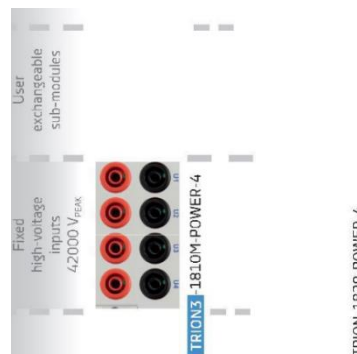# Power Test Boards

TRION3-1810M-POWER-4
TRION-1820-POWER-4

Both of these cards are 8-channel test boards with 18-bit sampling, The other four channels are fixed high voltage inputs with a maximum test voltage of ±2000 VPEAK.

The unique modular design allows both cards to have 4 channels to install different test type modules (SUB modules) for direct current input or voltage input. This test module is easy to replace and the user can do the module The modules can be easily replaced by the user. The flexibility of the test types allows almost any current or voltage transducer to be connected to Dvitronix power analyzers.

SUB-Model

>Users can replace themselves
>Software automatically detects and recognizes
>Built-in calibration information

The sampling rates for both boards are as follows:
>TRION3-1810M-POWER-410 MS/sec/channel
>TRION-1820-POWER-42 MS/sec/channel

Replaceable SUB Module Legend
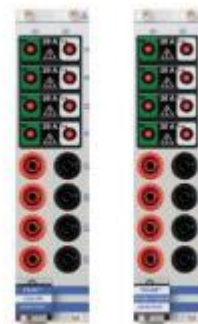
		Range	Surety	Bandwidth	Connector type	User replaceable	SUB-model
			User replaceable current test module (direct input & current sensor)				
CURRENT	20A Model	20A ($\pm40A_{peak}$)	CAT II 600 V, unfused	300 kHz	4mm Banana Fitting	Yes	
	2A Model	2A ($\pm4A_{peak}$)					
	1A Model	1A ($\pm2A_{peak}$)					
	0.2A Model	0.2A ($\pm0.4A_{peak}$)					
VOLTAGE	1V Model	1V ($\pm2V_{peak}$)	Not segregated. Depends on the used current sensor	5 MHz	DSUB-9	Yes	
	5V Model	5V ($\pm10V_{peak}$)		5 MHz	DSUB-9		
	Current clamp input	5V ($\pm10V_{peak}$)		150 kHz	DSUB-9		
			User-replaceable voltage test modules				
600 V Model		600V ($\pm1500V_{peak}$)	CAT II 600 V. Isolated	300 kHz	4mm Banana Fitting	Yes	
5 V Model		5V ($\pm10V_{peak}$)		300 kHz	4mm Banana Fitting		
			High Voltage Input				
Voltage Input U1,U2,U3,U4		1000V ($\pm2000V_{peak}$)	CAT IV 600 V CAT III 1000V	5 MHz	4mm Banana Fitting	No	

Test Accuracy Indicator

	TRION3-1810M-POWER-4 TRION-1820-POWER-4
Voltage Test Accuracy	
Range	1000V (±2000Vpeak)
DC	±0.02 % reading ±0.02 % range
0.5 Hz - 1 kHz	±0.03% of reading (no range error)
1 kHz - 5 kHz	±0.15% of reading (no range error)
5 kHz - 10 kHz	±0.35% of reading (no range error)
10 kHz - 50 kHz	±0.6% of reading (no range error)
50 kHz - 300 kHz	(± 0.02 % *f in kHz) reading (no range error)
Current Measurement Accuracy	
Range	0.2 A (±0.4 A_{PEAK}) / 1 A (±2 A_{PEAK}) / 2 A (±4 A_{PEAK}) / 20 A (±40)A_{PEAK}
DC	±0.02 % reading, ±80 µA
0.5 Hz - 10 kHz	±0.03% of reading (no range error)
10 kHz - 30 kHz	±0.1% of reading (no range error)
30 kHz - 200 kHz	(±0.015 % *f in kHz) reading (no range error)
200 kHz - 300 kHz	(± 0.01 % *f in kHz) reading (no range error)
Power test accuracy (50/60 HZ, PF=1)	
DC	±0.03 % reading ±0.03 % range
0.5 Hz - 1 kHz	±0.04% of reading (no range error)
1 kHz - 5 kHz	±0.15% of reading (no range error)
5 kHz - 10 kHz	±0.35% of reading (no range error)
10 kHz - 50 kHz	(± 0.5 % + 0.05 % *f in kHz) reading (no range error)
Fundamental frequency	
Realm	0.2 Hz – 200 kHz (>1 MS/s: 0.5Hz – 200 kHz)
Accuracy	±0.01% of reading, ±1 mHz

High dynamic range

DVT power test boards offer up to 10M sample rate and 18-bit resolution with high linearity. In addition, the boards offer high dynamic range over a range of up to 1000 V (2000 VPEAK) and 20A (40 APEAK). This maximizes test accuracy for dynamic and transient applications.

The DEWE2-PA7 and DEWE3-PA8 power analyzers offer high test accuracy. Compared to other brands of power analyzers on the market, the DEWE2-PA7 and DEWE3-PA8 products offer a constant test accuracy of 0.04% over the fundamental frequency range of 1 Hz to 1000 Hz. This is the key requirement for bench testing - to provide accurate test results over a very high frequency range.