

High Reliability

- Protective circuitry provides over-current, over-voltage, over-power, over-temperature and reverse polarity protection to ensure the protection of the electronic load
- A high-speed, power limiting circuit can limit input power rapidly when it is overloaded, thus there is no need to interrupt testing. Equipment adaptability to complicated operational environments is thereby greatly enhanced.
- A high-efficiency, intelligent cooling system can effectively reduce system temperature and enhance power density
- The input binding posts with their innovative design are especially suitable for large current testing. They are easy to operate, reliable and durable
- The specially ruggedized case with its rubber bumpers protects the load thus effectively prolonging the unit's service life

Great Performance

- Circuit improvement greatly enhances the dynamic response of CR mode and widens the application scope of that mode
- The innovative CPV and CPC modes can be applied to testing voltage/current source with constant power respectively, and both modes can effectively prevent short circuit when the set power level of the load exceeds the output power of the power supply
- Minimum operating voltage is less than 0.6V at the load's full rated current. With optional low-voltage testing devices, the maximum current can be achieved even though the input voltage is 0V. This is especially suitable for fuel cell, solar cell and other new energy test applications
- By adopting the optimum algorithm and high-speed hardware circuitry, the D/A conversion rate can reach up to 100kHz. The overall smoothness of slope control has been raised, meanwhile, the timing precision and resolution of transient test and sequential test have also been improved
- The 24 bit A/D and 17 bit D/A converters incorporated, provide this equipment with greatly enhanced setting and measurement resolution.

Multifunction, Easy Operation

- By supporting SCPI, it is easy to build an ATE(automatic test equipment) system that works with other programmable instruments via optional RS232, USB and GPIB interfaces.
- Design optimized for portability and rugged reliability
- Logical keypad design and convenient test operation
- Easy-to-set test parameters coupled with a powerful sequence editing function
- All electronic calibration - therefore no need to dismantle the equipment-chassis;
- Firmware can be updated online.

ARRAY

372X Series DC Electronic Load

- 4 operating modes: Constant Current, Constant Voltage, Constant Resistance, Constant Power;
- High-speed sequence, high-speed transient, short-circuit, battery discharge and other auxiliary functions;
- Minimum operating voltage is less than 0.6V at the load's full rated current;
- Optional zero-voltage test accessories are available;
- Programmable current slew rate;
- Perfect protection assures high reliability in the most complicated test environment;
- Multiple groups of parameters and sequences can be saved and recalled;
- Ruggedized structure, exquisite user-friendly design and convenient operation;
- Supports SCPI (Standard Commands for Programmable Instrumentation) and Labview, and provides necessary PC software.



372X Series Specifications

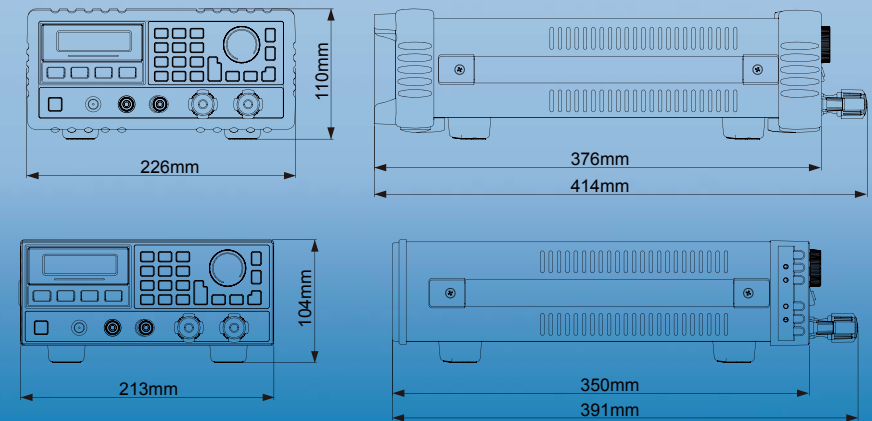
372X Series

(The warm-up time is 30 minutes. Specifications indicate warranted performance in the 25 ± 5 region of the total temperature range).

Model	3720A	3721A	3722A	3723A	3724A
Input Ratings					
Current	0 - 30A	0 - 40A	0 - 20A	0 - 30A	0 - 20A
Voltage	0 - 80V	0 - 80V	0 - 200V	0 - 200V	0 - 500V
Power ¹	250W at 40	400W at 40	200W at 40	350W at 40	250W at 40
Input Characteristics					
Input Characteristics					
Minimum Operation Voltage @ Full Scale Current	0.6V	0.6V	1.2V	1.2V	2V
Constant Current Mode					
Low Range Resolution Accuracy	0 - 3A 0.1mA 0.1%+5mA	0 - 4A 0.1mA 0.1%+5mA	0 - 2A 0.1mA 0.1%+5mA	0 - 3A 0.1mA 0.1%+5mA	0 - 2A 0.1mA 0.1%+5mA
High Range Resolution Accuracy	0 - 30A 1mA 0.1%+10mA	0 - 40A 1mA 0.1%+10mA	0 - 20A 1mA 0.1%+10mA	0 - 30A 1mA 0.1%+10mA	0 - 20A 1mA 0.1%+10mA
Constant Voltage Mode					
Range Resolution Accuracy	0 - 80V 1mV 0.1%+10mV	0 - 80V 1mV 0.1%+10mV	0 - 200V 2mV 0.1%+25mV	0 - 200V 2mV 0.1%+25mV	0 - 500V 5mV 0.1%+62.5mV
Constant Resistance Mode					
Low Range Resolution Accuracy @ I>4A	0.02 - 2Ω 0.1mΩ 0.5%+12mΩ @ I > 4A	0.02 - 2Ω 0.1mΩ 0.5%+12mΩ @ I > 4A	0.0666 - 6.66Ω 0.1mΩ 0.5%+40mΩ @ I > 3A	0.0666 - 6.66Ω 0.1mΩ 0.5%+40mΩ @ I > 3A	0.125 - 12.5Ω 0.1mΩ 0.5%+150mΩ @ I > 3A
Middle Range Resolution Accuracy @ V>8V	2 - 200 8.6μS ² 0.3%+1.25mS @ V > 8V	2 - 200 8.6μS ² 0.3%+1.25mS @ V > 8V	6.66 - 666 2.6μS ² 0.3%+375μS @ V > 20V	6.66 - 666 2.6μS ² 0.3%+375μS @ V > 20V	12.5 - 1250 13.8μS ² 0.3%+1mS @ V > 20V
High Range Resolution Accuracy @ V>8V	20 - 2000Ω 0.96μS 0.3%+0.625mS @ V > 8V	20 - 2000Ω 0.96μS 0.3%+0.625mS @ V > 8V	66.6 - 6660Ω 0.29μS 0.3%+188μS @ V > 20V	66.6 - 6660Ω 0.29μS 0.3%+188μS @ V > 20V	125 - 12500Ω 1.54μS 0.3%+0.5μS @ V > 20V
Constant Power Mode					
Range Resolution Accuracy @ P<100W @ P 100W	0 - 250W 1mW 0.2%+600mW	0 - 400W 1mW 0.2%+600mW	0 - 200W 1mW 0.2%+600mW	0 - 350W 1mW 0.2%+600mW	0 - 250W 1mW 0.2%+600mW
Current Measurement					
Low Range Resolution Accuracy	0 - 3A 0.1mA 0.05%+4mA	0 - 4A 0.1mA 0.05%+4mA	0 - 2A 0.1mA 0.05%+4mA	0 - 3A 0.1mA 0.05%+4mA	0 - 2A 0.1mA 0.05%+4mA
High Range Resolution Accuracy	0 - 30A 1mA 0.05%+8mA	0 - 40A 1mA 0.05%+8mA	0 - 20A 1mA 0.05%+8mA	0 - 30A 1mA 0.05%+8mA	0 - 20A 1mA 0.05%+8mA
Voltage Measurement					
Range Resolution Accuracy	0 - 80V 1mV 0.1%+8mV	0 - 80V 1mV 0.1%+8mV	0 - 200V 1mV 0.1%+50mV	0 - 200V 1mV 0.1%+50mV	0 - 500V 1mV 0.1%+200mV
Power Measurement					
Range Resolution Accuracy @ P<100W @ P 100W	0 - 250W 1mW 0.1%+600mW	0 - 400W 1mW 0.1%+600mW	0 - 200W 1mW 0.1%+600mW	0 - 350W 1mW 0.1%+600mW	0 - 250W 1mW 0.1%+600mW
Current Slew Rates					
Range CCH CCL ³	1mA/us - 3A/us 100A/us - 300A/us	1mA/us - 4A/us 100A/us - 400A/us	1mA/us - 2A/us 100A/us - 200A/us	1mA/us - 3A/us 100A/us - 300A/us	1mA/us - 2A/us 100A/us - 200A/us
Resolution	1mA/us	1mA/us	1mA/us	1mA/us	1mA/us
Accuracy ⁴	3% + 10us	3% + 10us	3% + 10us	3% + 10us	3% + 10us
Transient Operation					
Transient Mode	Continuous, Pulse, Toggled	Continuous, Pulse, Toggled	Continuous, Pulse, Toggled	Continuous, Pulse, Toggled	Continuous, Pulse, Toggled
Frequency Range ⁵	0.38Hz - 50kHz	0.38Hz - 50kHz	0.38Hz - 50kHz	0.38Hz - 50kHz	0.38Hz - 50kHz
High/Low Time Resolution Accuracy	0 - 655.35ms 10us 0.2%+10us	0 - 655.35ms 10us 0.2%+10us	0 - 655.35ms 10us 0.2%+10us	0 - 655.35ms 10us 0.2%+10us	0 - 655.35ms 10us 0.2%+10us
Rising/Falling Time Resolution Accuracy	10us - 655.35ms 10us 0.2%+10us	10us - 655.35ms 10us 0.2%+10us	10us - 655.35ms 10us 0.2%+10us	10us - 655.35ms 10us 0.2%+10us	10us - 655.35ms 10us 0.2%+10us
List Characteristics					
Step Time Resolution Accuracy	10us - 100000s 10us 0.2%+10us	10us - 100000s 10us 0.2%+10us	10us - 100000s 10us 0.2%+10us	10us - 100000s 10us 0.2%+10us	10us - 100000s 10us 0.2%+10us
Number of Steps	1 - 50	1 - 50	1 - 50	1 - 50#	1 - 50
Cycle	1 - 65535	1 - 65535	1 - 65535	1 - 65535	1 - 65535
Store Capacity	7 lists	7 lists	7 lists	7 lists	7 lists
Expanded Function	Chain	Chain	Chain	Chain	Chain

Model	3720A	3721A	3722A	3723A	3724A
Battery Discharge					
Discharge Time Resolution Accuracy	1s - 100h 1s 0.2%+1s	1s - 100h 1s 0.2%+1s	1s - 100h 1s 0.2%+1s	1s - 100h 1s 0.2%+1s	1s - 100h 1s 0.2%+1s
Battery Capacity Resolution Accuracy	1mAh - 3000Ah 1mAh 0.3%+0.01Ah	1mAh - 4000Ah 1mAh 0.3%+0.01Ah	1mAh - 2000Ah 1mAh 0.3%+0.01Ah	1mAh - 3000Ah 1mAh 0.3%+0.01Ah	1mAh - 3000Ah 1mAh 0.3%+0.01Ah
Short Circuit					
CCL	3.3A	4.4A	2.2A	3.3A	2.2A
CCH	33A	44A	22A	33A	22A
CV	0V	0V	0V	0V	0V
CRL	0.018	0.018	0.06	0.06	0.12
CRM	1.8	1.8	6	6	12
CRH	18	18	60	60	120
CPV	270W	420W	220W	370W	270W
CPC	0W	0W	0W	0W	0W
Maximum Slew Rate					
Current Voltage	3A/us 0.6V/us	4A/us 0.6V/us	2A/us 0.6V/us	3A/us 0.6V/us	2A/us 0.6V/us
Programmable Open Circuit	20kΩ	20kΩ	20kΩ	20kΩ	20kΩ
Trigger Input					
Trigger Level	TTL falling edge	TTL falling edge	TTL falling edge	TTL falling edge	TTL falling edge
Trigger Pulse Width	10us	10us	10us	10us	10us
Maximum Input Levels					
Current Voltage	33A 84V	44A 84V	22A 210V	33A 210V	22A 520V
Protection Features	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV
Reverse Current Capacity					
Input OFF Input ON	25A 40A	30A 50A	25A 35A	25A 40A	25A 40A
Ripple and Noise					
Current(rms/p-p) Voltage(rms)	3mA/30mA 5mV	3mA/30mA 5mV	3mA/30mA 12mV	3mA/30mA 12mV	3mA/30mA 30mV
Environmental Conditions					
Temperature Relative Humidity	0 - 50 85%	0 - 50 85%	0 - 50 85%	0 - 50 85%	0 - 50 85%
Remote Interface ⁶	RS232, GPIB, USB	RS232, GPIB, USB	RS232, GPIB, USB	RS232, GPIB, USB	RS232, GPIB, USB
Programming Language	SCPI	SCPI	SCPI	SCPI	SCPI
AC Input					
Voltage Frequency	AC110V or AC220V ± 15% 48 to 63Hz	AC110V or AC220V ± 15% 48 to 63Hz	AC110V or AC220V ± 15% 48 to 63Hz	AC110V or AC220V ± 15% 48 to 63Hz	AC110V or AC220V ± 15% 48 to 63Hz
Net Weight	5.8kg	5.8kg	5.8kg	5.8kg	5.8kg

- Maximum continuous power available is derated linearly from 100% of maximum at 40°C, to 75% of maximum at 50°C.
- Conductance (S) = 1 / Resistance (Ω). The siemens is the SI derived unit of conductance, and the symbol is "S".
- The set level is 10 times larger than the slew rate in CCL mode.
- The actual transition time is defined as the time required for the input to change from 10% to 90% of from 90% to 10% of the programmed excursion.
- Transient frequency depends on the time for high/low level and rising/falling edge.
- Full remote control via RS232 with optional GPIB and USB.



372X Series

