AC & DC Electronic Load

3270 Series AC & DC Electronic Load

3270 350V, 37.5A, 3750W **3271** 350V, 28A, 2800W **3272** 350V, 18.75A, 1875W

Features

- 5 digit V/A/W Meter，display the Voltage（Vrms, Vpeak, Vmax., Vmin）、Current（Irms, Ipeak, Imax., Imin.）、Watt, Voltampere（VA）、Frequency、Crest Factor、Power Factor、Total Harmonic Distortion of Voltage（VTHD）, Voltage Harmonic（VH）、Total Harmonic Distortion of Current（ITHD）, Current Harmonic（IH）
- CC, Linear CC, CR, CV, CP and AC Rectifier Load mode
- Up to 3 units master / slave parallel control
- Three units parallel applications can be used in three-phase power supply with △ or Y connection.
- Frequency Range : DC, 40~440Hz
- Crest factor adjustable range : 1.414~5.0
- Power factor（PF) adjustable range : 0~1 lead or（-1~0）lag
- Can be controlled by external voltage for CC, Linear CC, CR, CV, CP mode
- Measure the fuse and circuit breaker trip or blow time
- Measure the UPS OFF-Line transfer time（Transfer time）
- Perform short circuit simulation（can set the short circuit time）, OCP, OPP test
- 150 sets Store/Recall memory
- Protection against V, I, W, and ℃
- Optional interface：GPIB、RS232、USB、LAN

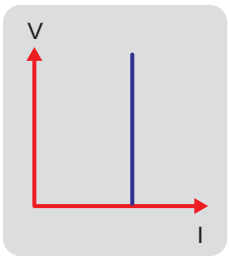
Descriptions

- 3270 Series is suitable for the step, square and sine wave of the AC Power device test, especially for the uninterruptible power supply UPS, Inverter, fuses, circuit breakers, power regulator AVR, battery, AC / DC power supply / components ... and so on, absolutely is the best test solution in the market.

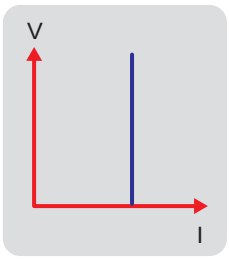
Complete AC and DC load modes

- AC load mode

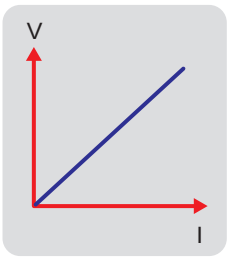
Constant current mode sine wave



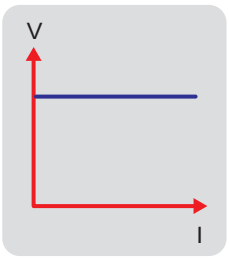
linear constant current mode sine , step , square wave



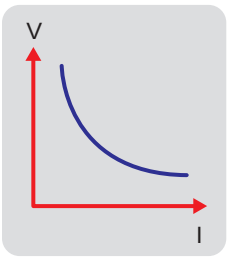
Constant resistance



Constant voltage mode



Constant power mode



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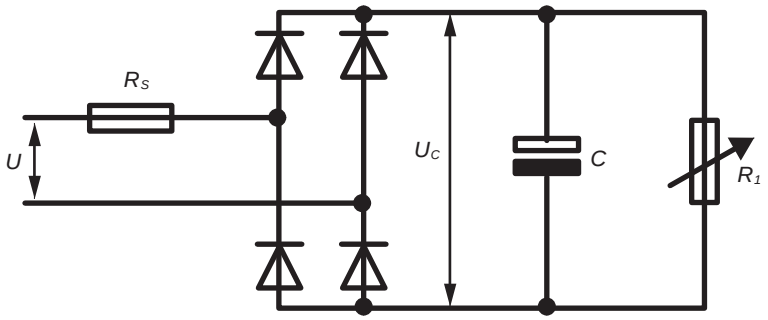
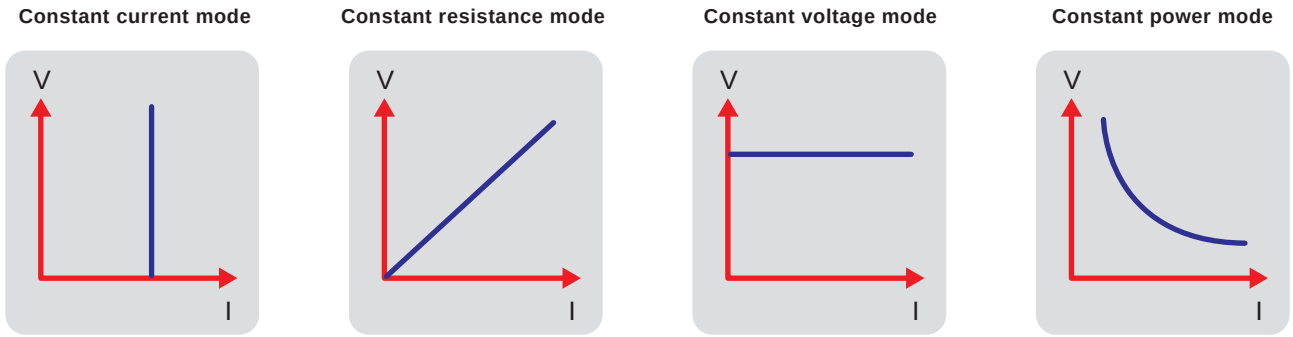
AC rectified load simulation

(IEC62040-3 UPS Efficiency Measurement non-Linear and IEC61683 Resistive Plus Non-Linear)

3270 AC & DC electronic load AC rectified load mode is fully compliance with the IEC test specification requirements for the UPS, IEC 62040-3 UPS Efficiency Measurement Non-Linear and IEC 61683 Resistive Plus Non-Linear, respectively, 3270 AC rectifier load mode is used CC + CR load mode and maintain current THD at 80%, to simulate the actual electronic device which is connecting the UPS.



DC load mode



Current protection component test

Current protection component include Fuse, Circuit breakers and a new PTC Resettable fuse etc.., its function is when the circuit current exceeds the design of the rated value, that is, if the load exceeds the design of the current capacity, the circuit will be disconnected, in order to avoid overheating, even fire. At the abnormal situation occurs it must be able to provide circuit break protection capability, while within the normal current range it must continue to provide current.

The current protection component has usually a product relationship of current and time, that is, the greater the current through the current protection component, the shorter the reaction time to protect the circuit.

Due to this feature, the 3270 series AC & DC electronic load, in particular for the verification of current protection components, has developed a Fuse Test function to test and verify such protection element with an electronic load of rated current and power.

Basically, Fuse test has Trip (fuse) and Non-Trip (no fuse) 2 types.

Fuse Test setting parameters include test current (Istart), test time (Time), test repeat number REPEAT TIME etc..

In the Trip fuse test, it is used to test when the current occurs too large abnormalities must be able to provide the protection of the circuit break, that means current protection components need the fuse action, therefore the test current needs to be greater than the fuse current rating.

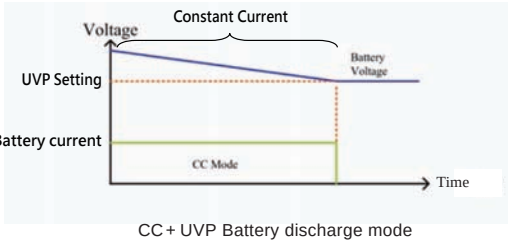
For the trip test mode of the 3270 series AC & DC electronic load, the LCD shows the Repeat times and the blow time of current protection component after the tested fuse blows.

In the Non-Trip fuse test, the current protection component is required to achieve non-blow action, so the test current needs to be lower than the fuse current rating that is used to verify the fuse must not blow during normal current range.

For the Non-trip test mode of the 3270 series AC & DC electronic load, the LCD display shows Repeat number information after the tested fuse does not blow.

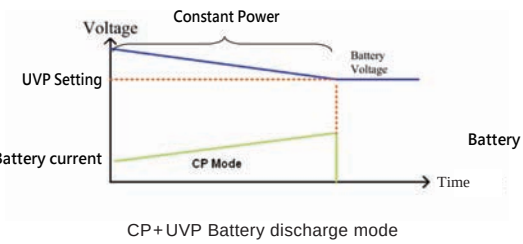
Battery test function

3270 series AC & DC electronic load has new TYPE1 ~ TYPE3 three kinds of battery discharge test, you can select the desired battery test mode, the test results can be directly displayed on the LCD display for battery AH capacity, the voltage value after discharge voltage, the cumulative discharge time data.



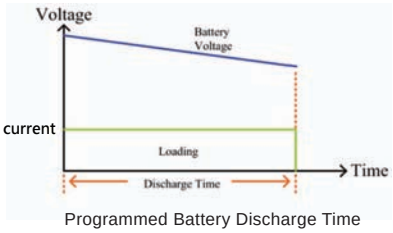
CC+UVP Battery discharge mode

Type 1



CP+UVP Battery discharge mode

Type 2



Programmed Battery Discharge Time

Type 3

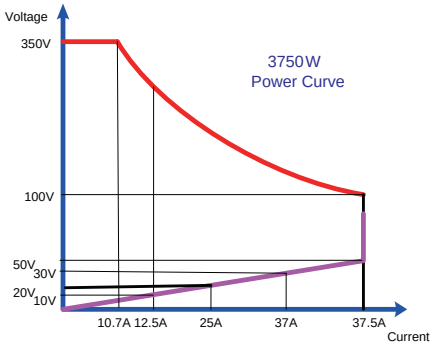
External Programming Input & SYNC input

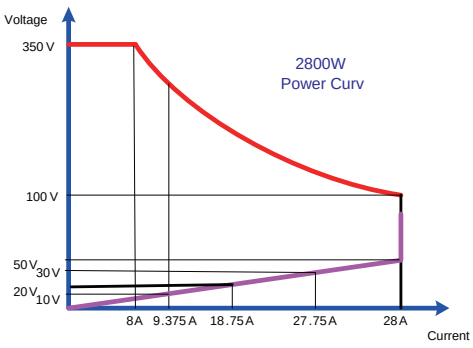
- The most complete measurement function

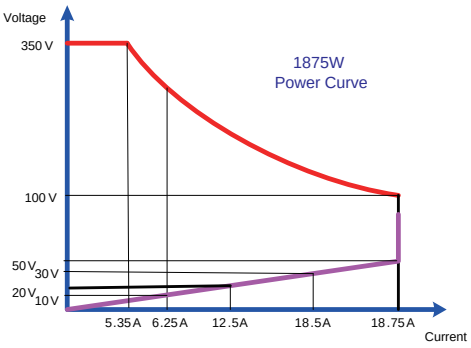
3270 series AC / DC electronic load has built-in 16-bit precision measurement circuit, providing accurate measurement values, measuring items include voltage rms (Vrms), current rms (Arms), watts (Watt), voltampere (VA), crest factor (CF), power factor (PF), voltage total harmonic distortion (VTHD), voltage harmonics (VH), current total harmonic distortion (ITHD), current Harmonics (IH), peak current (Ipeak), maximum ampere (Amax), minimum ampere (Amin), maximum voltage (Vmax), and minimum voltage (Vmin).

In addition to these measurement functions, it also provides time measurement, such as UPS back up time, fuses and circuit breakers' trip or blow time and Off-line UPS transfer time.

Power Curve







Order Information

- **3270** 350V, 37.5A, 3750W
- **3271** 350V, 28A, 2800W
- **3272** 350V, 18.75A, 1875W

Optional interface :

1. GPIB Card
2. RS232 Card
3. USB Card
4. LAN Card

Specifications

MODEL	3270		3271		3272	
Power (W)	3750 W		2800W		1875 W	
Current(Ampere)	37.5 Arms / 112.5Apeak		28 Arms / 84Apeak		18.75 Arms / 56.25Apeak	
Voltage(Volt)	50~350Vrms / 500Vdc					
FREQUENCY Range	DC,40~440Hz					
PROTECTIONS						
Over Power Protection	≒ 3937.5Wrms or Programmable		≒2940Wrms or Programmable		≒ 1968.75Wrms or Programmable	
Over Current Protection	≒ 39.375 Arms, or Programmable		≒ 29.4 Arms or Programmable		≒ 19.687 Arms or Programmable	
Over Vlotage Protection	≒ 367.5 Vrms/525Vdc					
Over Temp. Protection	Yes					
OPERATION MODE						
Constant Current Mode for Sine-Wave						
Range	0~37.5A		0~28A		0~18.75A	
Resolution	0.625mA/16bits		0.46875mA/16bits		0.3125mA/16bits	
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz , ± 0.5% of (setting + range)					
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave						
Range	0~37.5A		0~28A		0~18.75A	
Resolution	0.625mA/16bits		0.46875mA/16bits		0.3125mA/16bits	
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz , ± 0.5% of (setting + range)					
Constant Resistance Mode						
Range	1.6 ohm～32K ohm		2.133 ohm～42.66K ohm		3.2 ohm～64K ohm	
Resolution*1	0.010416mS/16bits		0.0078137mS/16bits		0.0052083mS/16bits	
Accuracy	±0.2% of (setting + range) @ 50/60Hz , ± (0.5% of setting + 2% of range)					
Constant Voltage Mode						
Range	50~350Vrms / 500Vdc					
Resolution	0.1V					
Accuracy	±(0.1% of reading + 0.1% of range)					
Constant Power Mode						
Range	3750W		2800W		1875W	
Resolution	0.1W		0.1W		0.1W	
Accuracy	±(0.1% of reading + 0.1% of range)					
CREST FACTOR (CC & CP MODE ONLY)						
Range	$\sqrt{2}$~5					
Resolution	0.1					
Accuracy	(0.5% / Irms) + 1%F.S.					
POWER FACTOR (CC & CP MODE ONLY)						
Range	0~1 Lag or Lead					
Resolution	0.01					
Accuracy	1%F.S.					
TEST MODE						
UPS Efficient Measurement	Non-Linear Mode					
PV SYSTEMS, POWER CONDITIONERS – PROCEDURE FOR MEASURING EFFICIENCY"	Resistive + Non-Linear Mode					
Battery Discharge / UPS Back-Up function						
UVP	50~350Vrms / 500Vdc					
Battery Discharge Time / UPS Back-Up Time	1~99999 Sec. (>27H)					
Turbo Mode	ON	OFF	ON	OFF	ON	OFF
Maximum Current	75Arms	37.5Arms	56Arms	28.0Arms	37.5Arms	18.75Arms
Fuse Test mode						
Trip & Non-Trip Time	0.1~1.0sec.	0.1~9999.9sec.	0.1~1.0 Sec.	0.1~9999.9sec.	0.1~1.0 Sec.	0.1~9999.9sec.
Meas. Accuracy	±0.003 Sec.					
Repeat Time	0~255					
Short/OPP/OCP Test Function						
Short Time	0.1S~1Sec	0.1S~10Sec. Or Cont.	0.1S ~ 1.0 Sec.	0.1S~10Sec. Or Cont.	0.1S ~ 1.0 Sec.	0.1S~10Sec. Or Cont.
OPP/OCP Step Time	100ms					
MEASUREMENTS						
VOLTAGE READBACK A METER						
Range	500V					
Resolution	0.01V					
Accuracy	±0.05% of (reading +range)					
Parameter	Vrms,V Max/Min,+/-Vpk					
CURRENT READBACK A METER						
Range	18.75Arms / 37.5Arms		14Arms / 28Arms		9.375Arms / 18.75Arms	
Resolution	0.4mA / 0.8mA		0.3mA / 0.6mA		0.2mA / 0.4mA	
Accuracy	±0.05% of (reading + range) @ 50/60Hz , ±0.2% of (reading + range)					
Parameter	Irms,I Max/Min,+/-Ipk					
WATT READBACK W METER						
Range	3750W		2800W		1875W	
Resolution	0.0625W		0.046875W		0.03125W	
Accuracy	±0.1% of (reading + range)					
VA METER	Vrms×Arms Correspond To Vrms and Arms					
Power Factor METER						
Range	+/- 0.000~1.000					
Accuracy	±(0.002±(0.001/PF)*F)					
Frequency METER						
Range	DC,40~440Hz					
Accuracy	0.1%					
Other Parameter METER						
	VA, VAR, CF_I, Ipeak, Imax., Imin. Vmax., Vmin., I_{HD}, V_{HD}, I_{THD}, V_{THD}					
OTHERS						
Master/Slave(3 Phase Application)	Yes					
External programming input	F.S / 10Vdc, Resulotion 0.1V					
External SYNC input	TTL					
Vmonitor （Isolated）	±500V / ±10V					
Imonitor （Isolated）	±112.5Apk / ±10Vpk		±84Apk / ±10Vpk		±56.25Apk / ±10Vpk	
Interface (OPTION)	GPIB；RS-232；LAN；USB					
Operation Temperature *2	0 ~ 40 ℃					
Dimension(H x W x D)	177 x 440 x 513 mm					
Weight	33.5Kg					

Note*1：ms= milli - siemens = 1/kΩ

Note*2：The operating temperature range is 0 ~ 40 ℃，accuracy of this specification is 25 ° C ± 5 ° C