

CANADA:

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Date: November 18, 2014 Project No: E10644

Report No: E10644-1403

Client: Dane Odde Ph: 307-234-9311 Company: Automation and Electronics Fx: 307-233-0393

Inc.

Address: 610 Platte Rd. Casper, Email: Dane_odde@autoelect.com

WY .82601

Subject: Field Certification of Class I, Division 2, Polymer Pilot Injection Skids

Dear Mr. Dane Odde,

We have completed our evaluation of the equipment referenced in quote # JS-2014-110502 and this letter will serve as our report. The products were subjected to the requirements contained in the following Safety Standards.

- Industrial Control Equipment (CAN/CSA-C22.2 No. 14-13)
- Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
 General Instruction No.1 (CSA C22.2 No. 213-M1987)

The investigation was begun on 2014-11-18 and concluded on 2014-11-18. Samples were made available and evaluated at the location identified in this report.

As part of the QAI Field Certification program only a QAI representative may evaluate the product and apply the QAI logo to eligible products. This report does not provide authorization to the manufacturer to apply the QAI logo to any product.

QAI is accredited by the Standards Council of Canada as a third party product certification body.

If you have any questions, please feel free to contact us at your convenience. We are looking forward for future opportunities to work together.

Yours truly,		
QAI Laboratories Ltd.		
	January 5, 2015	
Simon Hodson, Lead Electrical Engineer	earradity 6, 2016	

Company: Automation and Electronics Inc



Applicant: Automation and Electronics Inc. 610 Platte Rd. Casper, WY, USA,82601

Evaluation

Location: 4500 Thirty-three Mile Rd, Casper, WY, 82604, USA

Equipment

Description: Polymer Pilot Injection Skid with General Purpose Electrical

Equipment Room

For use in: Hazardous Location Class I Division 2, Groups C & D, T2C

Temperature Code: T2C

Ambient Rating: $40 \text{ to } +40^{\circ}\text{C}$

QAI Evaluator: Cory Bickerstaff

Evaluation Date(s): November 18, 2014

Labeling Date: November 18, 2014

Standards: Industrial Control Equipment (CAN/CSA-C22.2 No. 14)

Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations – General Instruction No.1 (CSA C22.2 No. 213-

M1987)

Manufacturer: Nalco Fab Tech

Product Ratings: Hazardous Location Polymer Pilot Injection Skid Class I Division 2,

Group C & D, T2C, With General Purpose Electrical Equipment Room

Model	Serial No.	Label No.
Polymer Pilot	NE14 102	LII 000264
Injection Skid	NF14-103	HL000364

Model	Serial No.	Label No.

Note: If 'N/A' is placed in the 'Label No.' column this is an indication that the product was not labelled with the QAI mark.

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Evaluation

Checklists: On file at QAI. Refer to project file # E10644-1403

Tests Performed: Refer to Evaluation Checklists.

Findings: None.

Acceptability: No Special Conditions

Additional

Comments: Includes General Purpose Electrical Equipment Room

Conclusion: The products identified in this *Report* have been investigated to the

referenced safety standards and have been found to be in compliance

with those requirements, and labeled by QAI's representative.

Please note, this report does not represent authorization for the applicant or

manufacturer to apply Certification Marks.

Example Label:

HL00	QAI	EQUIPMENT FOR HAZARDOUS LOCATIONS
X	C Quality Ruditing Institute	® CSA C22.2 No. 60079-0
X	WWW.QAI.ORG 888.540.4024	THIS CERTIFICATION IS LIMITED TO THE PRODUCT CHARACTERISTICS AS EVIDENT DURING THE INSPECTION. SEE REPORT FOR DETAILS

Issued :	G BALLY	Cory Bickerstaff	Field Inspector
	SIGNATURE	NAME	TITLE
Reviewed: By		Simon Hodson	Lead Electrical
	SIGNATURE	NAME	Engineer

Company: Automation and Electronics Inc



Photos

Polymer Pilot Injection Skid Serial Number NF14-103 Overall



Inside Hazardous Location Overall

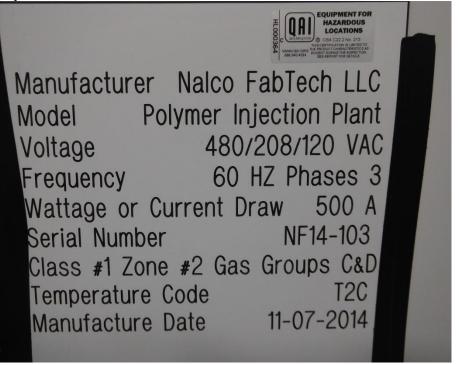


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Nameplate



Air Compressor

Effective Date: March 1, 2014

Revision Date: N/A



Company: Automation and Electronics Inc



Electrical Room Overall







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Bill of Materials

Item Number	Qty	Location	Description	Manufacturer	Model	Certification Agency Approval	Haz. Location Approvals	Gas Group	Temp Code
1	2	Inside - Process	Polymer Feed Pump Motor (7.5 hp) P-210/212	Baldor-Reliance	NP1426XPSL	CSA	Class 1 Class 1, Zone 1	Gr D 11A	T3C
2	6	Inside - Process	Injection Pump Motor (30hp) P- 220,222,225,227,230, 232	Teco- Westinghouse	AEHH8N	CSA	Class 1, Zone 2	Gr 11B & H2, 11B & 11A	T3C
3	6	Inside - Process	Slow-speed Lube Pump Motor (0.5 hp)	Baldor-Reliance	NP0015XPSL	CSA	Class 1, Zone 1	11A	T2C
4	1	Inside - Process	Polymer Transport Blower Motor (5hp) B-202	Baldor-Reliance	NP1426XPSL	CSA	Class 1, Zone 1	11A	T3C
5	1	Inside - Process	Volumetric Feeder Vibrator Motor (0.3 hp)	Baldor-Reliance	NP0681XPSL	CSA	lass 1, Zone	11B & 11A	T3C
6	1	Inside - Process	Volumetric Feeder Motor (0.5 hp) SF-201	Baldor-Reliance	NP0681XPSL	CSA	Class 1, Zone 1	11B & 11A	T3C
7	1	Inside - Process	Polymer Dust Blower Motor (0.33hp) B-203	WEG	00156ES3EB5 6C	CSA	Class 1, Zone 1	11C	T3C
8	1	Inside - Process	Chemical Metering Pump Motor P-217	Baldor-Reliance	NP0087XPSL	CSA	Class 1, Zone 1	11A	T3C
9	1	Inside - Process	Mix Tank Vent Blower Motor	WEG	00156ES3ES6 C-S		TEFC		
10	1	Inside - Process	Polymer Tank Mixer Motor M-402	Baldor-Reliance	NP2155	CSA	lass 1, Zone	11A, 11B & 11C	Т3
11	1	Inside - Process	15 kW Heater	Ruffneck	FX5-480-360- 150-WTD	CUL	Class 1, Zone 1 & 2	11A & 11B	Т3В
12	2	Inside - Process	20 kW Heater	Ruffneck	FX5-480-360- 200-WTD	CUL	Class 1, Zone 1 & 2	11A & 11B	ТЗВ
13	1	Inside - Process	1 Ton Crane Hoist A-200	Kito Corp.	ER2-0101S				40 degrees C
14	1	Inside - Process	1 Ton Crane Trolley A-200	Kito Corp.					40 degrees C

^{**} See Note below for items 13 and 14

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15	16	Inside - Process	LED Lights	Dialight	LTD3C4D2P	CSA	Class I, Div 2	ABCD	T4A
16	1	Inside - Process	Float Switch LS-200	Wellmark	686F-1B-1N.N	CSA	Class I	D	(-)20 to 400F
17	1	Inside - Process	ransmitter	Rosemount	3051L2AA0FD 21AAKBQ4	CSA	Class 1, Div.1 Class 1, Zone 2	Gr ABCD 11C	T5
18	8	Inside - Process	Mag Meter	Rosemount	8711SHA020R 1NOQ4	CSA	Class 1, Div.1 Class 1, Zone 2	Gr ABCD 11C	Т5
19	14	Inside - Process	Mag Meter Transmitter	Rosemount	8712ESR1A1 N0PA1AXM4Q 4	CSA	Class 1, Div.1 Class 1, Zone 2	ABCD	T4
20	12	Inside - Process	Pressure Transmitter	Rosemount	G5A2B21AKB M5	CSA	Class 1, Zone 2	11C	T5
21	6	Inside - Process	1" Mag Meter	Rosemount	8705NHA010C 9W0N0G1Q4 CR	CSA	Class 1, Zone 2		T5
22	6	Inside - Process	Pressure Transmitter	Rosemount	2088G3S22A1 K8M5P0054	CSA	Class 1, Div 2	ABCD	T4
23	2	Inside - Process	Actuator (CIV 801, 805)	Brady	630250- 21403536	CSA	Class 1, Div	ABCD	Т6
24	2	Inside - Process	Explosion-Proof Light Switch	Appleton	EDSF23WQ	CUL-2360	Class 1, Div 2	В	-
25	1	Inside - Process	Mixer RIO	A&E	MixerRIO D- 30222	CUL-39ZU	Class 1, Div 2	-	1
26	1	Inside - Process	Injection RIO	A&E	RIO Panel D- 29894	CUL-39ZU	Class 1, Div 2	-	-
27	1	Inside - Process	Methane Detector	Det-Tronics	UD10A5N25T 2	CSA	Class 1, Div 2	BCD	T4
28	1	Inside - Process	Display for Methane Detector	Det-Tronics	010195-041	CSA	Class 1, Div 2	ABCD	T4
29	1	Inside - Process	Pressure Switch	ITT Industries	132P44C6H	CSA	Class 1, Div 2	ABCD	T5
			Ger	neral Purpose Area	s				
30	3	Inside - MCC Rm	LED Lights	Dialight	LTM3C4D2P	CSA	unclassified	-	T5
31	1	Inside - MCC Rm	Main PLC	Automation & Electronics	Main PLC D- 29895	cUL	unclassified	-	-
32	1	Inside - MCC Rm	MCC	AllenBradley	6501823335/6 00	cUL	unclassified	-	-
33	1	Inside - MCC Rm	Filter	Harmonic Guard Active	ALC100A01H6 000	cUL	unclassified	-	-
34	1	Outside	HVAC	MarvAir	AVPA30	CSA	unclassified	-	ı
35	1	Inside - Air Comp Rm	Instrument Air Compressor K-205	Ingersol Rand	IRN7.5H-TAS- 100L	CSA	unclassified	-	-
36	1	Inside - Process	Exhaust Fan EX-600	Cook	195 ACE	cUL	XPRF	-	ı
37	1	Inside - Process / MCC	Hazardous wall cable pentetration barrier	Roxtec		CSA			

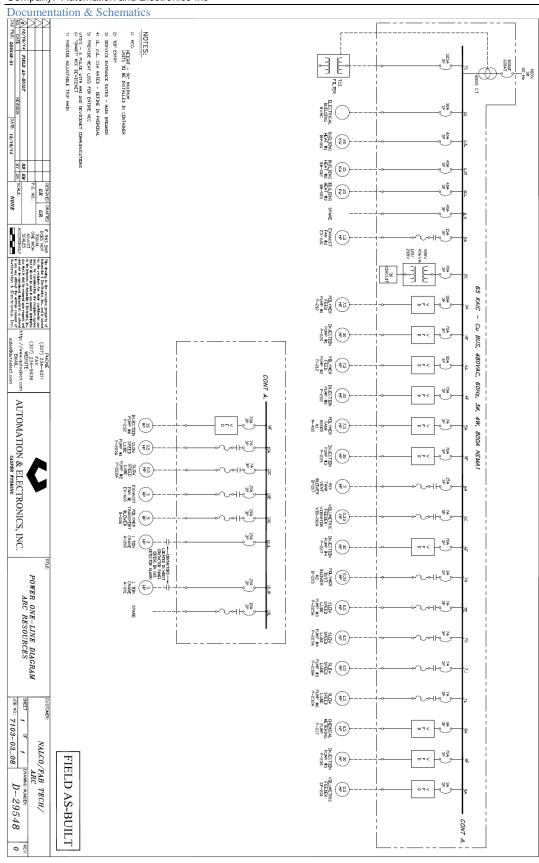
Controls for crane motor are suitable for the declared environment as they protected by item #27, a methane gas detector as per CSA-C22.1-12 Canadian Electrical Code Part 1- 22 Ed, Section 18-070. The crane motor itself is totally enclosed fan cooled.

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Effective Date: March 1, 2014 QM0512-8 - Hazardous Location Field Certification Report (HLFC) Revision Date: N/A Revision 6

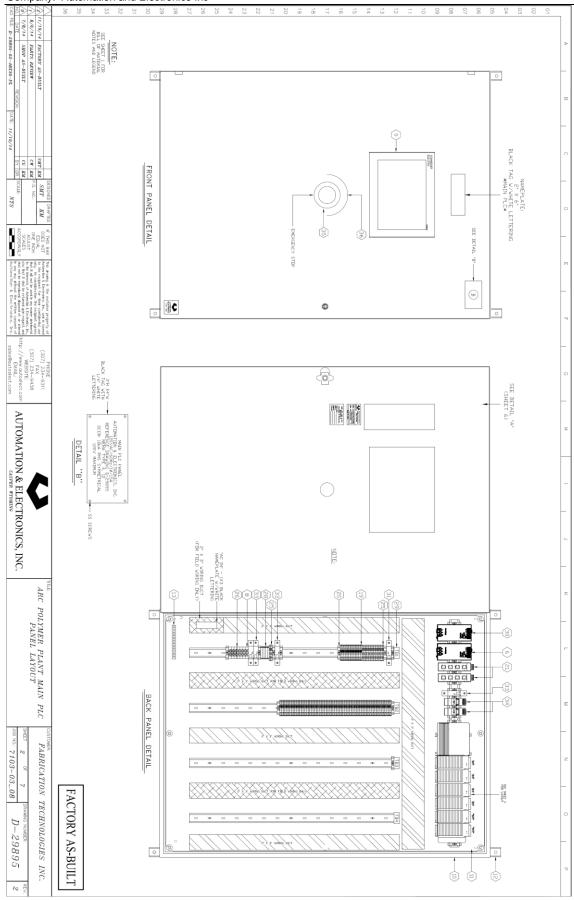




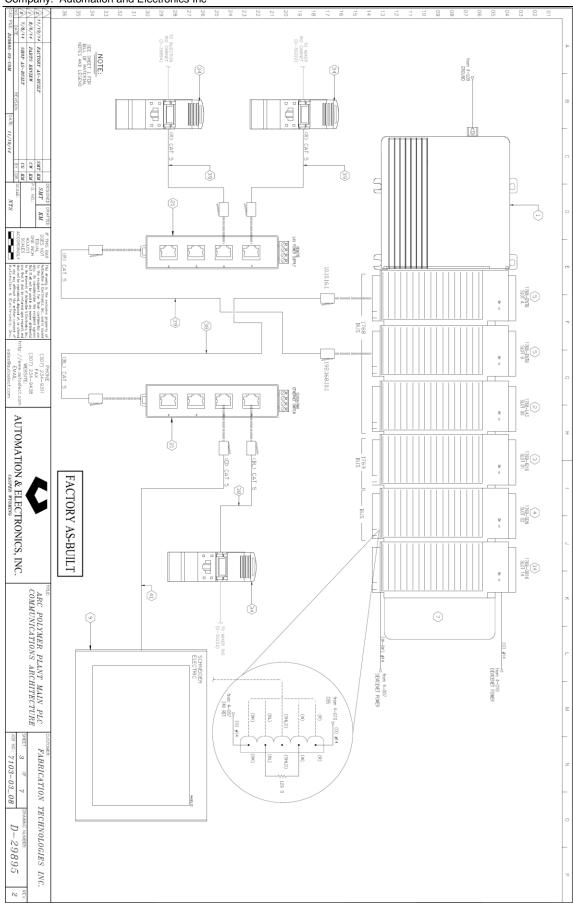


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11/19/14 FACTORY AS-BUILT 8/6/14 PARTS REVIEW 7/8/14 SHOP AS-BUILT	1	3	4	2	1	1	4	6		2	12	3	9	2	2	24	41	6	1	1	2	1	1	1	1	1	1	8	1	1	2	1	1	1	1	COUNT
TT SMT KM P.O. NO.: CG KM SMT KM P.O. NO.:	EMERGENCY STOP PUSH BUTTON	ETHERNET PUNCHDOWN BLOCK	CIRCUIT BREAKER, 10A	FUSE, TIME DELAY, 5 AMP	CIRCUIT BREAKER 5SJ, 15A	POWER SUPPLY, 24VDC, 10A	MARKER CARRIERS, UBE/D	TERMINAL BLOCK, GROUND, SINGLE LEVEL	NUMBER NOT USED	UK-10 END CAP	TERMINAL BLOCK, SINGLE LEVEL, UT 4-TG	AC FUSE PLUG, P-FU 5X20 LA 250	DC FUSE PLUG, P-FU 5X20 LED 24	RED JUMPER 20 POS.	ETHERNET SWITCH, UNMANAGED, 24VDC	END ANCHOR, E/NS 35N	TERMINAL BLOCK, UT 4-MTD	FUSE, FAST ACTING, 1 AMP	FUSE, FAST ACTING, 2 AMP	FUSE, FAST ACTING, 3 AMP	C1D2, 24VDC RELAY MODULE, TYPE S SPDT	COMPACTLOGIX 24VDC, 16 PT. DI MODULE	GROUND BUS BAR	MOUNTING FOOT KIT	48" X 36" BACK PANEL	48" X 36" X 12" ENCLOSURE	12" MAGELLIS TOUCH PANEL	TERMINAL BLOCK, UK 10 N	MODULE END CAP, RIGHT	DEVICENET POWER SUPPLY	COMPACT LOGIX ETHERNET MODULE	DEVICENET SCANNER MODULE	DI MODULE, 16 PT.	COMPACT LOGIX PROCESSOR	L4X SERIESPOWER SUPPLY, 24VDC	DESCRIPTION
KM DOES NOT Authorities for the re- EQUAL to the re- ADJUST to the re- SCALES SCALES also that	EATON	PHOENIX CONTACT	SIEMENS	LITTELFUSE	SIEMENS	PULS	PHOENIX CONTACT	PHOENIX CONTACT		PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	PHOENIX CONTACT	FERRAZ SHAWMUT	FERRAZ SHAWMUT	FERRAZ SHAWMUT	PHOENIX CONTACT	AB	SIEMENS	HOFFMAN	HOFFMAN	HOFFMAN	SCHNEIDER ELECTRIC	PHOENIX CONTACT	АВ	PULS	AB	AB	АВ	AB	АВ	MANUFACTURER
in is the exclusive property of a Electronics, inc., and is loan object for their confidential understands and a consideration the recipient agreement and how more derived to the angle of	10250T5J63-1X	1658118	5SJ4110-7HG40	239005P	5SJ4118-7HG40	CS10.241	0800307	3046207		3003020	3046142	3036835	3036819	3030365	2891152	0800886	3046184	GGM1	GGM2	GGM3	5603154	1769-0816	ECGB10	CMFK	CP4836	CSD483612LG	HMIGT06310	3005073	1769-ECR	QS10.DNET	1768-ENBT	1769-SDN	1769-IQ16	1768-L43	1768-PB3	MODEL
PHONE PHONE (307) 234-9311 FAX WEBSITE: WEBSITE:																											44)	(43)	(42)	(41)	40	(39)	(38)	(37)	(36)	MARK
																											1	1	1	1		3	2		1	COUNT
¢																											UK10 CENTERLINE JUMPER	FUSE, FAST ACTING, 5 AMP	FUSE, TIME DELAY , 1 AMP	7' ORANGE CATS CABLE	NUMBER NOT USED	3' RED CATS CABLE	3' BLUE CATS CABLE	NUMBER NOT USED	PUSHBUTTON GUARD	DESCRIPTION
	4																										PHOENIX	FERRAZ SHAWMUT	LITTELFUSE	FIS		FIS	FIS		EATON	MANUFACTURER
ARC POLYMER PLANT MAIN PLC BILL OF MATERIALS, NOTES, AND LEGEND																											0203276	GGM5	239001P	CT608007OR		CT608003RD	CT608003BU		10250ED1241	MODEL
AIN PLC FABRICATION TECHNOLOGIES INC. SEET 1 OF 7 DAMMG NUMBER.		FACTORY AS-BUILT	7		employed open amples officered including one in	UK 35 N TERMINAL BLDCK 3.2-3.7 NM	UT 35 TERMINAL BLOCK 3,2-3,7 NM	18: 10.3 HEST CLASS OF FUSE HIT DER 25-3 NM	5 - INSULATE ENGLOSURE WITH 1/2" RIGID INSULATION	- USE TINNED COPPER CONDUCTORS ONLY	3 - CONDUIT HUBS SHALL BE OF SAME RATING AS ENCLOSURE	2 - FIELD WIRING SHALL BE MTW RATED FOR 105°C.	 — MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION TO BE PROVIDED BY OTHERS. 	NOTES: GENERAL									PROJECT SPECIFIC NOTES				0		0		@ Acc		0 DC 00			

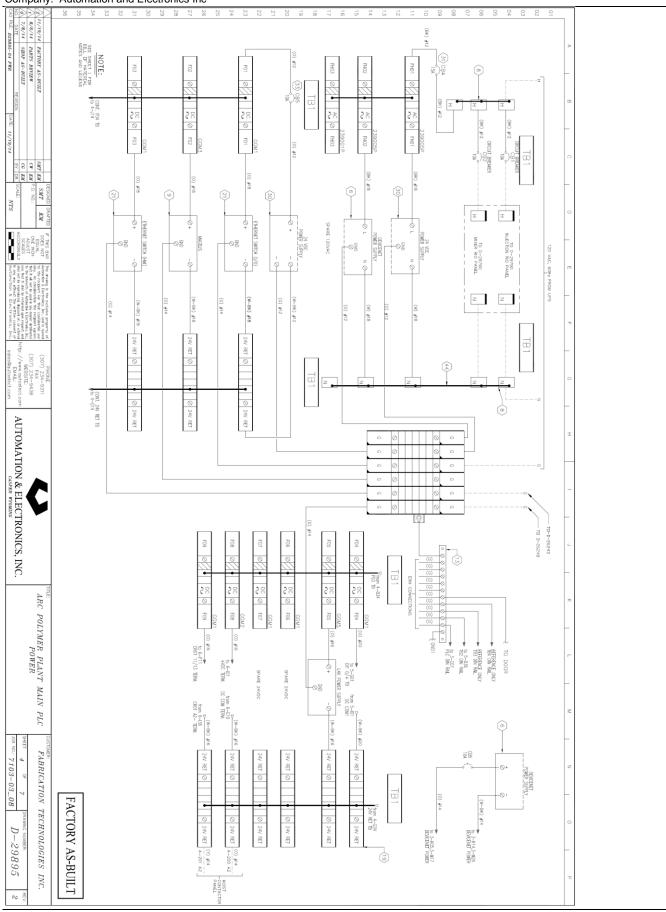




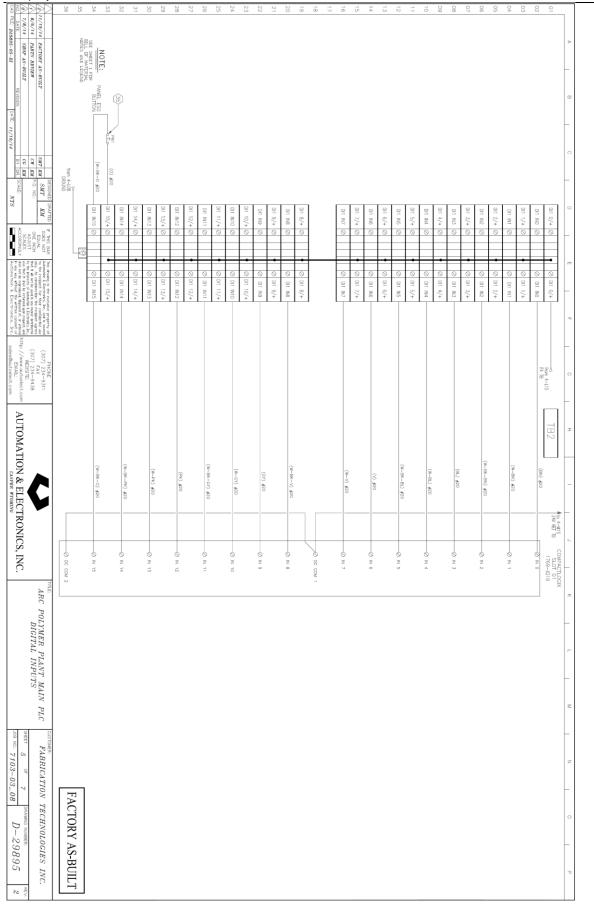




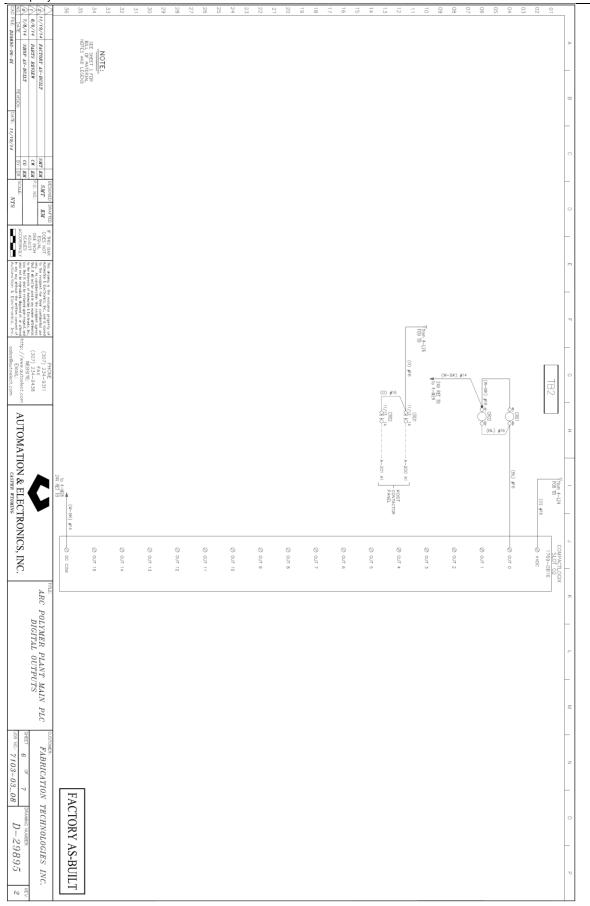




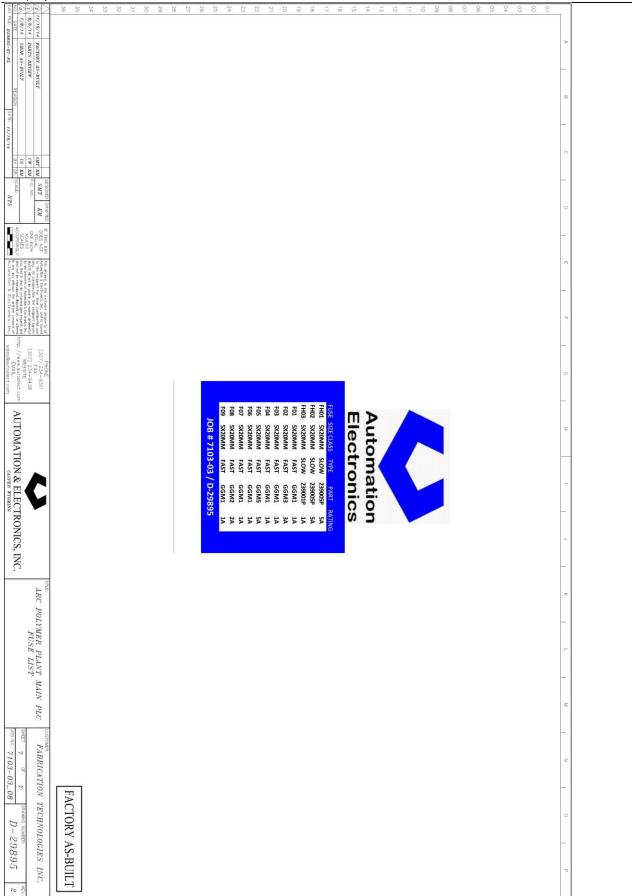












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Effective Date: March 1, 2014 Page 18 of 21 Revision Date: N/A



