

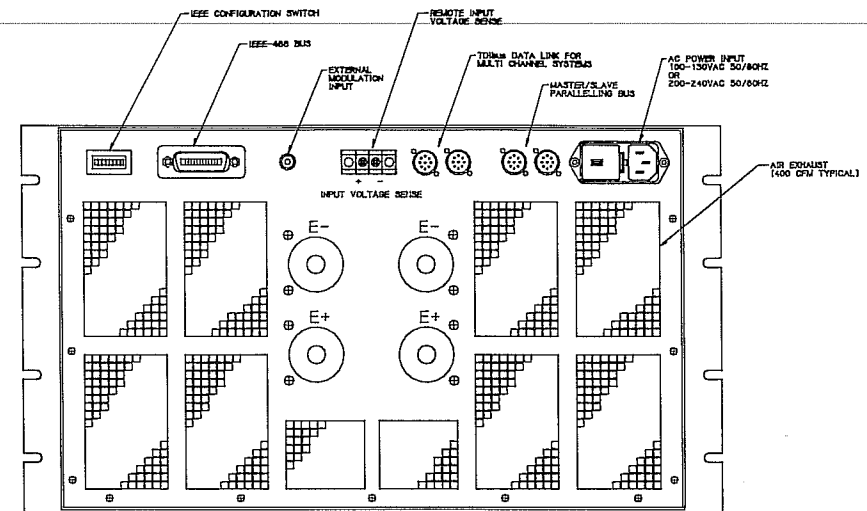
TDD-DCL LOAD SPECIFICATIONS

TDI PART NUMBER:	TDD-DCL-400-600-4000	TDD-DCL-100-600-4000	TDD-DCL-400-80-4000
AMPERES	600A	600A	80A
VOLTAGE	400V	100V	400V
MAXIMUM POWER	4500W(INTERMITTENT DUTY)	4500W(INTERMITTENT DUTY)	4500W(INTERMITTENT DUTY)
RATED POWER	4000W	4000W	4000W
<u>CONSTANT CURRENT MODE</u>			
RANGE	0-600A	0-600A	0-80.0A
ACCURACY	0.1% FS ±150mA	0.1% FS ±150mA	0.1% FS ±20mA
RESOLUTION	150mA	150mA	20mA
REGULATION	<60.0mA	<60.0mA	<10mA
<u>CONSTANT VOLTAGE MODE</u>			
RANGE	0-400V	0-100V	0-400V
ACCURACY	0.2% FS ±100mV	0.2% FS ±25.0mV	0.2% FS ±100mV
RESOLUTION	100mV	25.0mV	100mV
REGULATION	<100mV	<25.0mV	<100mV
<u>CONSTANT RESISTANCE MODE</u>			
RANGE	0.08-80.0 ohms	0.02-20.0 ohms	0.50-500 ohms
ACCURACY	1% FS ±0.020 ohms	1% FS ±0.005 ohms	1% FS ±0.125 ohms
RESOLUTION	0.020 ohms	0.005 ohms	0.002 ohms
<u>CONSTANT POWER MODE</u>			
RANGE	40.0-4000W	40.0-4000W	40.0-4000W
ACCURACY	0.5% FS ±1.0W	0.5% FS ±1.0W	0.5% FS ±1.0W
RESOLUTION	1.0W	1.0W	1.0W
<u>SWITCHOVER MODES</u>			
SWITCHOVER VOLTAGE RANGE	0-400V	0-100V	0-400V
SWITCHOVER ACCURACY:			
RESISTANCE TO CURRENT	1.6V	400mV	1.6V
CURRENT TO RESISTANCE	1.6V	400mV	1.6V
CURRENT TO CURRENT	1.6V	400mV	1.6V
<u>PROGRAMMABLE PROTECTION</u>			
<u>CURRENT LIMIT:</u>			
RANGE	0-700A	0-700A	0-94A
RESOLUTION	2.80A	2.80A	375mA
ACCURACY	1% FS ±2.80A	1% FS ±2.80A	1% FS ±375mA
<u>POWER LIMIT:</u>			
RANGE	0-4500W	0-4500W	0-4500W
RESOLUTION	18.0W	18.0W	18.0W
ACCURACY	1% FS ±18.0W	1% FS ±18.0W	1% FS ±18.0W
<u>VOLTAGE LIMIT:</u>			
RANGE	0-468V	0-117V	0-400V
RESOLUTION	1.87V	470mV	1.87V
ACCURACY	1% FS ±1.87V	1% FS ±470mV	1% FS ±1.87V

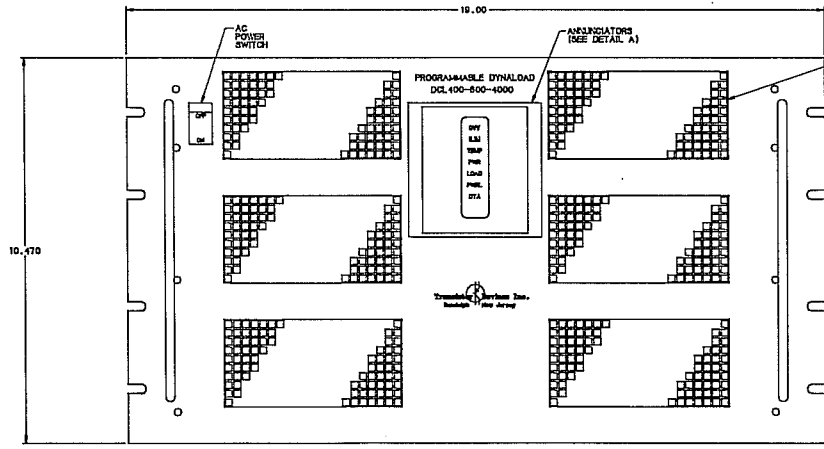
TDD-DCL LOAD SPECIFICATIONS

TDI PART NUMBER:	TDD-DCL-400-600-4000	TDD-DCL-100-600-4000	TDD-DCL-400-80-4000
<u>FIXED PROTECTION</u>			
OVER/UNDER SETPOINT OVER TEMPERATURE	ALARM AT $\pm 1\%$ DEVIATION FIXED AT 85°C	ALARM AT $\pm 1\%$ DEVIATION FIXED AT 85°C	ALARM AT $\pm 1\%$ DEVIATION FIXED AT 85°C
<u>SQUARE WAVE GENERATOR</u>			
FREQUENCY RANGE	16Hz-10KHz	16Hz-10KHz	16Hz-10KHz
TIME RESOLUTION	2uS	2uS	2uS
ACCURACY	4uS	4uS	4uS
DUTY CYCLE RANGE	3-97% (1.0KHz MAX)	3-97% (1.0KHz MAX)	3-97% (1.0KHz MAX)
DWELL TIME RANGE	30-65,500us	30-65,500us	30-65,500us
DWELL TIME RESOLUTION	2us	2us	2us
DWELL TIME ACCURACY	4us	4us	4us
<u>WAVEFORM GENERATOR</u>			
PROGRAMMABLE SLEW RATE(10-90%)	60mA/us-60A/us	60mA/us-60A/us	8mA/us-8.0A/us
DWELL TIME RANGE	30-65,500us	30-65,500us	30-65,500us
DWELL TIME RESOLUTION	2us	2us	2us
DWELL TIME ACCURACY	4us	4us	4us
<u>EXTERNAL PROGRAMMING</u>			
BANDWIDTH @ 3db	28KHz	28KHz	28KHz
RANGE	0-10VDC	0-10VDC	0-10VDC
ACCURACY	$\pm 1\%$ FS	$\pm 1\%$ FS	$\pm 1\%$ FS
INPUT IMPEDANCE	10,000 ohms	10,000 ohms	10,000 ohms
<u>READBACK SPECIFICATIONS</u>			
CURRENT READBACK RANGE	0-600A	0-600A	0-80A
CURRENT READBACK RESOLUTION	150mA	150mA	20mA
CURRENT READBACK ACCURACY	0.2% FS ± 150 mA	0.2% FS ± 150 mA	0.2% FS ± 20 mA
VOLTAGE READBACK RANGE	0-400V	0-100V	0-400V
VOLTAGE READBACK RESOLUTION	100mV	25.0mV	100mV
VOLTAGE READBACK ACCURACY	0.2% FS ± 100 mV	0.2% FS ± 25.0 mV	0.2% FS ± 100 mV
POWER READBACK RANGE	0-4000W	0-4000W	0-4000W
POWER READBACK RESOLUTION	1.0W	1.0W	1.0W
POWER READBACK ACCURACY	0.5% FS ± 1.0 W	0.5% FS ± 1.0 W	0.5% FS ± 1.0 W
<u>GENERAL SPECIFICATIONS</u>			
ELECTRONIC SHORT	0.030 ohms(TYPICAL)	0.030 ohms(TYPICAL)	0.030 ohms(TYPICAL)
OPERATE VOLTAGE	100-130VAC 50/60Hz OR 200-240VAC 50/60Hz	100-130VAC 50/60Hz OR 200-240VAC 50/60Hz	100-130VAC 50/60Hz OR 200-240VAC 50/60Hz

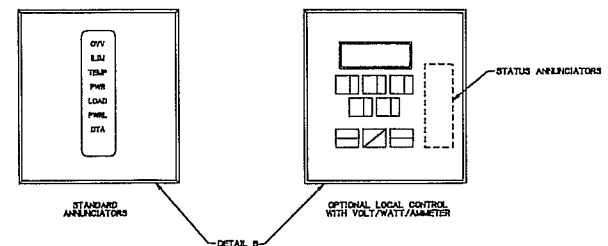
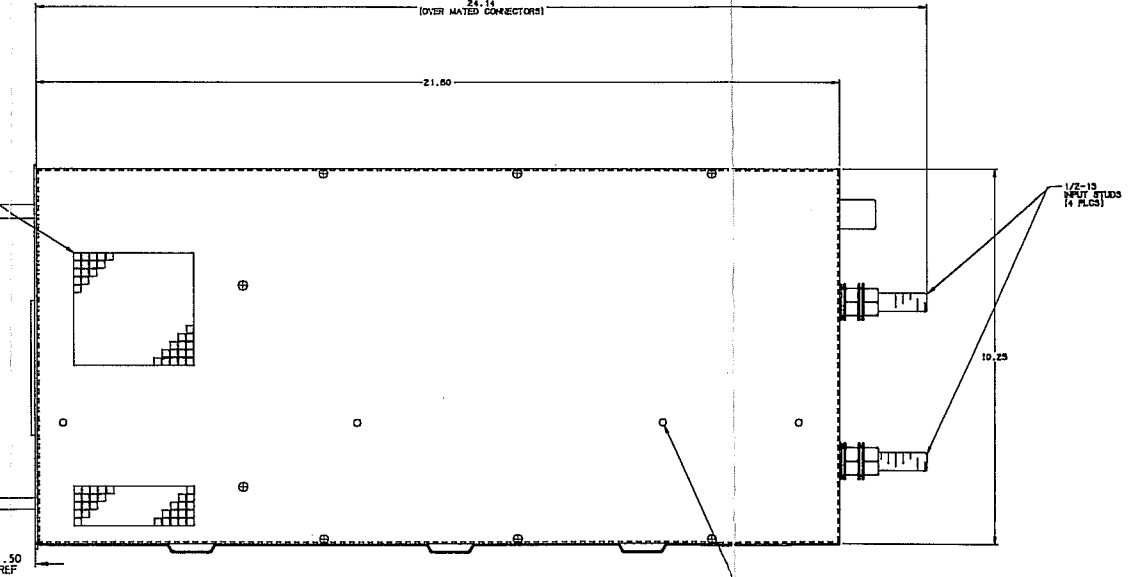
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



REAR VIEW



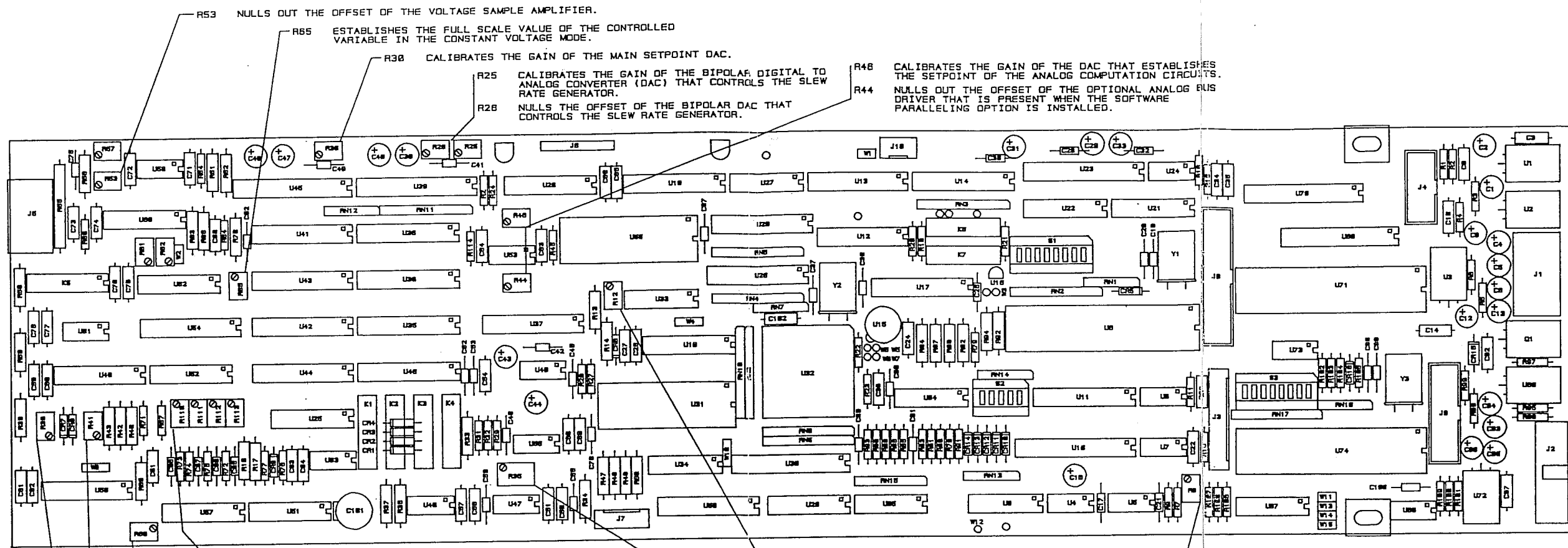
AIR INTAKE (TYPICAL)



DETAIL B

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTR NO.		PARTS LIST		
TOLERANCES: ANGLES ± 0°30'		DR ELAINE SWYHART 8-13-92		Transistor Devices Inc. Randolph New Jersey		
FRACTIONS ±		CHK		DRAWING TITLE		
3 PLACE DECIMALS ± .010		APPROVED		OUTLINE		
2 PLACE DECIMALS ± .02		BY DIRECTION OF		DCL-XXX-XXX-4000		
1 PLACE DECIMALS ±		SCALE NONE		PROGRAMMABLE DYNALOAD		
THIS IS A COMPUTER GENERATED DRAWING. ALL CHANGES MUST BE MADE TO THE CAD MODEL AND NOT TO THIS DOCUMENT.		SIZE		CODE IDENT NO. DRAWING NO.		
NEXT ASSY	USED ON	D 09004		123764		
APPLICATION		SHEET				

FIGURE 4



R53 NULLS OUT THE OFFSET OF THE VOLTAGE SAMPLE AMPLIFIER.

R65 ESTABLISHES THE FULL SCALE VALUE OF THE CONTROLLED VARIABLE IN THE CONSTANT VOLTAGE MODE.

R30 CALIBRATES THE GAIN OF THE MAIN SETPOINT DAC.

R25 CALIBRATES THE GAIN OF THE BIPOLAR DIGITAL TO ANALOG CONVERTER (DAC) THAT CONTRLS THE SLEW RATE GENERATOR.

R28 NULLS THE OFFSET OF THE BIPOLAR DAC THAT CONTROLS THE SLEW RATE GENERATOR.

R48 CALIBRATES THE GAIN OF THE DAC THAT ESTABLISHES THE SETPOINT OF THE ANALOG COMPUTATION CIRCUITS.

R44 NULLS OUT THE OFFSET OF THE OPTIONAL ANALOG BUS DRIVER THAT IS PRESENT WHEN THE SOFTWARE PARALLELING OPTION IS INSTALLED.

R110 CALIBRATES THE FULL SCALE READBACK OF THE VOLTAGE SAMPLE.

R111 CALIBRATES THE FULL SCALE READBACK OF THE CURRENT SAMPLE.

R112 CALIBRATES THE FULL SCALE READBACK OF THE POWER SAMPLE.

R113 CALIBRATES THE FULL SCALE READBACK OF THE INTERNAL FIVE VOLT SUPPLY FOR INTERNAL SELF TEST.

R88 ESTABLISHES THE FULL SCALE VALUE OF THE CURRENT IN THE CONSTANT CURRENT, CONSTANT POWER AND CONSTANT RESISTANCE MODES.

R41 CALIBRATES THE ANALOG SETPOINT GENERATOR THAT ESTABLISHES THE REQUIRED CURRENT SETPOINT IN THE CONSTANT POWER MODE.

R38 CALIBRATES THE ANALOG SETPOINT GENERATOR THAT ESTABLISHES THE REQUIRED CURRENT SETPOINT IN THE CONSTANT RESISTANCE MODE.

R12 CALIBRATES THE ANALOG POWER SAMPLE GENERATOR.

R35 CALIBRATES THE ZERO RATE (DRIFT) SETTING OF THE SLEW RATE GENERATOR.

R8 ESTABLISHES THE VOLTAGE AT WHICH THE AC VOLTAGE MONITOR TRIPS AND SHUTS THE LOAD DOWN FOR INSUFFICIENT AC OPERATE VOLTAGE.

LOAD CONTROL BOARD
POTENTIOMETER LOCATION

FIGURE 11