

DC Electronic Load

150W ~ 6000W High-Power DC Electronic Load THL-Series

Product description:

THLXX- Series DC electronic load is a high-precision, programmable DC electronic load controlled by a high-performance microprocessor. 3.5-inch TFT true color LCD display, It has 4 base operating modes (CC/CV/CR/CW) and 10 functional modes. Has a comprehensive protection function, overheat protection, overcurrent protection, overpower protection, overvoltage protection, loop oscillation protection. Built-in rich interfaces, RS232,LAN,USB and analog interfaces for remote control and data acquisition, analysis.

Features

- 500kHz high speed voltage, current sampling rate
- High precision voltage and current measurement
- Fast loop response speed and current slew rate
- Programmable single step up to 10μS
- Equipped with remote four-wire compensation
- Unique real-time display of current ripple and voltage ripple
- Real-time display of load power and resistance

Test Function

4 basic working modes CC/CV/CR/CW and 10 functional modes multiple extended function modes:

- Dynamic test mode (DYNA)
- EFFECT mode
- AUTO mode
- AUTO mode
- LED (HP8151 has no LED mode)
- High-speed dynamic frequency conversion scanning function (SWEEP)
- OCP mode
- LIST function
- Timing test mode
- Professional battery test function



THL1 & THL2 & THL3 Seires
(150W ~ 300W)



THL6 & THL12 Seires
(600W ~ 1200W)



THL15 ~ THL32 Seires
(1500W ~ 3200W)



THL40 ~ THL60 Seires
(4kW ~ 6kW)



THL80 ~ THL500-Seires
(8kW ~ 50kW)



High Energy Density



Wide Range Electronic Load



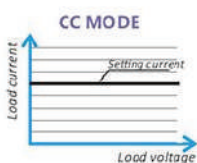
Instrument Self-diagnosis



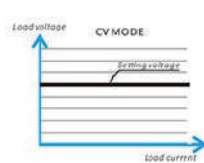
Modular Design



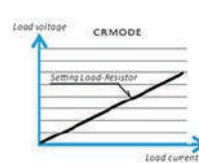
Multiple Protection



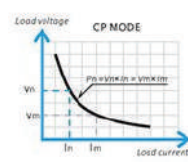
CC MODE



CV MODE



CR MODE



CW MODE

THL1-Series & THL2-Series & THL3-Series

Rate power : 150W / 200W / 300W

Dynamic Frequency: 25kHz

Sampling Speed: 500kHz

Specifications

Model	THL1-1530A	THL1-1530	THL1-5015	THL2-1530	THL2-1560	THL3-1530	THL3-5015	THL3-1560
Input Voltage	15V / 150V		50V / 500V	15V / 150V			50V / 500V	15V / 150V
Input Current	3A / 30A		1.5A / 15A	3A / 30A	1.5A / 15A	3A / 30A	1.5A / 15A	6A / 60A
Input Power	150W			200W		300W		
Min. Voltage	1.5V@30A		7.5V@30A	1.5V@30A	6.5V@15A	1V@30A	4V@30A	1.5V@30A
Min. Current Rise Time	10μs							
Constant Voltage mode: CV								
Range	15V / 150V		50V / 500V	15V / 150V			50V / 500V	15V / 150V
Resolution	0.2mV / 2mV		0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV
Accuracy	±(0.05%+0.05%FS)							
Constant Current mode: CC								
Range	3A / 30A		1.5A / 15A	3A / 30A	1.5A / 15A	3A / 30A	1.5A / 15A	6A / 60A
Resolution	0.04mA/0.4mA		0.02mA/0.2mA	0.04mA/0.4mA	0.02mA/0.2mA	0.04mA/0.4mA	0.02mA/0.2mA	0.09mA/0.9mA
Accuracy	±(0.05%+0.05%FS)							
Constant Resistance mode: CR								
Range	0.1 ~ 7.5kΩ							
Resolution	16 Bits							
Accuracy	±0.1%							
Constant Power mode: CP								
Range	150W			200W		300W		
Resolution	16 Bits							
Accuracy	±(0.1%+0.1%FS)							
LED mode: LED								
Band Width	-----	100kHz and above						
Rd Coefficient	-----	0.001 ~ 1						
Dynamic mode: DYNA								
Ta&Tb	10μS ~ 50S							
Min. Resolution	10μS							
Max. Rise/Drop Slope	0.8A/μs	1.5A/μs	0.8A/μs	1.5A/μs	0.8A/μs	1.5A/μs	0.8A/μs	3A/μs
Voltage Read-back Value								
Range	15V / 150V		50V / 500V	15V / 150V	50V / 500V	15V / 150V	50V / 500V	15V / 150V
Resolution	0.1mV / 1mV		0.3mV / 3mV	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV
Accuracy	±(0.025%+0.025%FS)							
Current Read-back Value								
Range	3A / 30A		1.5A / 15A	3A / 30A	1.5A / 15A	3A / 30A	1.5A / 15A	6A / 60A
Resolution	0.02mA/0.2mA		0.01mA/0.1mA	0.02mA/0.2mA	0.01mA/0.1mA	0.02mA/0.2mA	0.01mA/0.1mA	0.04mA/0.4mA
Accuracy	±(0.05%+0.05%FS)					±(0.05%+0.1%FS)		
Ripple Read-back Value								
Range	---	150V / 30A	500V / 15A	150V / 30A	500V / 15A	150V / 30A	500V / 15A	150V / 60A
Resolution	---	10Hz ~ 250kHz						
Accuracy	±1%							
Protection								
Over Power	158W			210W		315W		
Over Current	32A		16A	32A	16A	32A	16A	63A
Over Voltage	158V		525V	158V	525V	158V	525V	158V
Over Temperature	85℃							
Interface	RS232, LAN, USB and analog interfaces							
Input Power	AC : 220V±10%, 50/60Hz							
Dimension (L*W*H)	358mm*214mm*88mm							
Weight (Kg)	3.8kg							

Ordering Informations

THL1-1530A : 150W/300V/30A Programmable DC Electronic Load

THL1-1530 : 150W/150V/30A Programmable DC Electronic Load

THL1-5015 : 150W/500V/15A Programmable DC Electronic Load

THL2-1530 : 200W/150V/30A Programmable DC Electronic Load

THL2-1560 : 200W/150V/60A Programmable DC Electronic Load

THL3-1530 : 300W/150V/30A Programmable DC Electronic Load

THL3-5015 : 300W/500V/15A Programmable DC Electronic Load

THL3-1560 : 300W/150V/60A Programmable DC Electronic Load

Standard Accessories :

- User Manual
- Power cord

THL6-Series & THL12-Series

Rate power : 600W / 1200W

Dynamic Frequency: 25kHz

Sampling Speed: 500kHz

Specifications

Model	THL6-15120	THL6-5060	THL12-15240	THL12-5060
Input Voltage	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Input Current	12A / 120A	6A / 60A	24A / 240A	6A / 60A
Input Power	600W		1200W	
Min. Voltage	1.5V@120A	4V@60A	1.5V@240A	4V@60A
Min. Current Rise Time	60μs			
Constant Voltage mode: CV				
Range	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Resolution	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV
Accuracy	±(0.05%+0.025%FS)			
Constant Current mode: CC				
Range	12A / 120A	6A / 60A	24A / 240A	6A / 60A
Resolution	0.1mA / 1mA	0.09mA / 0.9mA	0.3mA / 3mA	0.09mA / 0.9mA
Accuracy	±(0.05%+0.05%FS)		±(0.1%+0.1%FS)	±(0.05%+0.05%FS)
Constant Resistance mode: CR				
Range	0.1Ω ~ 7.5kΩ			
Resolution	16 Bits			
Accuracy	±0.1%			
Constant Power mode: CP				
Range	600W		1200W	
Resolution	16 Bits			
Accuracy	±(0.1%+0.1%FS)			
LED mode: LED				
Band Width	---			
Rd Coefficient	---			
Dynamic mode: DYNA				
Ta&Tb	10μS ~ 50S			
Min. Resolution	10μS			
Max. Rise/Drop Slope	1.5A/μs	0.5A/μs	3.2A/μs	0.8A/μs
Voltage Read-back Value				
Range	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Resolution	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV	0.3mV / 3mV
Accuracy	±(0.05%+0.05%FS)			
Current Read-back Value				
Range	12A / 120A	6A / 60A	24A / 240A	6A / 60A
Resolution	0.09mA / 0.9mA	0.02mA / 0.2mA	0.1mA / 1mA	0.04mA / 0.4mA
Accuracy	±(0.05%+0.05%FS)			
Ripple Read-back Value				
Range	150V / 120A	500V / 60A	150V / 240A	500V / 60A
Resolution	10Hz ~ 250kHz			
Accuracy	±0.1%			
Protection				
Over Power	630W		1260W	
Over Current	126A	63A	252A	63A
Over Voltage	158V	525V	158V	525V
Over Temperature	85°C			
Interface	RS232, LAN, USB and analog interfaces			
Input Power	AC : 220V±10%, 50/60Hz			
Dimension (L*W*H)	483mm*428mm*106mm			
Weight (Kg)	19.5kg			

Ordering Informations

THL6-15120 : 600W/150V/120A Programmable DC Electronic Load

THL6-5060 : 600W/500V/60A Programmable DC Electronic Load

THL12-15240 : 1200W/150V/240A Programmable DC Electronic Load

THL12-5060 : 1200W/500V/60A Programmable DC Electronic Load

Standard Accessories :

- User Manual
- Power cord

THL15-Series & THL18-Series & TH24-Series

Rate power : 1500W / 1800W / 2400W

Dynamic Frequency: 25kHz

Sampling Speed: 500kHz

Specifications

Model	THL15-15240	THL15-50120	THL18-15240	THL18-50120	THL24-15240	THL24-50120
Input Voltage	15V / 150V	50V / 500V	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Input Current	24A / 240A	12A / 120A	24A / 240A	12A / 120A	24A / 240A	12A / 120A
Input Power	1500W		1800W		2400W	
Min. Voltage	1V@240A	4.5V@120A	1V@240A	5.5V@120A	1.5V@240A	4.5V@120A
Min. Current Rise Time	60μs					
Constant Voltage mode: CV						
Range	15V / 150V	50V / 500V	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Resolution	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV
Accuracy	±(0.05%+0.025%FS)					
Constant Current mode: CC						
Range	24A / 240A, 12A / 120A					
Resolution	0.3mA / 3mA, 0.1mA / 1mA					
Accuracy	±(0.1%+0.1%FS)					
Constant Resistance mode: CR						
Range	0.1Ω ~ 7.5kΩ					
Resolution	16 Bits					
Accuracy	±0.1%					
Constant Power mode: CP						
Range	1500W		1800W		2400W	
Resolution	16 Bits					
Accuracy	±(0.1%+0.1%FS)					
LED mode: LED						
Band Width	---					
Rd Coefficient	---					
Dynamic mode: DYNA						
Ta&Tb	10μS ~ 50S					
Min. Resolution	10μS					
Max. Rise/Drop Slope	3.2A/μs	0.8A/μs	3.2A/μs	0.8A/μs	3.2A/μs	0.8A/μs
Voltage Read-back Value						
Range	15V / 150V	50V / 500V	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Resolution	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV	0.3mV / 3mV
Accuracy	±(0.025%+0.025%FS)					
Current Read-back Value						
Range	24A / 240A	12A / 120A	24A / 240A	2A / 120A	24A / 240A	2A / 120A
Resolution	0.09mA / 0.9mA	0.09mA / 0.9mA	0.1mA / 1mA	0.09mA / 0.9mA	0.1mA / 1mA	0.09mA / 0.9mA
Accuracy	±(0.05%+0.05%FS)					
Ripple Read-back Value						
Range	150V / 240A	500V / 120A	500V / 120A			
Resolution	10Hz ~ 250kHz					
Accuracy	±1%					
Protection						
Over Power	1575W		1890W		2420W	
Over Current	252A	126A	252A	126A	252A	126A
Over Voltage	158V	525V	158V	525V	158V	525V
Over Temperature	85°C					
Interface	RS232, LAN, USB and Analog interfaces					
Input Power	AC : 220V±10%, 50/60Hz					
Dimension (L*W*H)	483mm*427mm*174mm					
Weight (Kg)	24kg		26kg		31kg	

Ordering Informations

THL15-15240 : 1500W/150V/240A Programmable DC Electronic Load

THL15-50120 : 1500W/500V/120A Programmable DC Electronic Load

THL18-15240 : 1800W/150V/240A Programmable DC Electronic Load

THL18-50120 : 1800W/500V/120A Programmable DC Electronic Load

THL24-15240 : 2400W/150V/240A Programmable DC Electronic Load

THL24-50120 : 2400W/500V/120A Programmable DC Electronic Load

Standard Accessories :

- User Manual
- Power cord

THL40-Series & THL50-Series

Rate power : 4000W / 5000W

Dynamic Frequency: 25kHz

Sampling Speed: 500kHz

Specifications

Model	THL40-15240	THL40-50120	THL40-15500	THL50-15240	THL50-50120	THL50-15500
Input Voltage	15V / 150V	50V / 500V	15V / 150V	5V / 150V	50V / 500V	15V / 150V
Input Current	24A / 240A	12A / 120A	50A / 500A	24A / 240A	12A / 120A	50A / 500A
Input Power	4000W			5000W		
Min. Voltage	1V@240A	2.5V@120A	15V@500A	5.5V@120A	1.5V@120A	4.5V@500A
Min. Current Rise Time	100μs					
Constant Voltage mode: CV						
Range	15V / 150V	50V / 500V	15V / 150V	50V / 500V	15V / 150V	50V / 500V
Resolution	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV	0.7mV / 7mV
Accuracy	±(0.05%+0.025%FS)			±(0.025%+0.05%FS)		
Constant Current mode: CC						
Range	24A / 240A	12A / 120A	50A / 500A	24A / 240A	12A / 120A	50A / 500A
Resolution	0.3mA / 3mA	0.1mA / 1mA	0.7mA / 7mA	0.3mA / 3mA	0.1mA / 1mA	0.7mA / 7mA
Accuracy	±(0.1%+0.1%FS)					
Constant Resistance mode: CR						
Range	0.1Ω ~ 7.5kΩ					
Resolution	16 Bits					
Accuracy	±0.1%					
Constant Power mode: CP						
Range	4000W			5000W		
Resolution	16 Bits					
Accuracy	±(0.2%+0.2%FS)					
LED mode: LED						
Band Width	---					
Rd Coefficient	---					
Dynamic mode: DYNA						
Ta&Tb	10μS ~ 50S					
Min. Resolution	10μS					
Max. Rise/Drop Slope	2.5A/μs	1A/μs	5A/μs	2.5A/μs	1A/μs	5A/μs
Voltage Read-back Value						
Range	15V / 150V	50V / 500V	15V / 150V	15V / 150V	50V / 500V	15V / 150V
Resolution	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV
Accuracy	±(0.025%+0.025%FS)					
Current Read-back Value						
Range	24A / 240A	12A / 120A	50A / 500A	24A / 240A	12A / 120A	50A / 500A
Resolution	0.09mA / 0.9mA	0.09mA / 0.9mA	0.3mA / 3mA	0.09mA / 0.9mA	0.09mA / 0.9mA	0.3mA / 3mA
Accuracy	±(0.05%+0.05%FS)					
Ripple Read-back Value						
Range	150V / 240A	500V / 120A	150V/ 500A	50V / 240A	500V / 120A	150V/ 500A
Resolution	10Hz ~ 250kHz					
Accuracy	±1%					
Protection						
Over Power	4200W			5250W		
Over Current	252A	126A	252A	252A	126A	525A
Over Voltage	158V	525V	158V	58V	525V	158V
Over Temperature	85°C					
Interface	RS232, LAN, USB and Analog interfaces					
Input Power	AC : 220V±10%, 50/60Hz					
Dimension (L*W*H)	326mm*483mm*176mm			624mm*483mm*176mm		
Weight (Kg)	39kg			44kg		

Ordering Informations

THL40-15240 : 4000W/150V/240A Programmable DC Electronic Load

THL40-50120 : 4000W/500V/120A Programmable DC Electronic Load

THL40-15500 : 4000W/150V/500A Programmable DC Electronic Load

THL50-15240 : 5000W/150V/240A Programmable DC Electronic Load

THL50-50120 : 5000W/500V/120A Programmable DC Electronic Load

THL50-15500 : 5000W/150V/500A Programmable DC Electronic Load

Standard Accessories :

- User Manual
- Power cord

THL60-Series

Rate power : 6000W

Dynamic Frequency: 25kHz

Sampling Speed: 500kHz

Specifications

Model	THL60-15240	THL60-50120	THL60-15500
Input Voltage	15V / 150V	50V / 500V	15V / 150V
Input Current	24A / 240A	12A / 120A	50A / 500A
Input Power	6000W		
Min. Voltage	1.5V@240A	2.5V@120A	1.5V@500A
Min. Current Rise Time	100μs		
Constant Voltage mode: CV			
Range	15V / 150V	50V / 500V	15V / 150V
Resolution	0.2mV / 2mV	0.7mV / 7mV	0.2mV / 2mV
Accuracy	±(0.025%+0.025%FS)		
Constant Current mode: CC			
Range	24A / 240A	12A / 120A	50A / 500A
Resolution	0.3mA / 3mA	0.1mA / 1mA	0.7mA / 7mA
Accuracy	±(0.1%+0.1%FS)		
Constant Resistance mode: CR			
Range	0.1Ω ~ 7.5kΩ		
Resolution	16 Bits		
Accuracy	±0.1%		
Constant Power mode: CP			
Range	6000W		
Resolution	16 Bits		
Accuracy	±(0.2%+0.2%FS)		
LED mode: LED			
Band Width	---		
Rd Coefficient	---		
Dynamic mode: DYNA			
Ta&Tb	10μS ~ 50S		
Min. Resolution	10μS		
Max. Rise/Drop Slope	2.5A/μs	1A/μs	5A/μs
Voltage Read-back Value			
Range	15V / 150V	50V / 500V	15V / 150V
Resolution	0.1mV / 1mV	0.3mV / 3mV	0.1mV / 1mV
Accuracy	±(0.025%+0.025%FS)		
Current Read-back Value			
Range	24A / 240A	12A / 120A	50A / 500A
Resolution	0.1mA / 1mA	0.09mA / 0.9mA	0.3mA / 3mA
Accuracy	±(0.05%+0.05%FS)		
Ripple Read-back Value			
Range	150V / 240A	500V / 120A	150V / 500A
Resolution	10Hz ~ 250kHz		
Accuracy	±1%		
Protection			
Over Power	6300W		
Over Current	252A	126A	252A
Over Voltage	158V	525V	158V
Over Temperature	85°C		
Interface	RS232, LAN, USB and Analog interfaces		
Input Power	AC : 220V±10%, 50/60Hz		
Dimension (L*W*H)	624mm*483mm*176mm		
Weight (Kg)	45kg		

Ordering Informations

THL60-15240 : 6000W/150V/240A Programmable DC Electronic Load

THL60-50120 : 6000W/500V/120A Programmable DC Electronic Load

THL60-15500 : 6000W/150V/500A Programmable DC Electronic Load

Standard Accessories :

- User Manual
- Power cord