

ABP-2500 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____109.2 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.

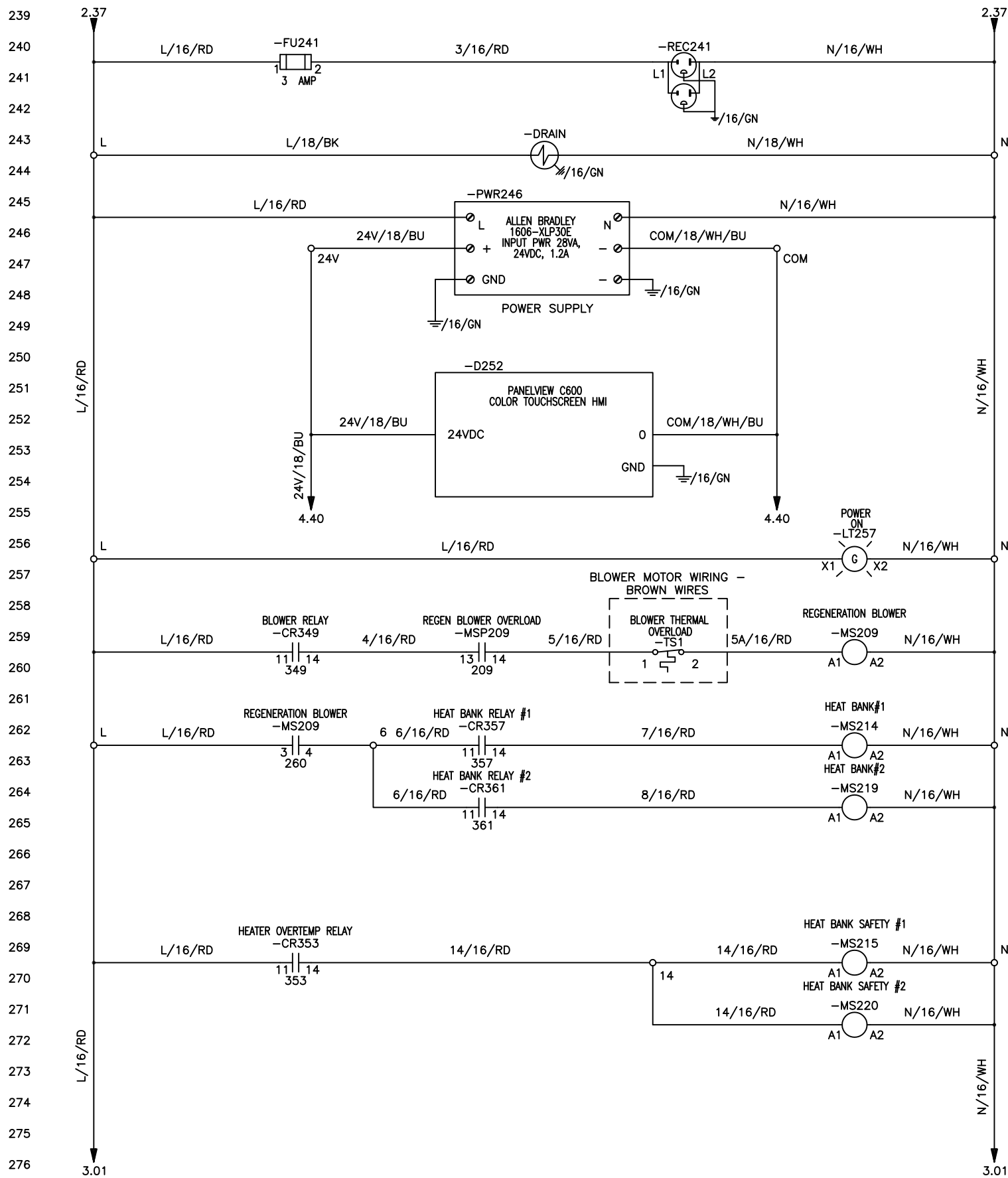
NOTES:

REV	REVISION DESCRIPTION	APPROVAL/DATE
1	PRODUCTION REDLINES	08/05/2015
		/
		/

THIS DOCUMENT CONTAINS
INFORMATION THAT IS CONFIDENTIAL
AND/OR PROPRIETARY TO AIRCEL
CORP. ALL RIGHTS TO DISCLOSE, COPY
REPRODUCE MANUFACTURE FROM OR
DISPOSE OF THIS DOCUMENT OR ITS
CONTENTS ARE RESERVED UNLESS
SPECIFIED IN WRITING BY AIRCEL.



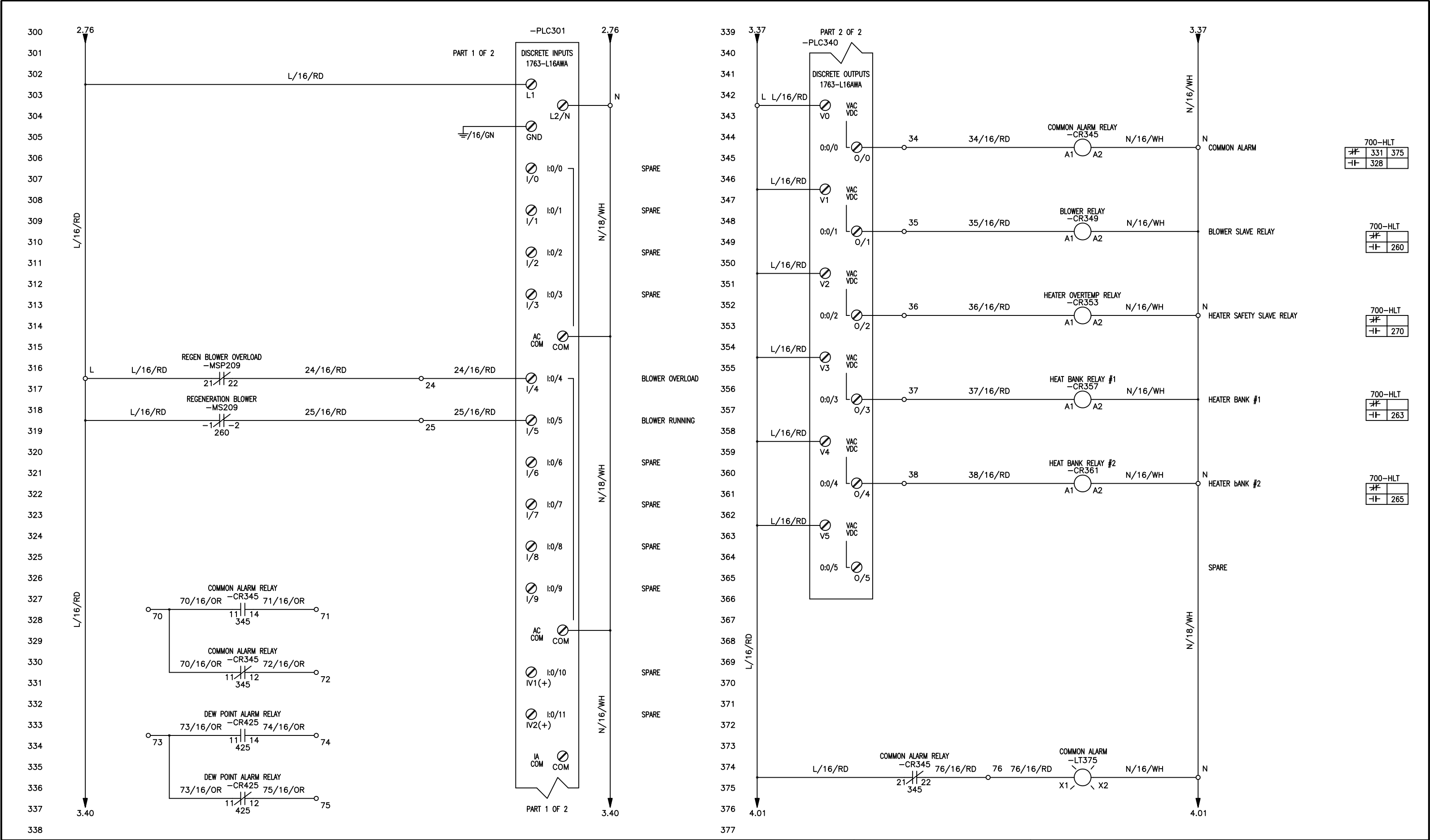
PROJECT ABP-2500	DRAWN BY TRAVIS.RYAN	DATE 02/12/2013
TITLE DESCRIPTION	CHK'D BY MICHAEL.SCWEER	DATE 02/12/2013
PAGE DESCRIPTION TORQUE TABLE	JOB No. ABP-E7	DRAWING No. AG3935966 - 1 of 8
PAGE DESCRIPTION		



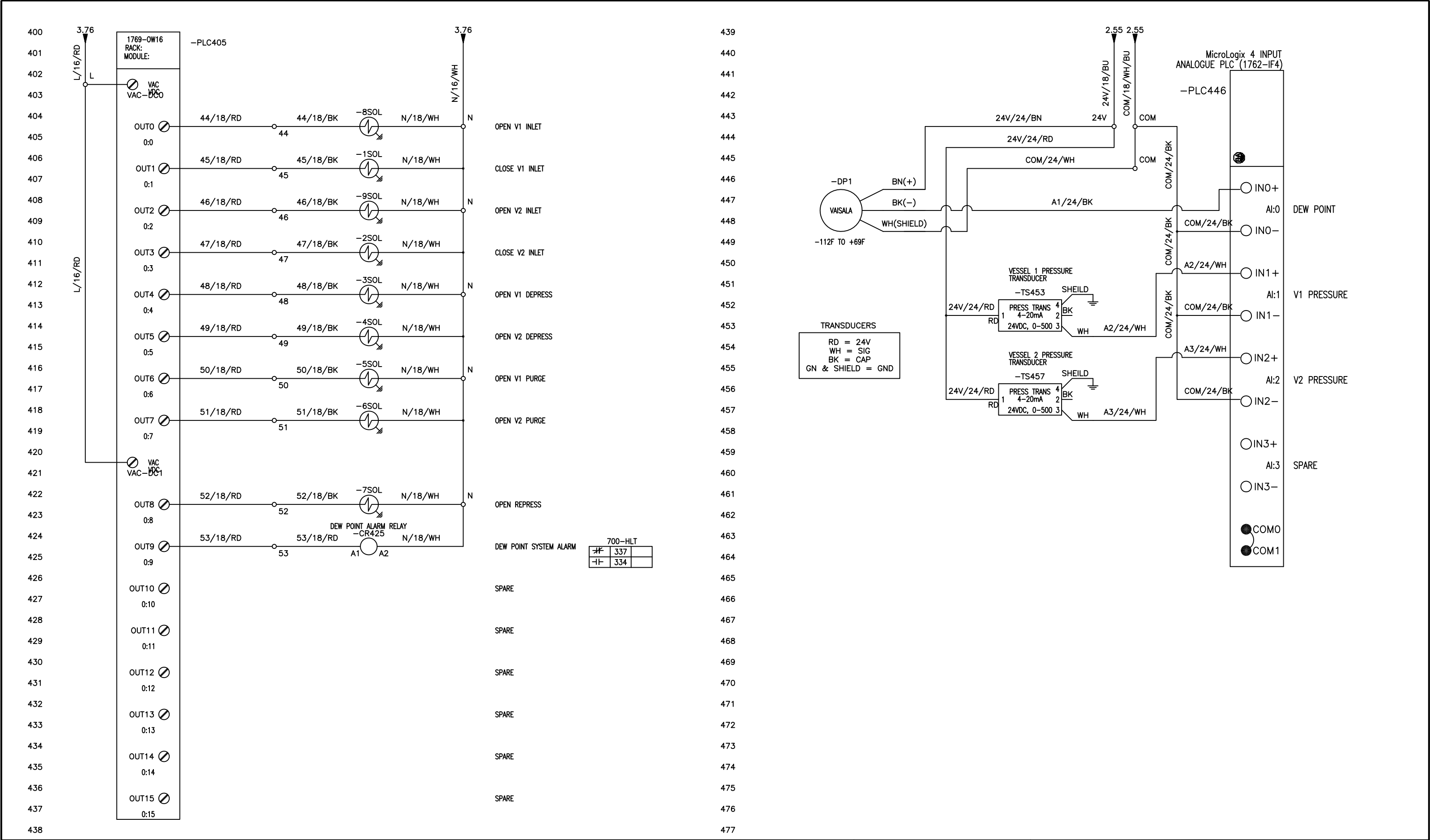
DATE
02/12/2013

DATE
02/12/2013

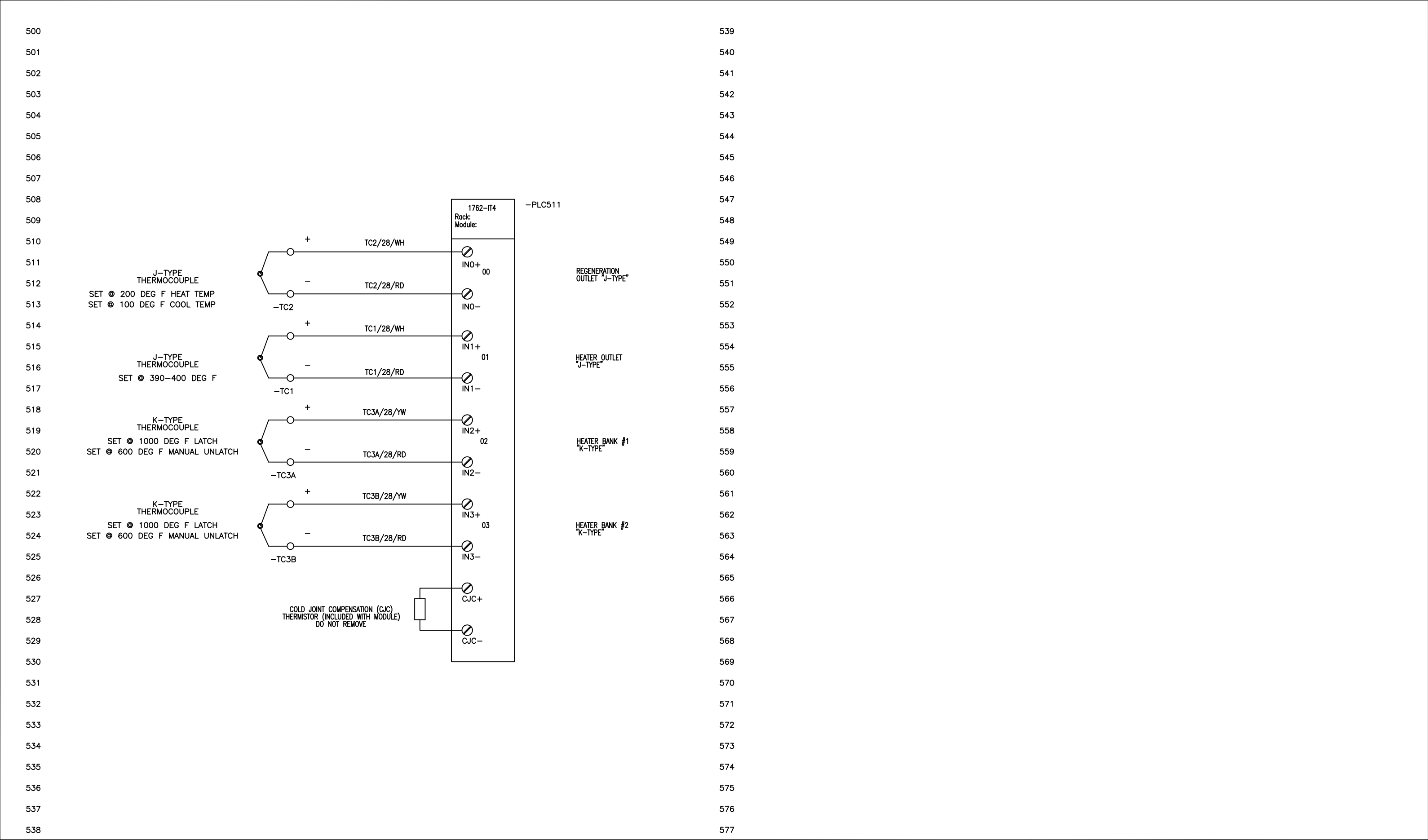
DRAWING No.
AG3935966 - 2 of 8



NOTES:	REV	REVISION DESCRIPTION	APPROVAL/DATE	THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL AND/OR PROPRIETARY TO AIRCEL CORP. ALL RIGHTS TO DISCLOSE, COPY, REPRODUCE, MANUFACTURE FROM OR DISPOSE OF THIS DOCUMENT OR ITS CONTENTS ARE RESERVED UNLESS SPECIFIED IN WRITING BY AIRCEL. 323 Crisp Circle Maryville, TN 37801	PROJECT ABP-2500	DRAWN BY TRAVIS.RYAN	DATE 02/12/2013
	1	PRODUCTION REDLINES	08/05/2015		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-E7	AG3935966 - 3 of 8



NOTES:	REV	REVISION DESCRIPTION	APPROVAL/DATE	THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL AND/OR PROPRIETARY TO AIRCEL CORP. ALL RIGHTS TO DISCLOSE, COPY, REPRODUCE MANUFACTURE FROM OR DISPOSE OF THIS DOCUMENT OR ITS CONTENTS ARE RESERVED UNLESS SPECIFIED IN WRITING BY AIRCEL. 323 Crisp Circle Maryville, TN 37801	PROJECT	ABP-2500	DRAWN BY	TRAVIS.RYAN	DATE	02/12/2013
	1	PRODUCTION REDLINES	08/05/2015		TITLE DESCRIPTION		CHK'D BY	MICHAEL.SCHWEER	DATE	02/12/2013
	2	DMT SENSOR CHANGED	08/01/2016		PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.		DRAWING No.	
			/		PAGE DESCRIPTION	PLC BASE OUTPUTS	ABP-E7		AG3935966 - 4 of 8	



539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

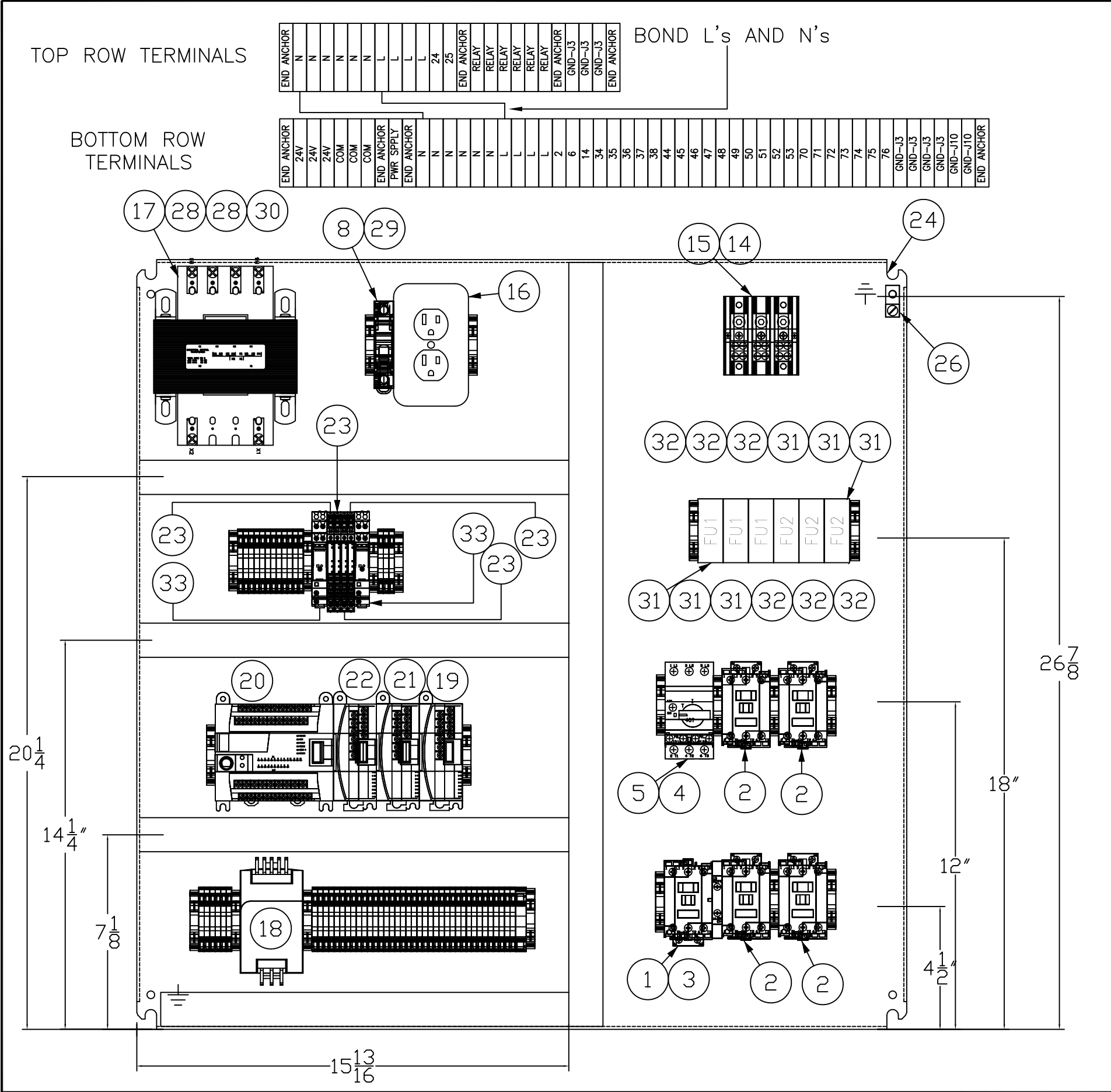
574

575

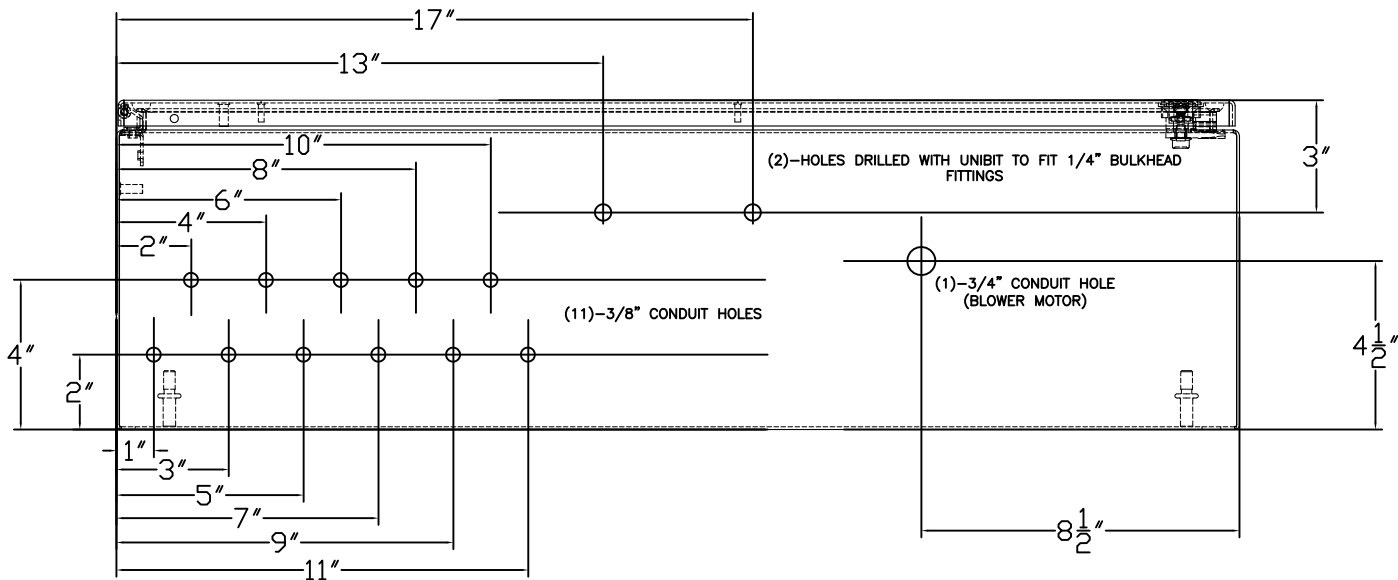
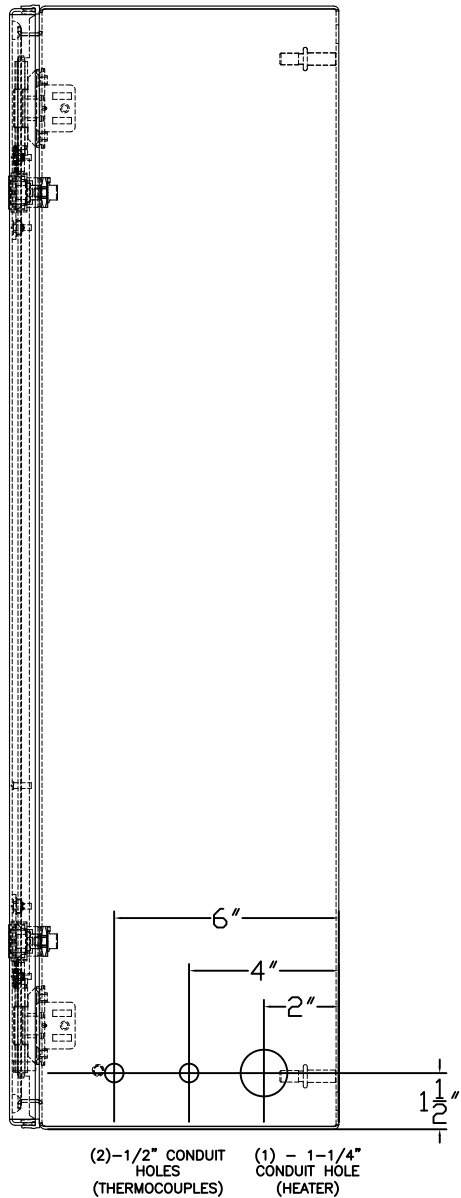
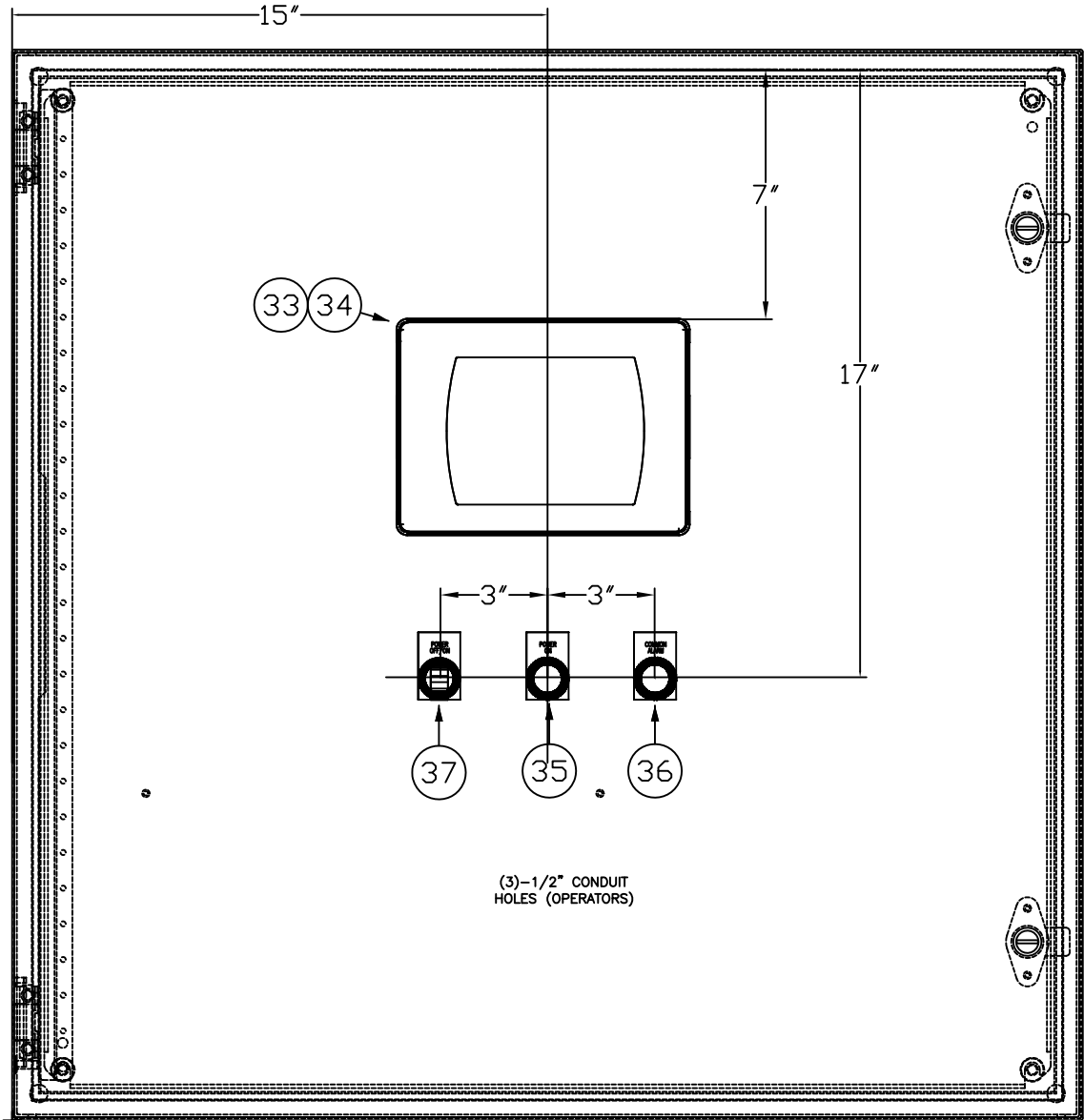
576

577

NOTES:	REV	REVISION DESCRIPTION	APPROVAL/DATE	THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL AND/OR PROPRIETARY TO AIRCEL CORP. ALL RIGHTS TO DISCLOSE, COPY REPRODUCE MANUFACTURE FROM OR DISPOSE OF THIS DOCUMENT OR ITS CONTENTS ARE RESERVED UNLESS SPECIFIED IN WRITING BY AIRCEL. Aircel 323 Crisp Circle Maryville, TN 37801	PROJECT	ABP-2500	DRAWN BY	TRAVIS.RYAN	DATE	02/12/2013
	1	PRODUCTION REDLINES	08/05/2015		TITLE DESCRIPTION		CHK'D BY	MICHAEL.SCHWEER	DATE	02/12/2013
			/		PAGE DESCRIPTION	ELECTRICAL SCHEMATICS				
			/		PAGE DESCRIPTION	PLC THERM INPUTS		JOB No. ABP-E7	DRAWING No.	AG3935966 - 5 of 8



ITEM#	AIRCEL PART NUMBER	DESCRIPTION	QTY
1	AG3948862	CONTACTOR, 25HP @460V, REVERSE	1
2	AG3939577	CONTACTOR, 30HP @ 460V,	4
3	AG3948852	CONTACTOR, SIDE MOUNT, AUXILLA	1
4	AG3948844	SWITCH, AUXILLARY, FRONT MOUNT	1
5	AG3948914	MOTOR STARTER PROTECTOR 18-25 AMP	1
7	AG3251901	ANCHOR, SCREW END, GRAY	21
8	AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1
9	AG3933345	TERMINAL BLK,GRY,FEED THROUGH	41
10	AG3933672	TERMINAL BLOCK, BLU, FEED THRU	12
11	AG3480613	TERMINAL BLOCK, GREEN/YELLOW, J10	2
12	AG3933346	TERMINAL BLK, 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, INPUT 100.240VAC	1
19	AG3480143	PLC, MICROLOGIX 4X	1
20	AG3480020	PLC, MICRO, 1100, PWR-120/240V	1
21	AG3480021	PLC, MICROLOGIX CHANNEL	1
22	AG3954507	PLC, MICROLOGIX, 16X RELAY	1
23	AG3948856	RELAY, SCREW TYPE TERMINAL	4
24	AG3939364	BACK PLATE, FITS 30x30 CONCEPT	1
25	AG3480590	COVER, WHITE DUCT, 1"X 3"	8
26	AG3482390	GROUND LUG, 8 GAUGE TO 1/0	1
27	AG3480591	DUCT, WHITE, NARROW, SLOT, 1"	8
28	AG3443601	FUSE, MIDGET, 2-1/2 AMPS	2
29	AG3329701	FUSE, FNQ-R-3 ,600VAC ,CLASS C	1
30	AG3443701	FUSE, CLASS CC, FNQR, 7AMPS, 1	1
31	AG3935640	FUSE, 45 AMP, 600 VAC, DUAL-	6
32	AG3205401	FUSE HOLDER ,FOR CUBE FUSE, 1-	6
33	AG3948855	RELAY, DPDT, SCREW TYPE	2



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

NOTES:

REV	REVISION DESCRIPTION	APPROVAL/DATE
1	PRODUCTION REDLINES	08/05/2015
		/
		/

THIS DOCUMENT CONTAINS
INFORMATION THAT IS CONFIDENTIAL
AND/OR PROPRIETARY TO AIRCEL
CORP. ALL RIGHTS TO DISCLOSE, COPY
REPRODUCE MANUFACTURE FROM OR
DISPOSE OF THIS DOCUMENT OR ITS
CONTENTS ARE RESERVED UNLESS
SPECIFIED IN WRITING BY AIRCEL.



PROJECT	ABP-2500	DRAWN BY	TRAVIS.RYAN	DATE	02/13/13
TITLE DESCRIPTION		CHK'D BY	MICHAEL.SCHWEER	DATE	02/13/13
PAGE DESCRIPTION	ELECTRICAL SCHEMATICS	JOB No.	ABP-E7	DRAWING No.	AG3935966 - 7 of 8
PAGE DESCRIPTION	ENCLOSURE LAYOUT				

AIRCEL PART NUMBER	DESCRIPTION	QTY
AG3939577	CONTACTOR, 30 HP @ 460V	4.0
AG3948862	CONTACTOR, 25HP @460V, REVERSE	1.0
AG3948852	CONTACTOR, SIDE MOUNT, AUXILLA	1.0
AG3948844	SWITCH, AUXILLARY, FRONT MOUNT	1.0
AG3948914	MOTOR STARTER PROTECTOR, 18-25 AMP	1.0
AG3948856	RELAY, SCREW TYPE TERMINAL, SPDT	4.0
AG3948855	RELAY, SCREW TYPE TERMINAL, DPDT	2.0
AG3251901	ANCHOR, SCREW END, GRAY	21.0
AG3933345	TERMINAL BLK,GRY,FEED THROUGH	41.0
AG3933672	TERMINAL BLOCK, BLU, FEED THRU	12.0
AG3933346	TERMINAL BLK, GREEN/YELLOW - J3	7.0
AG3480613	TERMINAL BLOCK, GREEN/YELLOW - J10	2.0
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, INPUT 100 240	1.0
1C932208-US	CABLE, RS-232, 8 PIN MINI DIN	1.0
AG3480143	PLC, MICROLOGIX 4X	1.0
AG3480020	PLC, MICRO, 1100, PWR-120/240V	1.0
AG3480021	PLC, MICROLOGIX CHANNEL	1.0
AG3954507	PLC, MICROLOGIX, 16X RELAY	1.0
1C932146-US	SOLENOID 1/8" 4/2 115/120V 50	9.0
AG3992110	HMI, AB PANEVIEW C800, TOUCH S	1.0
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"x30"x8"	1.0
AG3939364	PANEL, BACK PLATE FOR HOFFMAN FOR 30x30	1.0
AG3480590	COVER, WHITE DUCT, 1"	8.0
AG3480591	DUCT, WHITE, NARROW, SLOT, 1x3	8.0
AG3443601	FUSE, MIDGET, 2-1/2 AMPS	2.0
AG3329701	FUSE, FNQ-R-3 ,600VAC ,CLASS C	1.0
AG3935640	FUSE, 45 AMP, 600 VAC, DUAL-	6.0
AG3205401	FUSE HOLDER ,FOR CUBE FUSE, 1-	6.0
AG3948853	FUSE HOLDER, 1-POLE, CLASS CC	1.0
AG3443701	FUSE, CLASS CC, FNQR, 7AMPS, 1	1.0
AG3936238	TRANSDUCER,PRESS,0-500PSI,	2.0
AG3482390	GROUND LUG, 8 GAUGE TO 1/0	1.0
AG3481252	TERMINAL LUG, ALUMINIUM	2.0

AIRCEL PART NUMBER	DESCRIPTION	QTY
AG3371501	WIRE, #6 BLACK, THHN	73.0
AG3372301	WIRE, #16 GREEN	16.0
AG3372201	WIRE #10 THHN GREEN	20.0
AG3373901	WIRE, #16 ORANGE	10.0
AG3480947	WIRE, #18 RED	20.0
AG3275201	WIRE #12 BLACK	30.0
AG3275601	WIRE, #14 GREEN	7.0
AG3374201	WIRE, #16 RED	110.0
AG3374901	WIRE, #16 WHITE	28.0
AG3480463	WIRE #18 BLUE	8.0
AG3480991	WIRE #18 WHITE W/BBLUE STRIPE	8.0
AG3462801	WIRE ,THERMOCOUPLE, K-TYPE, 20	20.0
AG3374301	WIRE, THERMOCOUPLE, J TYPE	33.0
AG3481460	CORD, 18/3 SVT, .24 OD, 600V	65.0
AG3465601	WIRE, 3 CONDUCTOR, 24 AWG	10.0
0900804	BOLT, HEX, 3/8"x 1"	4.0
AG3344601	NUT, KEP, 3/8" -16	4.0
AG3284101	WASHER, FLAT, 3/8"	4.0
AG3301501	BOLT, HEX, 5/16"-18 X 1/2"	1.0
AG3353401	STRAP, 3/4" HW	1.0
AG3481159	SEAL RING, 3/8", FOR NYLON	11.0
AG3481168	STRAIN RELIEF, 3/8"	11.0
AG3481158	LOCK NUT, 3/8", FOR NYLON	11.0
AG3163001	CONNECTOR, CONDUIT, LT 3/8"	1.0
AG3287701	CONNECTOR 90 LIQUID TIGHT 3/8"	3.0
AG3480861	CONDUIT, SEALTITE, FLEXIBLE, 3/8"	14.0
AG3480633	CONNECTOR, LIQUIDTIGHT, 90 DEG, 1-1/4"	2.0
AG3480863	CONDUIT, SEALTITE, FLEXIBLE, 1-1/4"	6.0
AG3352801	STRAP 1-HOLE 1 1/4" HW	1.0
AG3342801	NIPPLE, CONDUIT, 1/2" X CLOSE,	3.0
AG3481092	CONDUIT, RIGID, 1/2"	8.0
AG3324101	ELBOW, PULLING, 1/2"	2.0
AG3481089	UNION, 1/2" FEMALE, CONDUIT,	3.0
AG3163401	CONDUIT RED DOT BODY "T", 1/2"	1.0
AG3480859	CONDUIT, SEALTITE, FLEXIBLE, 3/4"	4.0
AG3313701	CONNECTOR 90 LIQUID TIGHT 3/4"	1.0
AG3314001	CONNECTOR STRAIGHT LIQUID, 3/4"	1.0
AG3296601	BUSHING, CONDUIT, 3/4" x 1/2"	2.0
AG3342901	NIPPLE, CONDUIT, 1/2" X 2"	1.0

NOTES:	REV	REVISION DESCRIPTION	APPROVAL/DATE	THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL AND/OR PROPRIETARY TO AIRCEL CORP. ALL RIGHTS TO DISCLOSE, COPY, REPRODUCE, MANUFACTURE FROM OR DISPOSE OF THIS DOCUMENT OR ITS CONTENTS ARE RESERVED UNLESS SPECIFIED IN WRITING BY AIRCEL.	Aircel 323 Crisp Circle Maryville, TN 37801	PROJECT	ABP-2500	DRAWN BY	TRAVIS.RYAN	DATE	03/11/13
	1	PRODUCTION REDLINES	08/05/2015			TITLE DESCRIPTION		CHK'D BY	MICHAEL.SCHWEER	DATE	03/11/13
	2		/			PAGE DESCRIPTION	EBOM	JOB No.		DRAWING No.	
	3		/			PAGE DESCRIPTION			ABP-E7		AG3935966 - 8 of 8