ELECTRICAL, 30"x 30"	1.0
AG3939364	PANEL, BACK PLATE FOR 30x30 ENCLOSURE	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,	9.0
AG3205401	FUSE HOLDER ,FOR CUBE FUSE, 1-	9.0
AG3936238	TRANSDUCER,PRESS,0-500PSI,	2.0
AG3482390	GROUND LUG	1.0

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
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
0900804	BOLT, HEX, 3/8"-16 X 1"	4.0
AG3344601	NUT, KEP, 3/8"-16	4.0
AG3284101	WASHER, FLAT, 3/8"	4.0
AG3296601	BUSHING, CONDUIT, REDUCING, 3/4" x 1/2"	2.0
AG3371501	WIRE, #6 BLACK, THHN	73.0
AG3275301	WIRE #14 BLACK	6.0
AG3372201	WIRE #10 THHN GREEN	29.0
AG3372301	WIRE, #16, GREEN	16.0
AG3373901	WIRE, #16, ORANGE	10.0
AG3480947	WIRE, #18, RED	20.0
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
AG3481460	CORD, 18/3 SVT, .24 OD, 600V	46.0
AG3462801	WIRE ,THERMOCOUPLE, K-TYPE, 20	22.0
AG3374301	WIRE, THERMOCOUPLE, J TYPE	53.0
AG3465601	WIRE, 3 CONDUCTOR, 24 AWG	10.0
AG3481168	STRAIN RELIEF, 3/8"	11.0
AG3481158	LOCK NUT, 3/8", FOR NYLON	11.0
AG3481159	SEAL RING, 3/8", FOR NYLON	11.0
AG3939223	CONDUIT BODY, TYPE LB, 2"	2.0
AG3480642	HUB, MYERS, 2"	1.0
AG3480077	CONDUIT, 2", RIGID	10.0
AG3301501	BOLT, 5/16" x 1/2"	1.0
AG3163001	CONNECTOR, CONDUIT, LT 3/8"	3.0
AG3480861	CONDUIT, SEAL TITE, 3/8"	16.5
AG3287701	CONNECTOR, ELBOW, 90 DEGREE, 3/8"	1.0
AG3353101	STRAP, 1-HOLE, 3/4"	1.0
AG3163401	CONDUIT RED DOT BODY "T", 1/2"	1.0

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