



# Programmable DC Electronic Load

## — — 10kW-20kW series

### OVERVIEW

- The HT8XXX-M is a high precision programmable DC electronic load controlled by a high performance microprocessor.
- 3.5-inch TFT true color LCD display with Chinese and English menu.
- With 4 basic working modes (CC/CV/CR/CW) and 10 functional modes.
- With comprehensive protection including overheat protection, over-current protection, over-power protection, over-voltage protection, loop oscillation protection.
- Built-in rich interfaces. HT8XXX-M supports RS232, LAN, USB and analog interfaces to fit your versatile solution and testing needs.

### Test function

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

- DYNA dynamic test function
- OCP over current protection mode
- BATT battery mode
- EFFT load effect mode
- SWEEP dynamic frequency conversion scanning function
- TIMEING time measurement function
- OVP over voltage protection mode
- AUTO mode
- LIST function
- ESR function



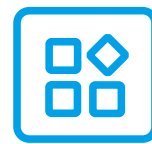
High Energy Density



Wide Range Electronic Load



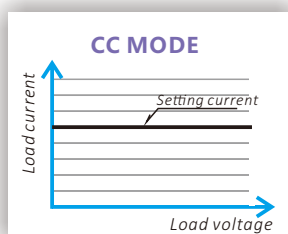
Instrument Self-diagnosis



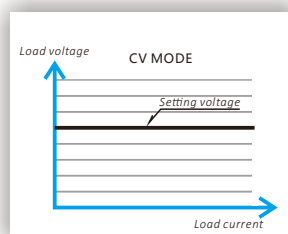
Modular Design



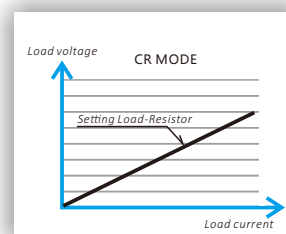
Multiple Protection



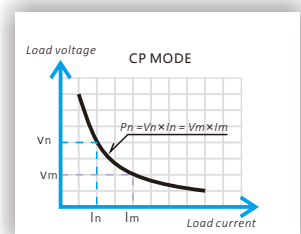
CC MODE



CV MODE



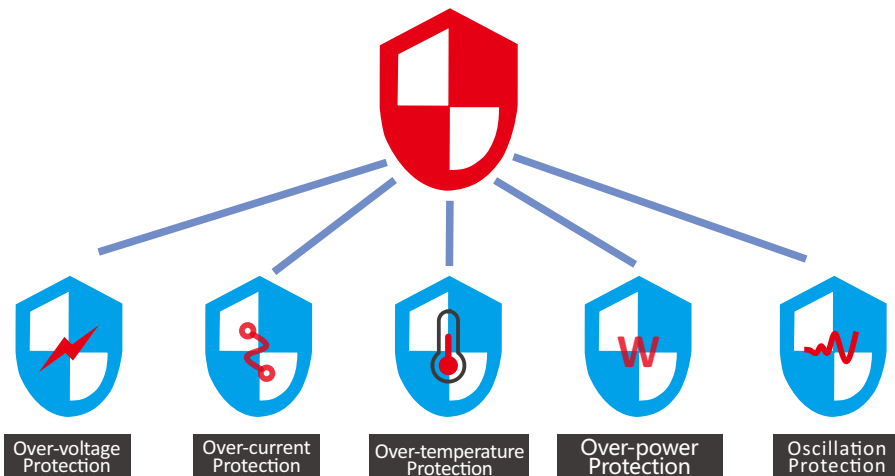
CR MODE



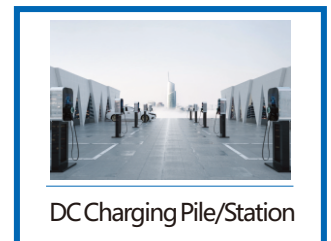
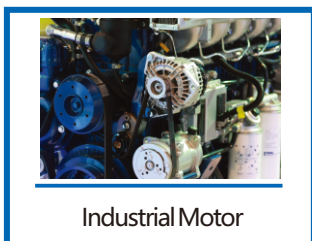
CP MODE

## 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 10 $\mu$ S
- Equipped with remote four-wire compensation
- Unique real-time display of current ripple and voltage ripple
- Real-time display of load power and resistance



## APPLICATION



## SPECIFICATION

Model	HT8103B-M		HT8103C-M		HT8123B-M		HT8123C-M	
Input voltage	50V	500V	15V	150V	50V	500V	15V	150V
Input current	24A	240A	50A	500A	24A	240A	50A	500A
Input power	10kW				12kW			
Min.operation voltage	1.5V@240A		1.5V@500A		2.5V@240A		1.5V@500A	
Min.risetime@FS current	25us		25us		25us		25us	
CV mode								
Range	50V	500V	15V	150V	50V	500V	15V	150V
Resolution	0.7mV	7mV	0.2mV	2mV	0.7mV	7mV	0.2mV	2mV
Accuracy	±(0.03%+0.02%FS)							
CC mode								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.3mA	3mA	0.7mA	7mA	0.3mA	3mA	0.7mA	7mA
Accuracy	±(0.03%+0.02%FS)							
CR mode								
Range	0.04Ω~21kΩ		0.008Ω~3kΩ		0.04Ω~21kΩ		0.01Ω~3kΩ	
Resolution	16Bits							
Accuracy	±0.1%							
CW mode								
Range	10kW				12kW			
Resolution	16Bits							
Accuracy	± (0.1%+0.1%FS)							
Dynamic mode								
Ta & Tb	10us~50s							
Min.resolution	10us							
Min. rise time	3A/us		3A/us		3A/us		3A/us	
Read-back voltage								
Range	50V	500V	50V	500V	50V	500V	15V	150V
Resolution	0.3mV	3mV	0.1mV	1mV	0.3mV	3mV	0.1mV	1mV
Accuracy	±(0.015%+0.01%FS)							
Read-back current								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.1mA	1mA	0.3mA	3mA	0.1mA	1mA	0.3mA	3mA
Accuracy	±(0.03%+0.02%FS)							
Read-back Ripple								
Range(R/I)	500V/240A		150V/500A		500V/240A		150V/500A	
bandwidth	10Hz~250kHz							
Accuracy	±1%							
Protection range								
Over-power protection	10500W				12600W			
Over-current protection	252A		525A		252A		525A	
Over-voltage protection	525V		158V		525V		158V	
Over-temperature protection	≈85°C							
Specification								
Dimension (L*W*D)	-----							
Gross Weight	-----							

## SPECIFICATION

Model	HT8143B-M		HT8143C-M		HT8163B-M		HT8163C-M	
Input voltage	50V	500V	15V	150V	50V	500V	15V	150V
Input current	24A	240A	50A	500A	24A	240A	50A	500A
Input power	14kW				16kW			
Min.operation voltage	2V@240A		1.5V@500A		2.5V@240A		1.5V@500A	
Min.risetime@FS current	25us		25us		25us		25us	
CV mode								
Range	50V	500V	15V	150V	50V	500V	15V	150V
Resolution	0.7mV	7mV	0.2mV	2mV	0.7mV	7mV	0.2mV	2mV
Accuracy	±(0.03%+0.02%FS)							
CC mode								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.3mA	3mA	0.7mA	7mA	0.3mA	3mA	0.7mA	7mA
Accuracy	±(0.03%+0.02%FS)							
CR mode								
Range	0.05Ω~21kΩ		0.01Ω~3kΩ		0.06Ω~21kΩ		0.01Ω~3kΩ	
Resolution	16Bits							
Accuracy	±0.1%							
CW mode								
Range	14kW				12kW			
Resolution	16Bits							
Accuracy	± (0.1%+0.1%FS)							
Dynamic mode								
Ta & Tb	10us~50s							
Min.resolution	10us							
Min. rise time	3A/us		3A/us		3A/us		3A/us	
Read-back voltage								
Range	50V	500V	50V	500V	50V	500V	15V	150V
Resolution	0.3mV	3mV	0.1mV	1mV	0.3mV	3mV	0.1mV	1mV
Accuracy	±(0.015%+0.01%FS)							
Read-back current								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.1mA	1mA	0.3mA	3mA	0.1mA	1mA	0.3mA	3mA
Accuracy	±(0.03%+0.02%FS)							
Read-back Ripple								
Range(R/I)	500V/240A		150V/500A		500V/240A		150V/500A	
bandwidth	10Hz~250kHz							
Accuracy	±1%							
Protection range								
Over-power protection	14700W				16800W			
Over-current protection	252A		525A		252A		525A	
Over-voltage protection	525V		158V		525V		158V	
Over-temperature protection	≈85°C							
Specification								
Dimension (L*W*D)	-----							
Gross Weight	-----							

## SPECIFICATION

Model	HT8183B-M		HT8183C-M		HT8203B-M		HT8203C-M	
Input voltage	50V	500V	15V	150V	50V	500V	15V	150V
Input current	24A	240A	50A	500A	24A	240A	50A	500A
Input power	18kW				20kW			
Min.operation voltage	2V@240A		1.5V@500A		2V@240A		1.5V@500A	
Min.risetime@FS current	100us		100us		100us		100us	
CV mode								
Range	50V	500V	15V	150V	50V	500V	15V	150V
Resolution	0.7mV	7mV	0.2mV	2mV	0.7mV	7mV	0.2mV	2mV
Accuracy	±(0.03%+0.02%FS)							
CC mode								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.3mA	3mA	0.7mA	7mA	0.3mA	3mA	0.7mA	7mA
Accuracy	±(0.05%+0.05%FS)							
CR mode								
Range	0.1Ω~7.5kΩ		0.1Ω~7.5kΩ		0.1Ω~7.5kΩ		0.1Ω~7.5kΩ	
Resolution	16 bits							
Accuracy	±0.2%							
CW mode								
Range	18kW				20kW			
Resolution	16 bits							
Accuracy	± (0.2%+0.2%FS)							
Dynamic mode								
Ta & Tb	10us~50s							
Min.resolution	10us							
Min. rise time	2.5A/us		5A/us		2.5A/us		5A/us	
Read-back voltage								
Range	50V	500V	50V	500V	50V	500V	15V	150V
Resolution	0.3mV	3mV	0.1mV	1mV	0.3mV	3mV	0.1mV	1mV
Accuracy	±(0.015%+0.01%FS)							
Read-back current								
Range	24A	240A	50A	500A	24A	240A	50A	500A
Resolution	0.1mA	1mA	0.3mA	3mA	0.1mA	1mA	0.3mA	3mA
Accuracy	±(0.025%+0.025%FS)							
Read-back Ripple								
Range(R/I)	500V/240A		150V/500A		500V/240A		150V/500A	
bandwidth	10Hz~250kHz							
Accuracy	±1%							
Protection range								
Over-power protection	18900W				21000W			
Over-current protection	252A		525A		252A		525A	
Over-voltage protection	525V		158V		525V		158V	
Over-temperature protection	≈85°C							
Specification								
Dimension (L*W*D)	720.5mm*483mm*530mm							
Gross Weight	136kg				150kg			