

REF. DWG. M1271 P/N 5026-0201 FOR SINGLE FRONT PANEL  
 REF. DWG. M1271 P/N 5026-0209 FOR DUAL FRONT PANEL  
 REF. DWG. V0397 P/N 5001-0322 FOR OVERLAY.  
 REF. DWG. V0431 P/N 5006-1008 FOR REAR PANEL.

**728DCD-1S-6C-FLB-T/C K-T/C K-BBM(24)**

**MODEL**  
**NUMBER OF SAMPLES**  
 1S = 1 SAMPLE + BYPASS  
 2S = 2 SAMPLE + BYPASS  
 3S = 3 SAMPLE + BYPASS  
 4S = 4 SAMPLE + BYPASS

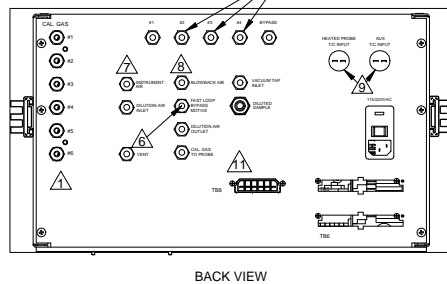
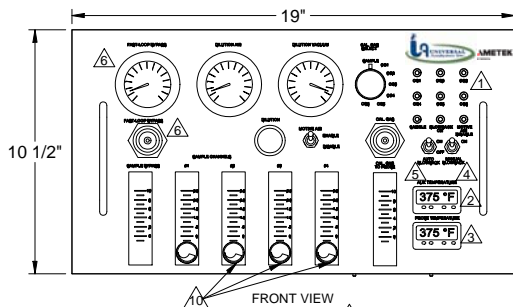
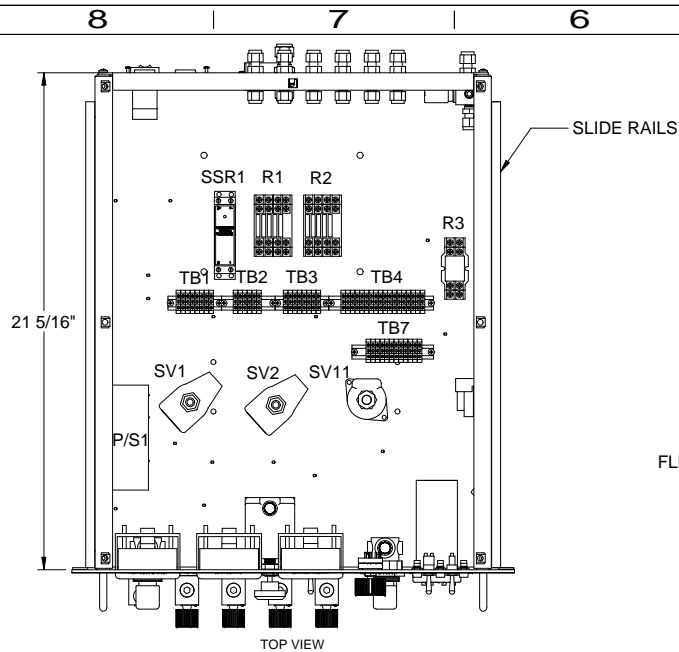
**NUMBER OF CAL GASES**  
 2C = 2 CAL GASES  
 3C = 3 CAL GASES  
 4C = 4 CAL GASES  
 5C = 5 CAL GASES  
 6C = 6 CAL GASES

**FAST LOOP CONTROL**  
 FLB = REGULATOR & GAUGE FOR FAST LOOP  
 N = NO FAST LOOP CONTROL

**BLOWBACK CONTROL**  
 BBT(115) = BLOWBACK TIMER CARD (115VAC)  
 BBT(230) = BLOWBACK TIMER CARD (230VAC)  
 BBM(24) = MANUAL BLOWBACK (24VAC)  
 BBM(115) = MANUAL BLOWBACK (115VAC)  
 BBM(230) = MANUAL BLOWBACK (230VAC)  
 BBL = BLOWBACK BULKHEAD  
 N = NO BLOWBACK PROVISIONS

**AUX CONTROL**  
 T/C K = DIN CONTROLLER W/TYPE "K" INPUT  
 T/C J = DIN CONTROLLER W/TYPE "J" INPUT  
 PT100 = DIN CONTROLLER W/TYPE "PT100" INPUT  
 N = NO AUX. CONTROL

**PROBE HEAT CONTROL**  
 T/C K = DIN CONTROLLER W/TYPE "K" INPUT  
 T/C J = DIN CONTROLLER W/TYPE "J" INPUT  
 PT100 = DIN CONTROLLER W/TYPE "PT100" INPUT  
 N = NO PROBE HEATER CONTROL



- ① OPTIONAL NUMBER OF CAL GASES.
- ② OPTIONAL HEATED PROBE CONTROL. INCLUDE IF T/C "K" OR T/C "J".
- ③ OPTIONAL AUX. CONTROL. INCLUDE IF T/C "K", T/C "J" OR PT100.
- ④ OPTIONAL MANUAL BLOWBACK CONTROL.
- ⑤ OPTIONAL AUTO BLOWBACK CONTROL.
- ⑥ OPTIONAL FAST-LOOP BYPASS.
- ⑦ OPTIONAL FAST-LOOP BYPASS, BLOWBACK CONTROL, BLOWBACK MANUAL OR BLOWBACK LINE.
- ⑧ OPTIONAL BLOWBACK CONTROL, BLOWBACK MANUAL OR BLOWBACK LINE.
- ⑨ OPTIONAL THERMOCOUPLE TYPE "K" OR "J".
- ⑩ OPTIONAL NUMBER OF DILUTED SAMPLES.
- ⑪ OPTIONAL AUX. TEMP CONTROL.

- NOTES:  
 1). ARRANGEMENT ACCORDING TO GOOD ENGINEERING AND ASSEMBLY PRACTICES.  
 2). SEE SHEET 2 FOR P&ID.  
 3). SEE SHEETS 3 THRU 7 FOR WIRING SCHEMATICS.

<b>UNIVERSAL ANALYZERS INC.</b>		K	12/23/09	Update P/N Nomenclature	MW	GE	
5200 Convent Drive Carson City, Nevada 89706 USA		REV	DATE	DESCRIPTION	DWN	APVD	
DILUTION CONTROLLER DRAWER ARRANGEMENT		REVISIONS					
DATE	SCALE	SIZE	D	SHEET	1 OF 7		
01/18/2007	NTS	D					
DRAWN BY	R. Wells	DRAWING NO.		P1144			
APVD BY	G. Evans	PART NO.	FOR				
		NOT ISSUED	728 DCD				

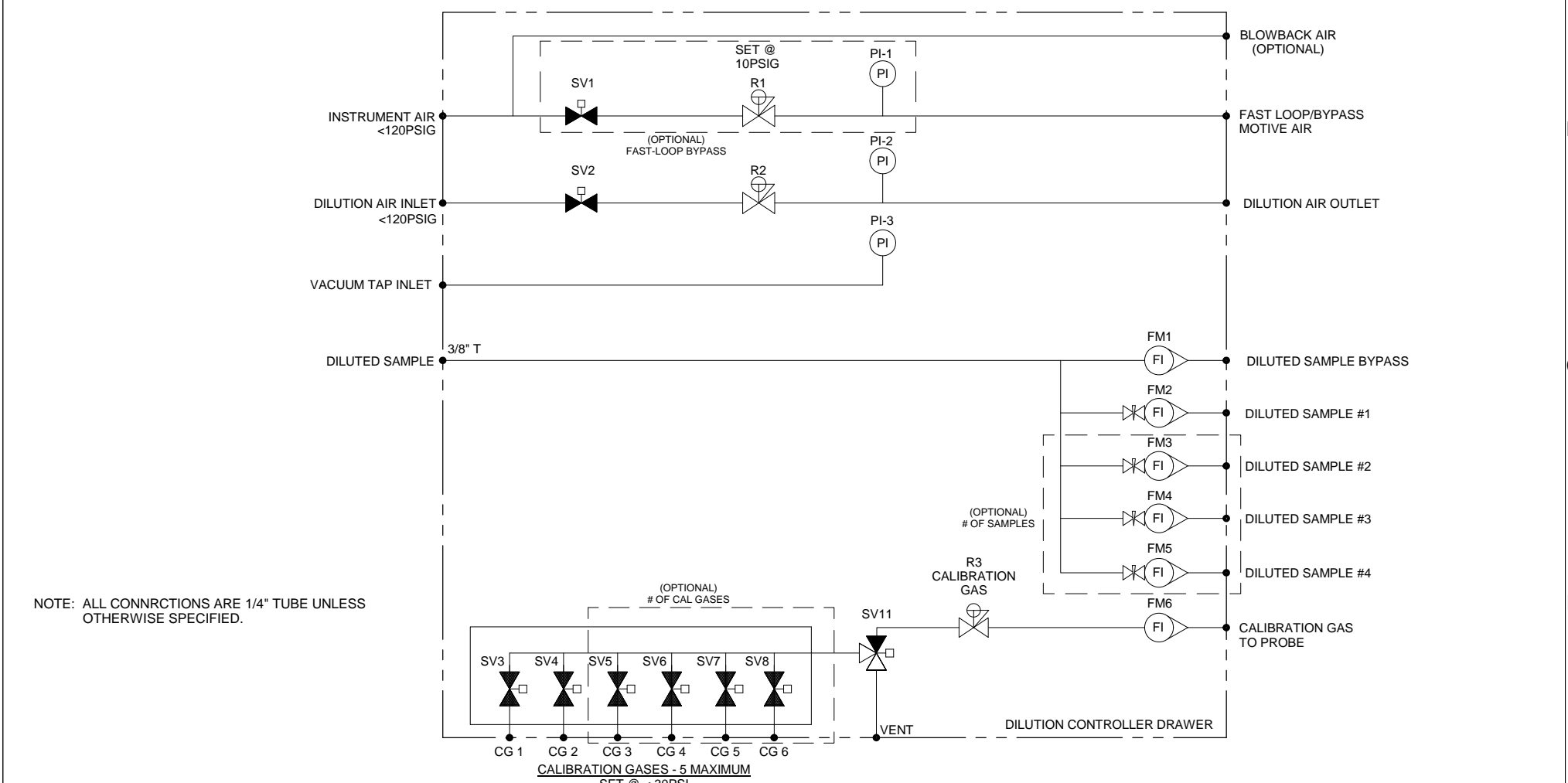
8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

D

C

B

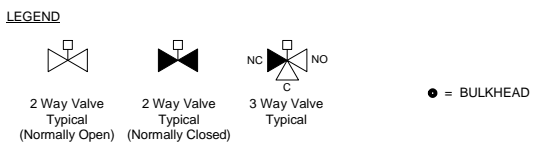
A



NOTE: ALL CONNRCTIONS ARE 1/4" TUBE UNLESS OTHERWISE SPECIFIED.

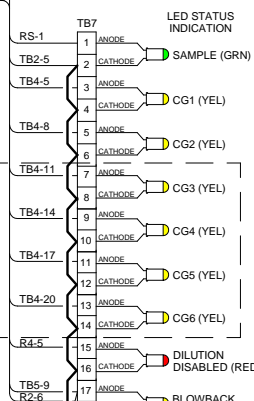
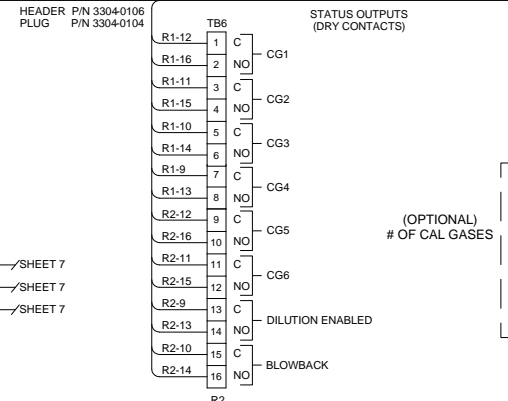
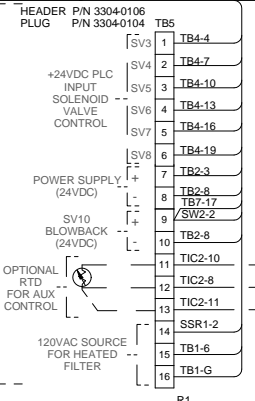
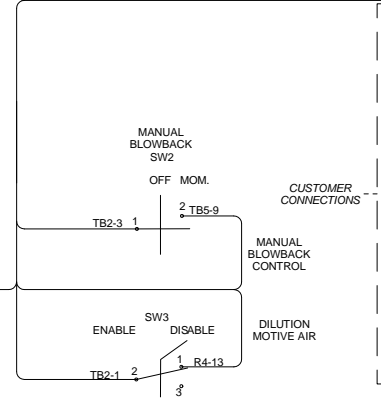
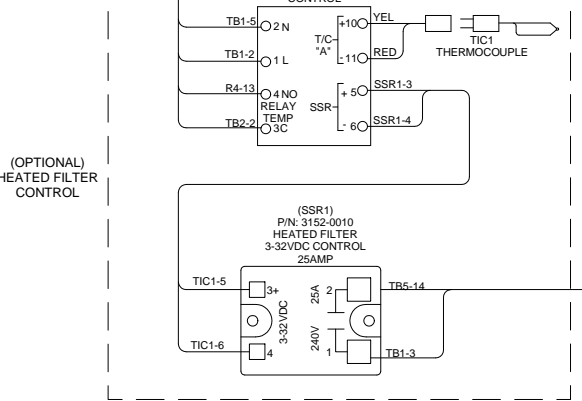
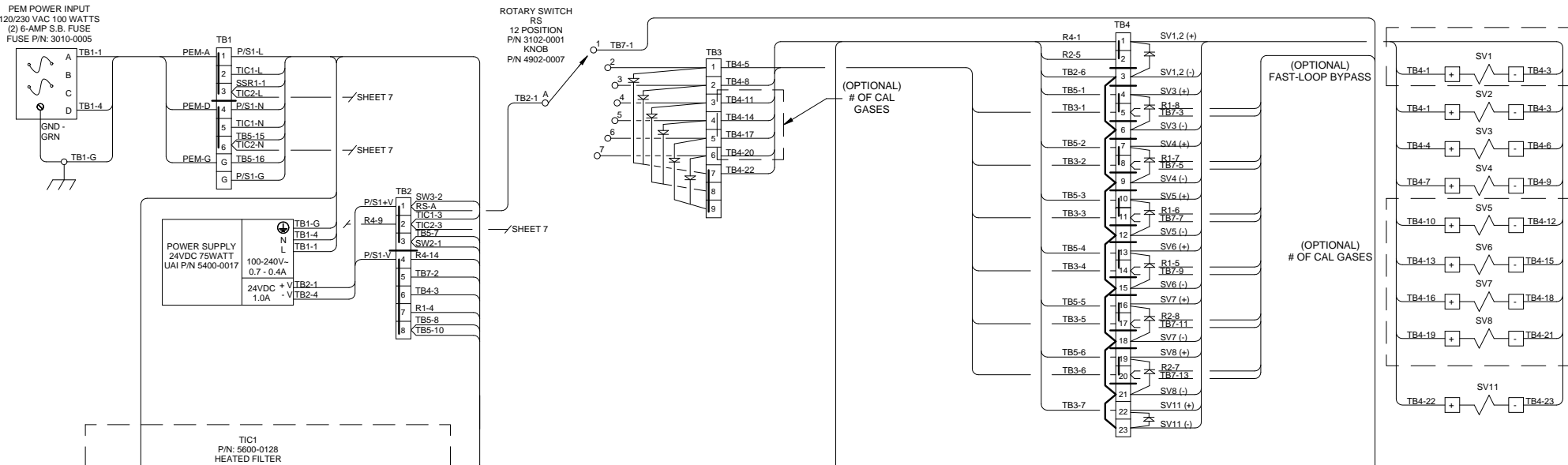
CALIBRATION GASES - 5 MAXIMUM  
SET @ < 30PSI

Item	Qty	Description	UAI Part No.
FM1,6	2	Flowmeter W/ Out Needle Valve 0-10 l/m	4965-0020
FM2,3,4,5	4	Flowmeter W/Needle Valve 0-2.5 l/m	4965-0018
PI-1	1	Gauge - Pressure 0-30psig	3019-0019
PI-2	1	Gauge - Pressure 0-100psig	3019-0007
PI-3	1	Gauge - Vacuum 0-30"Hg	3019-0006
R2	1	Regulator - 0-100psig	8200-0020
R1,3	2	Regulator - 0-30psig	8200-0019
SV1,2	2	Valve - Solenoid 24Vdc 2 Way - Normally Closed	4955-0010
SV3 - 8	6	Valve - Solenoid 24Vdc 2 Way	4955-0247
SV11	1	Valve - Solenoid 24Vdc 3 Way	4955-0062



<b>UNIVERSAL ANALYZERS INC.</b>		K	12/23/09	Update P/N Nomenclature	MW	GE
5200 Convent Drive Carson City, Nevada 89706 USA		REV	DATE	DESCRIPTION	REVISIONS	
Model 728 Dilution Controller Drawer P&ID		DATE	01/18/2007	SCALE	NTS	SIZE
PART NO.	FOR	DRAWN BY	R. Wells	SCALE	NTS	SIZE
NOT ISSUED	728 DCD	APVD BY	G. Evans	DRAWING NO.	P1144	
						SHEET 2 OF 7

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



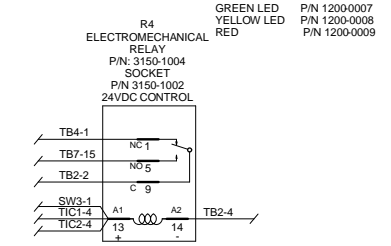
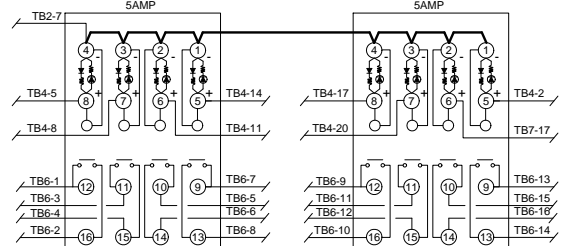
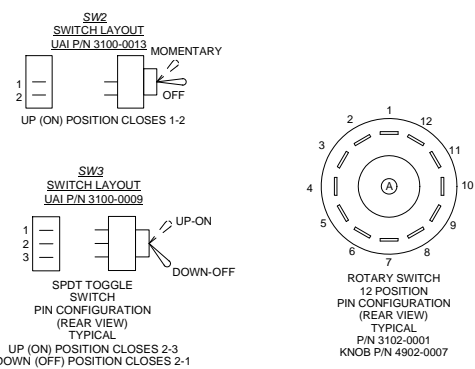
**CONDUIT AND WIRING NOTES**

- ELECTRICAL CLASSIFICATION: INSIDE - GENERAL PURPOSE SYSTEM IS CONFIGURED AT THE FACTORY FOR REQUIRED VOLTAGE. CONTACT FACTORY FOR VOLTAGE CHANGE REQUIREMENTS.
- AC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 18 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  

115VAC	230VAC
HOT - BLACK	L1 - BROWN
NEUTRAL - WHITE	L2 - BLUE
GROUND - GREEN	GROUND - GRN/YEL
- DC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 22 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  

115VAC	230VAC
+V - RED	+V - RED
0V - BLUE	0V - BLACK

FIELD TO WIRE  
DIODE RECTIFIERS #N4004  
UAI P/N 1000-0009 TYP



**UNIVERSAL ANALYZERS INC.**  
8200 Convair Drive  
Carson City, Nevada 89706 USA

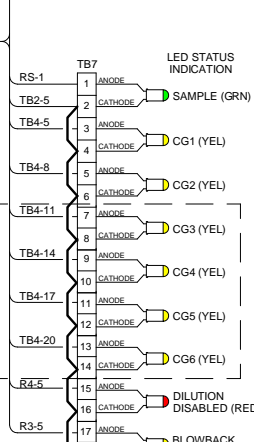
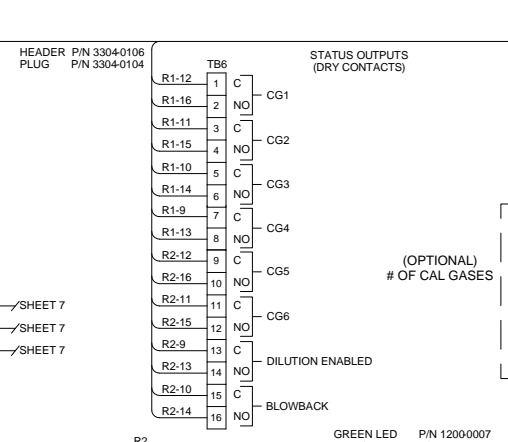
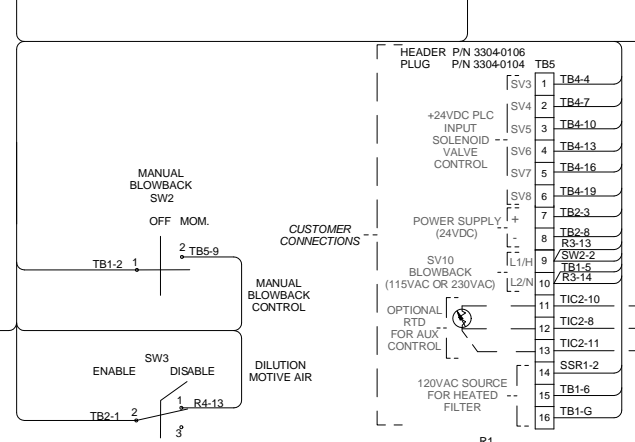
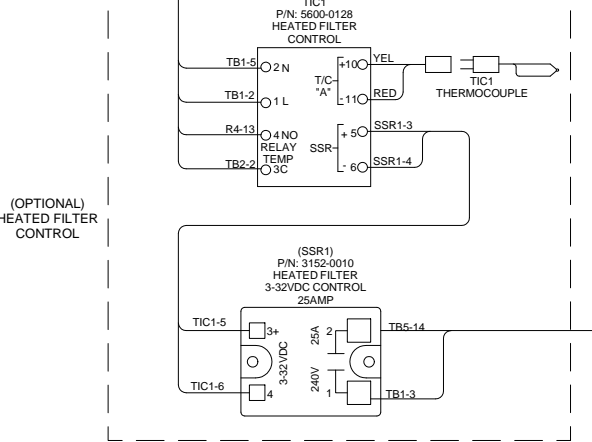
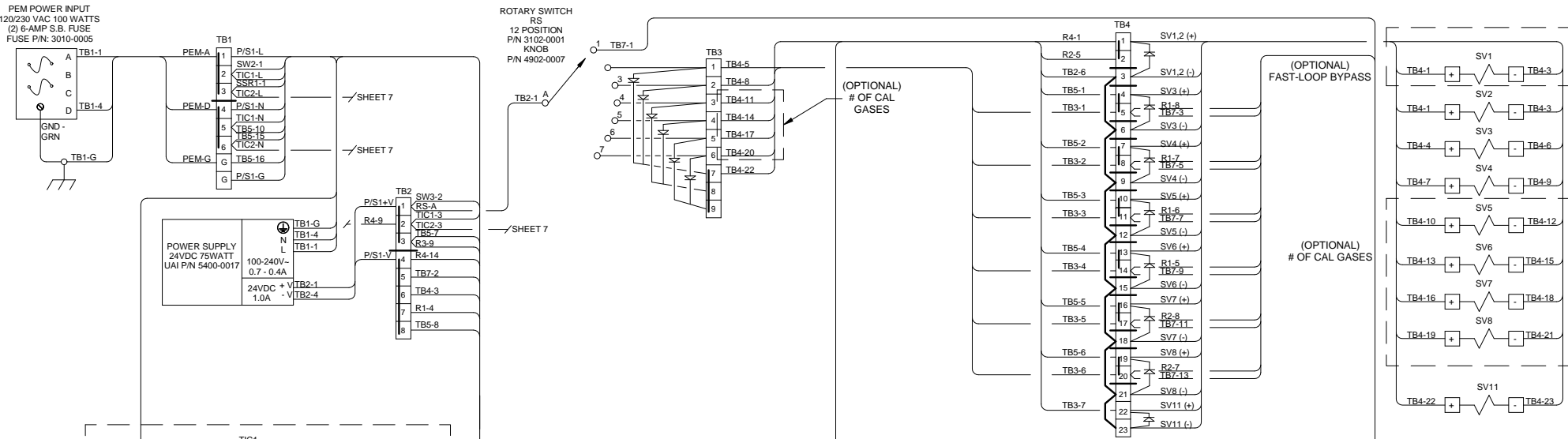
24VDC MANUAL BLOWBACK BBM(24) SCHEMATICS

REV	DATE	DESCRIPTION	REVISIONS	DWN	APVD
K	12/23/09	Update P/N Nomenclature		MW	GE
REV	DATE	DESCRIPTION	REVISIONS	DWN	APVD
	01/18/2007	SCALE NTS	SIZE D	SHEET 3	OF 7

DRAWN BY: R. Wells  
APVD BY: G. Evans

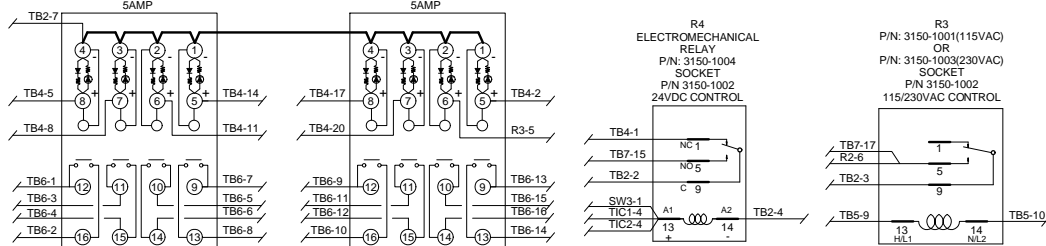
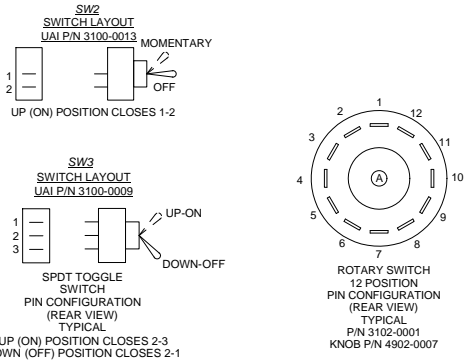
DRAWING NO: P1144

PART NO. NOT ISSUED FOR 728 DCD



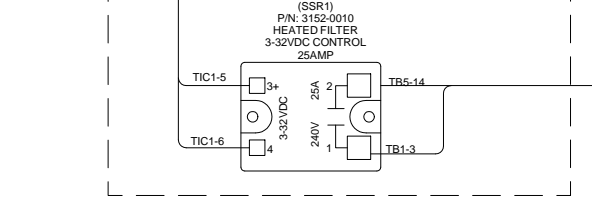
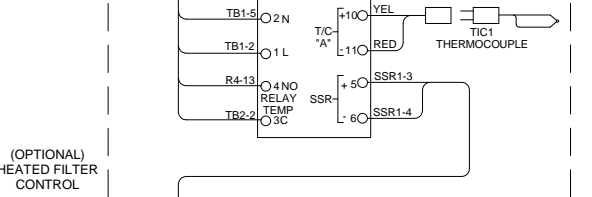
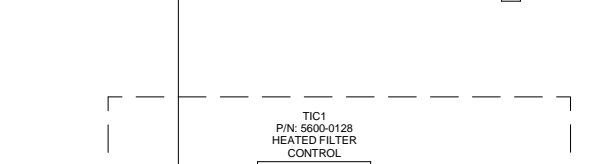
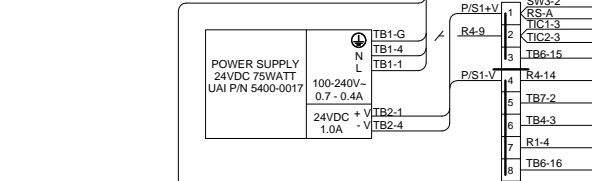
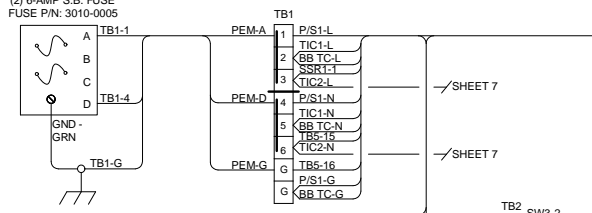
**CONDUIT AND WIRING NOTES**

- ELECTRICAL CLASSIFICATION: INSIDE - GENERAL PURPOSE SYSTEM IS CONFIGURED AT THE FACTORY FOR REQUIRED VOLTAGE. CONTACT FACTORY FOR VOLTAGE CHANGE REQUIREMENTS.
  - AC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 18 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC: HOT - BLACK, NEUTRAL - WHITE, GROUND - GREEN  
230VAC: L1 - BROWN, L2 - BLUE, GROUND - GRN/YEL
  - DC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 22 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC: +V - RED, 0V - BLUE  
230VAC: +V - RED, 0V - BLACK
- FIELD TO WIRE  
DIODE RECTIFIERS #IN4004  
UAI P/N 1000-0009 TYP



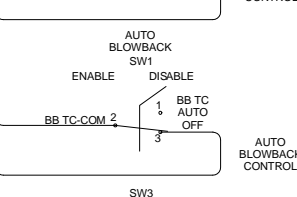
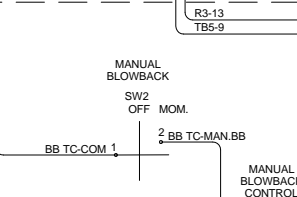
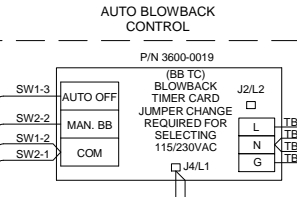
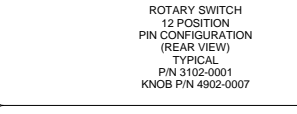
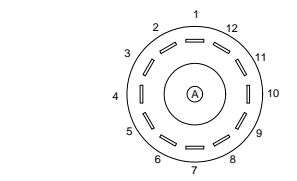
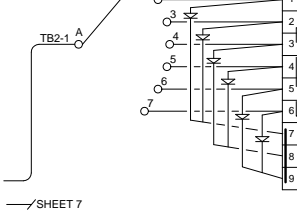
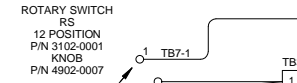
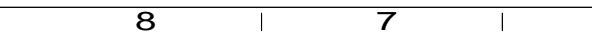
<b>UNIVERSAL ANALYZERS INC.</b> 8200 Convent Drive Carson City, Nevada 89706 USA		K	12/23/09	Update P/N Nomenclature	MW	GE
115/230VAC MANUAL BLOWBACK BBM(115/230) SCHEMATIC		REV	DATE	DESCRIPTION	DWN	APVD
PART NO. FOR NOT ISSUED		DATE	01/18/2007	SCALE	SIZE	SHEET
728 DCD		DRAWN BY	R. Wells	NTS	D	4 OF 7
		APVD BY	G. Evans	DRAWING NO.	P1144	

PEM POWER INPUT  
120/230 VAC-100 WATTS  
(2) 6-AMP S.B. FUSE  
FUSE P/N: 3010-0005

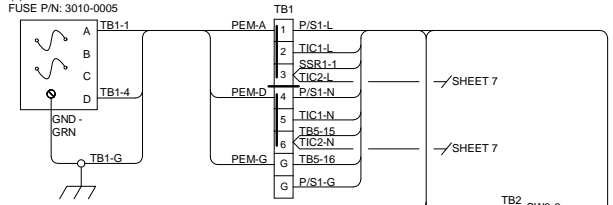


**CONDUIT AND WIRING NOTES**

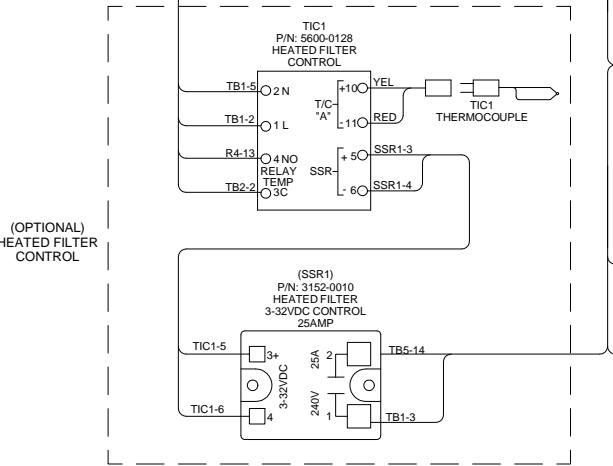
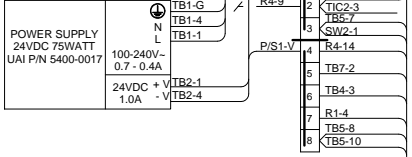
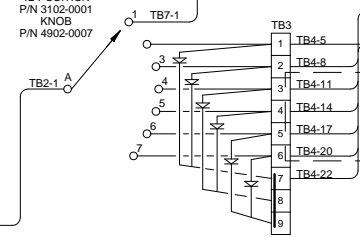
- ELECTRICAL CLASSIFICATION: INSIDE - GENERAL PURPOSE SYSTEM IS CONFIGURED AT THE FACTORY FOR REQUIRED VOLTAGE. CONTACT FACTORY FOR VOLTAGE CHANGE REQUIREMENTS.
- AC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 18 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC: HOT - BLACK, NEUTRAL - WHITE, GROUND - GREEN  
230VAC: L1 - BROWN, L2 - BLUE, GROUND - GRN/YEL
- DC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 22 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC: +V - RED, 0V - BLUE  
230VAC: +V - RED, 0V - BLACK



PEM POWER INPUT  
120/230 VAC 100 WATTS  
(2) 6-AMP S.B. FUSE  
FUSE P/N: 3010-0005

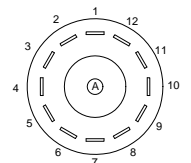
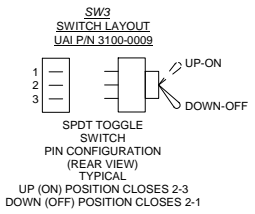


ROTAARY SWITCH  
RS  
12 POSITION  
P/N 3102-0001  
KNOB  
P/N 4902-0007



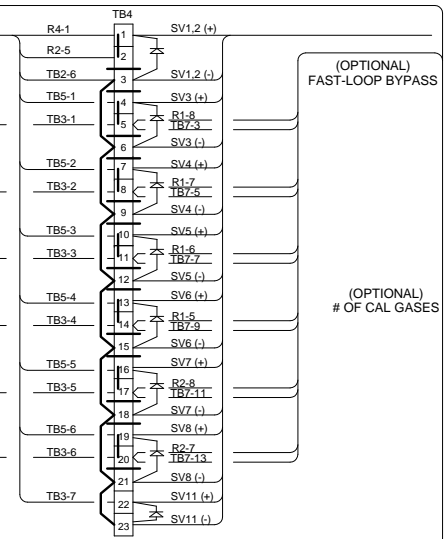
**CONDUIT AND WIRING NOTES**

- ELECTRICAL CLASSIFICATION : INSIDE - GENERAL PURPOSE SYSTEM IS CONFIGURED AT THE FACTORY FOR REQUIRED VOLTAGE. CONTACT FACTORY FOR VOLTAGE CHANGE REQUIREMENTS.
- AC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 18 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC  
HOT - BLACK L1 - BROWN  
NEUTRAL - WHITE L2 - BLUE  
GROUND - GREEN GROUND - GRN/YEL
- DC WIRING SHALL BE INDIVIDUAL CONDUCTORS OF STRANDED TINNED COPPER WITH 300V, TYPE TFE INSULATION. MINIMUM WIRE SIZE SHALL BE 22 AWG UNLESS OTHERWISE SPECIFIED. COLOR CODE SHALL BE AS FOLLOWS:  
115VAC  
+V - RED  
0V - BLUE

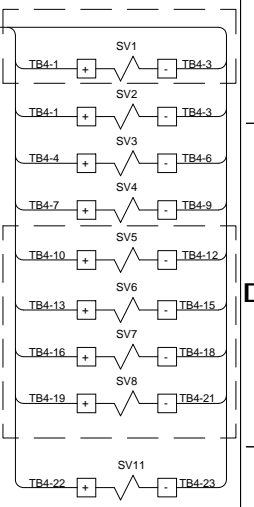


ROTAARY SWITCH  
12 POSITION  
PIN CONFIGURATION  
(REAR VIEW)  
TYPICAL  
P/N 3102-0001  
KNOB P/N 4902-0007

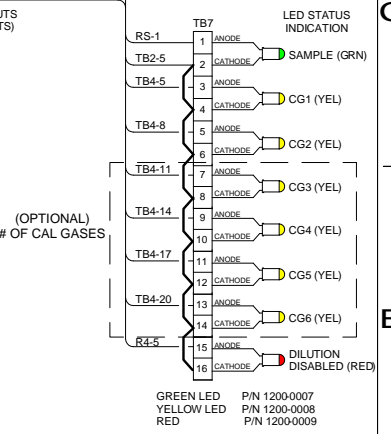
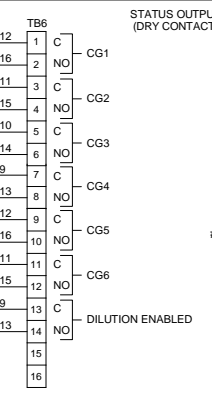
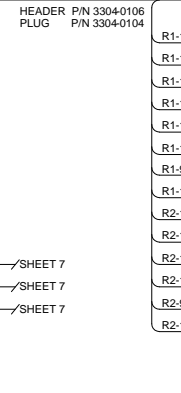
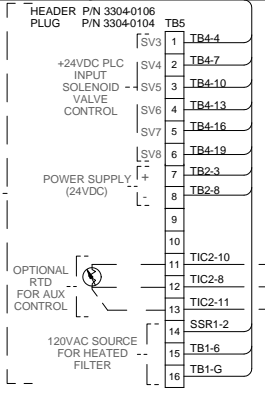
(OPTIONAL)  
# OF CAL GASES



(OPTIONAL)  
FAST-LOOP BYPASS

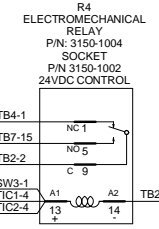
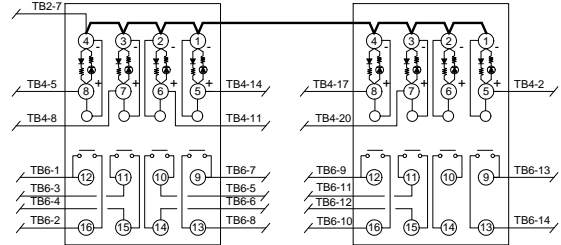


(OPTIONAL)  
# OF CAL GASES



R1 P/N: 5600-0181  
24VDC CONTROL  
5AMP

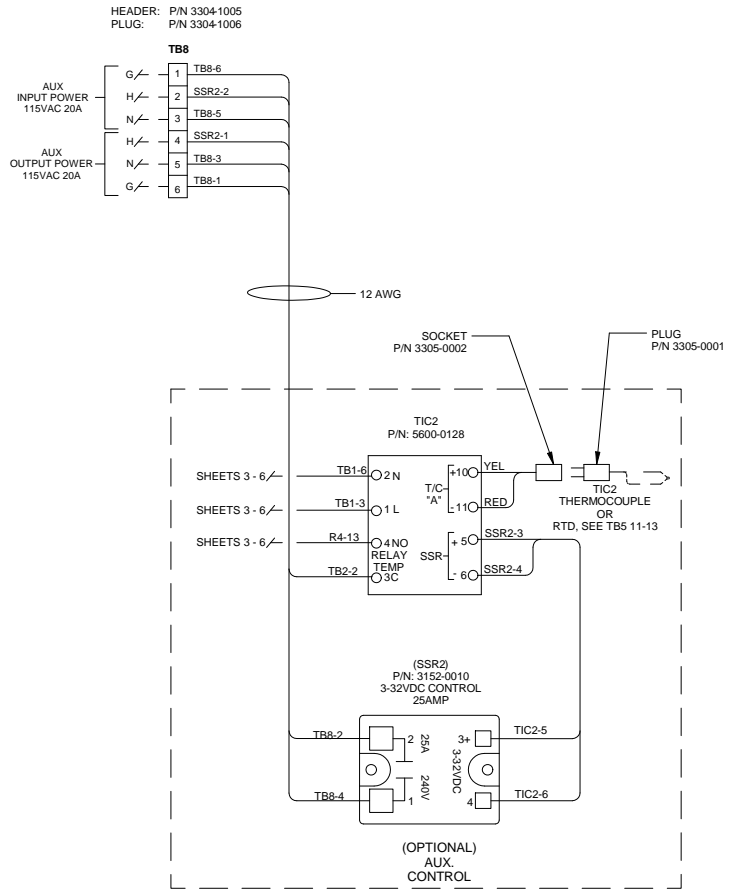
R2 P/N: 5600-0181  
24VDC CONTROL  
5AMP



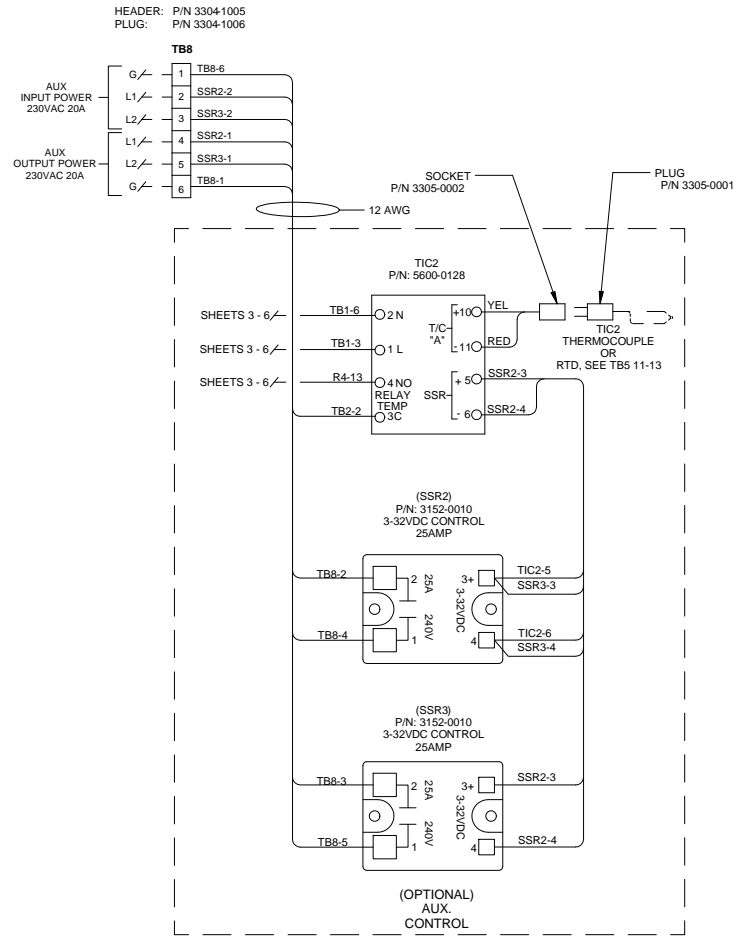
<b>UNIVERSAL ANALYZERS INC.</b> 5200 Convent Drive Carson City, Nevada 89706 USA		K 12/23/09	Update P/N Nomenclature	MW	GE
REV	DATE	DESCRIPTION		DWN	APVD
		REVISIONS			
	DATE	SCALE	NTS	SIZE	SHEET
	01/18/2007			D	6 OF 7
PART NO.	FOR	DRAWING NO.			
NOT ISSUED	728 DCD	P1144			
DRAWN BY R. Wells		APVD BY G. Evans			

8 7 6 5 4 3 2 1

**115 VAC**



**230 VAC**



8 7 6 5 4 3 2 1

<b>UNIVERSAL ANALYZERS INC.</b>		K	12/23/09	Update P/N Nomenclature	MW	GE	
5200 Convair Drive Carson City, Nevada 89706 USA		REV	DATE	DESCRIPTION	DWN	APVD	
<b>DILUTION CONTROLLER DRAWER SCHEMATICS</b>		REVISIONS					
PART NO.	FOR	DATE	SCALE	SIZE	SHEET		
NOT ISSUED	728 DCD	01/18/2007	NTS	D	7 OF 7		
DRAWN BY R. Wells		DRAWING NO.		P1144			
APVD BY G. Evans							