

# 3270 Series

## AC & DC ELECTRONIC LOAD



## AC & DC ELECTRONIC LOAD



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# 3270 Series AC & DC Electronic Load



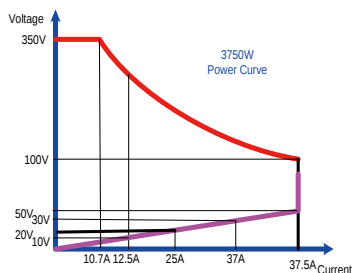
| MODEL           |           | 3270                      | 3271                 | 3272                      | 3273                 | 3274                      |
|-----------------|-----------|---------------------------|----------------------|---------------------------|----------------------|---------------------------|
| Power (W)       | Turbo OFF | 3750 W                    | 2800W                | 1875 W                    | 3750 W               | 2800W                     |
|                 | Turbo ON  | 7500W (x2)*               | 5600W (x2)*          | 3750W (x2)*               | 7500W (x2)*          | 5600W (x2)*               |
| Current(Ampere) | Turbo OFF | 37.5 Arms / 112.5Apeak    | 28 Arms / 84Apeak    | 18.75 Arms / 56.25Apeak   | 28 Arms / 84Apeak    | 18.75 Arms / 56.25Apeak   |
|                 | Turbo ON  | 75.0Arms/112.5Apeak (x2)* | 56Arms/84Apeak (x2)* | 37.5Arms/56.25Apeak (x2)* | 56Arms/84Apeak (x2)* | 37.5Arms/56.25Apeak (x2)* |
| Voltage(Volt)   |           | 50~350Vrms / 500Vdc       |                      |                           | 50~480Vrms / 700Vdc  |                           |

| MODEL           |           | 32701                    | 32702                    | 32703                    | 32704                    | 32705                    |
|-----------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Power (W)       | Turbo OFF | 7500 W                   | 11250W                   | 15000W                   | 18750W                   | 22500W                   |
|                 | Turbo ON  | 15000W (x2)*             | 22500W (x2)*             | 30000W (x2)*             | 37500W (x2)*             | 45000W (x2)*             |
| Current(Ampere) | Turbo OFF | 75.0 Arms / 225Apeak     | 112.5 Arms / 337.5Apeak  | 112.5 Arms / 337.5Apeak  | 112.5 Arms / 337.5Apeak  | 112.5 Arms / 337.5Apeak  |
|                 | Turbo ON  | 150.0Arms/225Apeak (x2)* | 225Arms/337.5Apeak (x2)* | 225Arms/337.5Apeak (x2)* | 225Arms/337.5Apeak (x2)* | 225Arms/337.5Apeak (x2)* |
| Voltage(Volt)   |           | 50~350Vrms / 500Vdc      |                          |                          |                          |                          |

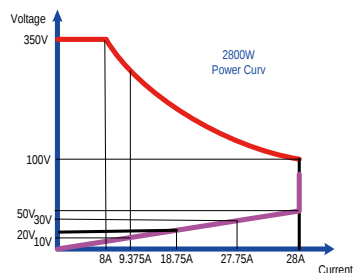
| MODEL           |           | 32711                     |
|-----------------|-----------|---------------------------|
| Power (W)       | Turbo OFF | 5600 W                    |
|                 | Turbo ON  | 11200W (x2)*              |
| Current(Ampere) | Turbo OFF | 56.0 Arms / 168Apeak      |
|                 | Turbo ON  | 112.0Arms/ 168Apeak (x2)* |
| Voltage(Volt)   |           | 50~350Vrms / 500Vdc       |

\* Turbo ON can double the power and Current ratings

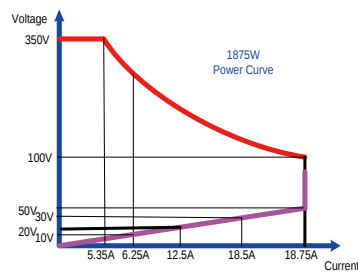
## Power Curve



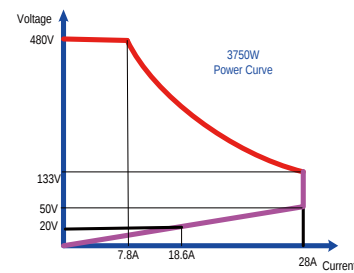
3270 Power Curve



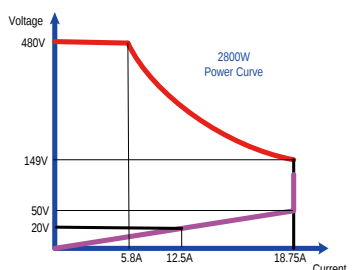
3271 Power Curve



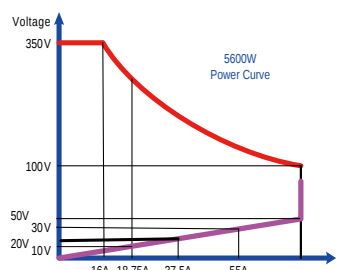
3272 Power Curve



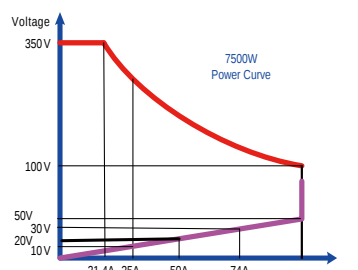
3273 Power Curve



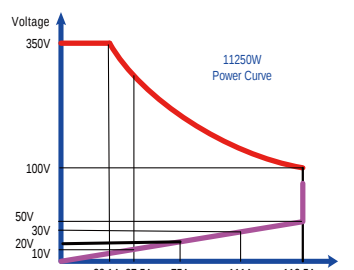
3274 Power Curve



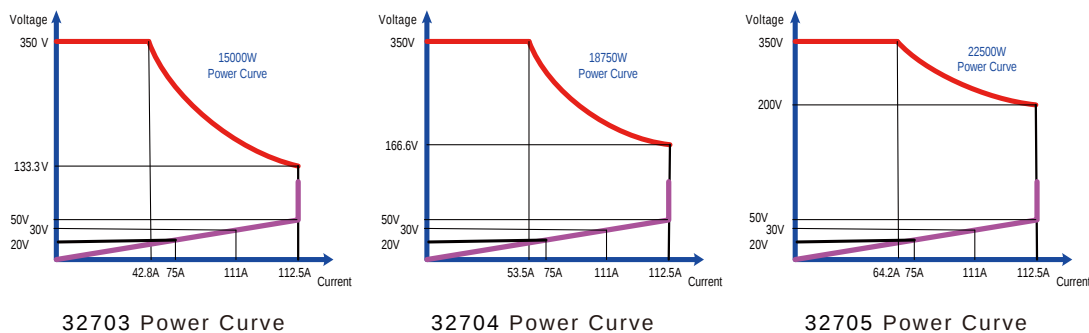
32711 Power Curve



32701 Power Curve



32702 Power Curve



## Features

- 4 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
- **Voltage Optional : 425Vrms / 600Vdc ( except 3273 / 3274 )**
- Crest factor range : 1.414~5.0
- Power factor ( PF ) range : 0~1 lead or ( -1~0 ) lag
- Built-in function test modes include UPS Efficiency, PV Inverter Efficiency, UPS Back-up time, Battery Discharge time, UPS transfer time, Fuse/Breaker Trip/Non-Trip, Short circuit , OCP, OPP test modes
- Turbo mode is able to increase to 2 times the current and power of electronic load in a short period which is the most suitable for Fuse / Breaker test and short circuit, OCP, OPP test of AC power supply
- Time measurement can be applied to batteries, UPS, fuses and circuit breakers and other tests
- Three units parallel up to 90KW and three-phase  $\Delta$  or Y load connection can be synchronized control by one master unit
- Support on-load boot; at first set Load ON to support on-load boot, inverter or uninterruptible power supply is turned on directly with the set load current, used to verify whether the starter is stable when the Inverter is connected.
- Supports the loading and unloading angle control; the loading and unloading angle control, the full range of 0-359 degrees can be set to verify whether the Inverter output voltage transient response is stable when the actual electrical plugging and unplugging, and whether Overshoot/Undershoot is within the allowable range.
- Support positive half-cycle or negative half-cycle loading; used to verify whether the Inverter output voltage remains stable when the actual appliance has only positive half-cycle or negative half-cycle load current.
- Supports SCR/TRIAC current phase modulation waveforms, 90 degree Trailing edge and Leading Edge.
- Supports the Inrush Current of the inverter at startup and the Surge Current test when the load is suddenly plugged in (Hot Plug-in) during testing.
- Frequency Range : DC, 40~440Hz
- Voltage and current monitoring
- Can be controlled by external voltage for CC, Linear CC, CR, CV, CP operating modes
- Protection against V, I, W, and  $^{\circ}\text{C}$
- Optional interface : GPIB 、 RS232 、 USB 、 LAN
- **The most complete measurement capabilities**

3270 Series AC & DC electronic load built-in 16-bit A/D and DSP precision measurement circuit, provides accurate measurements, measurement items have Vrms, Arms, Watt, VA, CF, PF, THD, VTHD, ITHD, Ipeak, Amax, Amin, Vmax, and Vmin

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

## Order Information



- ▶ **3270** 350V, 37.5A, 3750W
- ▶ **3271** 350V, 28A, 2800W
- ▶ **3272** 350V, 18.75A, 1875W
- ▶ **3273** 480V, 28A, 3750W
- ▶ **3274** 480V, 1875A, 2800W

Optional Interface : ① GPIB Card ② RS232 Card ③ USB Card ④ LAN Card



**32711**  
350V,56A,5600W



**32701**  
350V,75A,7500W



**32702**  
350V,112.5A,11250W



**32703**  
350V,112.5A,15000W



**32704**  
350V,112.5A,18750W



**32705**  
350V,112.5A,22500W

## Specifications

| MODEL                                                                                  | 3270                                                           | 3271                       | 3272                          | 3273                                             | 3274                         |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------|-------------------------------|--------------------------------------------------|------------------------------|
| Power (W)                                                                              | 3750 W                                                         | 2800W                      | 1875 W                        | 3750 W                                           | 2800W                        |
| Current(Ampere)                                                                        | 37.5 Arms / 112.5Apeak                                         | 28 Arms / 84Apeak          | 18.75 Arms / 56.25Apeak       | 28 Arms / 84Apeak                                | 18.75 Arms / 56.25Apeak      |
| Voltage(Volt)                                                                          | 50~350Vrms / 500Vdc                                            |                            |                               | 50~480Vrms / 700Vdc                              |                              |
| FREQUENCY Range                                                                        | DC,40~440Hz (CC,CP Mode) , DC~440Hz (LIN,CR,CV Mode)           |                            |                               | DC,40~70Hz(CC,CP Mode) , DC~70Hz(LIN,CR,CV Mode) |                              |
| DC Section                                                                             |                                                                |                            |                               |                                                  |                              |
| Current Range                                                                          | 37.5 A                                                         | 28 A                       | 18.75 A                       | 28 A                                             | 18.75 A                      |
| Voltage Range                                                                          | 5~500V                                                         |                            |                               | 5~700V                                           |                              |
| Min. operating voltage                                                                 | 5V                                                             |                            |                               |                                                  |                              |
| Slew Rate                                                                              | 50μs                                                           |                            |                               |                                                  |                              |
| Operating Mode                                                                         | CC , CR , Linear CC , CP , CV , DC Rectified , DC Rectified+CR |                            |                               |                                                  |                              |
| Test Function                                                                          | Battery , FUSE/Breaker , OPP/OCP/Short                         |                            |                               |                                                  |                              |
| PROTECTIONS                                                                            |                                                                |                            |                               |                                                  |                              |
| Over Power Protection                                                                  | ≐ 3937.5Wrms or Programmable                                   | ≐ 2940Wrms or Programmable | ≐ 1968.75Wrms or Programmable | ≐ 3937.5 Wrms or Programmable                    | ≐2940 Wrms or Programmable   |
| Over Current Protection                                                                | ≐ 39.375Arms or Programmable                                   | ≐ 29.4Arms or Programmable | ≐ 19.687Arms or Programmable  | ≐ 29.4 Arms or Programmab                        | ≐19.687 Arms or Programmable |
| Over Vlotage Protection                                                                | ≐ 367.5 Vrms / 525Vdc                                          |                            |                               | ≐ 504Vrms / 735Vdc                               |                              |
| Over Temp. Protection                                                                  | Yes                                                            |                            |                               |                                                  |                              |
| OPERATION MODE                                                                         |                                                                |                            |                               |                                                  |                              |
| Constant Current Mode for Sine-Wave                                                    |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | 0 ~ 37.5A                                                      | 0 ~ 28A                    | 0 ~ 18.75A                    | 0 ~ 28A                                          | 0 ~ 18.75A                   |
| Resolution                                                                             | 0.625mA / 16bits                                               | 0.5mA / 16bits             | 0.3125mA / 16bits             | 0.5mA / 16bits                                   | 0.3125mA / 16bits            |
| Accuracy                                                                               | ± ( 0.1% of setting + 0.2% of range ) @ 50/60Hz                |                            |                               |                                                  |                              |
| Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | 0~37.5A                                                        | 0 ~ 28A                    | 0 ~ 18.75A                    | 0~28A                                            | 0 ~ 18.75A                   |
| Resolution                                                                             | 0.625mA / 16bits                                               | 0.5mA / 16bits             | 0.3125mA / 16bits             | 0.5mA / 16bits                                   | 0.3125mA / 16bits            |
| Accuracy                                                                               | ± ( 0.1% of setting + 0.2% of range ) @ 50/60Hz                |                            |                               |                                                  |                              |
| Constant Resistance Mode                                                               |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | 1.6 ohm ~ 32K ohm                                              | 2.0 ohm ~ 40K ohm          | 3.2 ohm ~ 64K ohm             | 2.5 ohm ~ 50K ohm                                | 4 ohm ~ 80K ohm              |
| Resolution *1                                                                          | 0.010416mS / 16bits                                            | 0.0083333mS / 16bits       | 0.0052083mS / 16bits          | 0.006666mS / 16bits                              | 0.004166mS / 16bits          |
| Accuracy                                                                               | ±0.2% of ( setting + range ) @ 50/60Hz                         |                            |                               |                                                  |                              |
| Constant Voltage Mode                                                                  |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | 0 ~ 500V                                                       |                            |                               | 0 ~ 700V                                         |                              |
| Resolution                                                                             | 0.1V                                                           |                            |                               | 0.0125V                                          |                              |
| Accuracy                                                                               | ±(0.1% of setting + 0.1% of range)                             |                            |                               |                                                  |                              |
| Constant Power Mode                                                                    |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | 3750W                                                          | 2800W                      | 1875W                         | 3750W                                            | 2800W                        |
| Resolution                                                                             | 0.1W                                                           | 0.1W                       | 0.1W                          | 0.1W                                             | 0.1W                         |
| Accuracy *4                                                                            | ±0.5% of ( setting + range ) @ 50/60Hz                         |                            |                               |                                                  |                              |
| CREST FACTOR (CC & CP MODE ONLY)                                                       |                                                                |                            |                               |                                                  |                              |
| Range                                                                                  | √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                                                |                            |                               |                                                  |                              |
| Operating Frequency                                                                    | Auto ; 40 ~ 440Hz                                              |                            |                               | Auto ; 40 ~ 70Hz                                 |                              |
| Current Range                                                                          | 0 ~ 37.5A                                                      | 0 ~ 28A                    | 0 ~ 18.75A                    | 0 ~ 28A                                          | 0 ~ 18.75A                   |
| PF Range                                                                               | 0~1                                                            |                            |                               |                                                  |                              |
| MEASURING EFFICIENCY FOR PV SYSTEMS, POWER CONDITIONERS for THD 80%                    | Resistive + Non-Linear Mode                                    |                            |                               |                                                  |                              |
| Operating Frequency                                                                    | Auto ; 40 ~ 440Hz                                              |                            |                               | Auto ; 40 ~ 70Hz                                 |                              |
| Current Range                                                                          | 0 ~ 37.5A                                                      | 0 ~ 28A                    | 0 ~ 18.75A                    | 0 ~ 28A                                          | 0 ~ 18.75A                   |
| Resistive Range                                                                        | 1.6 ohm ~ 32K ohm                                              | 2.0 ohm ~ 40K ohm          | 3.2 ohm ~ 64K ohm             | 2.5 ohm ~ 50K ohm                                | 4 ohm ~ 80K ohm              |
| UPS Back-Up function(CC,LIN,CR,CP)                                                     |                                                                |                            |                               |                                                  |                              |
| VTH                                                                                    | 0 ~ 500V                                                       |                            |                               | 0 ~ 700V                                         |                              |
| UPS Back-Up Time                                                                       | 1 ~ 99999 Sec. (>27H)                                          |                            |                               |                                                  |                              |
| Battery Discharge function(CC,LIN,CR,CP)                                               |                                                                |                            |                               |                                                  |                              |
| VTH                                                                                    | 0 ~ 500V                                                       |                            |                               | 0 ~ 700V                                         |                              |
| Battery Discharge Time                                                                 | 1 ~ 99999 Sec. (>27H)                                          |                            |                               |                                                  |                              |
| UPS Transfer Time                                                                      |                                                                |                            |                               |                                                  |                              |
| Current Range                                                                          | 0 ~ 37.5A                                                      | 0 ~ 28A                    | 0 ~ 18.75A                    | 0 ~ 28A                                          | 0 ~ 18.75A                   |
| VTH                                                                                    | 2.5V                                                           |                            |                               |                                                  |                              |
| Time range                                                                             | 0.15mS ~ 999.99mS                                              |                            |                               |                                                  |                              |

| Specifications                                                        |                    |                                                                                                      |                    |                       |                    |                       |
|-----------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------|--------------------|-----------------------|--------------------|-----------------------|
| MODEL                                                                 |                    | 3270                                                                                                 | 3271               | 3272                  | 3273               | 3274                  |
| Fuse Test mode                                                        |                    |                                                                                                      |                    |                       |                    |                       |
| Max. Current                                                          | Turbo OFF(CC1~3)   | 37.5Arms                                                                                             | 28.0Arms           | 18.75Arms             | 28.0Arms           | 18.75Arms             |
|                                                                       | Turbo ON(CC3)      |                                                                                                      |                    |                       |                    |                       |
|                                                                       | Turbo ON(CC1~2)    | 75.0Arms (x2) *3                                                                                     | 56.0Arms (x2) *3   | 37.5Arms (x2) *3      | 56.0Arms (x2) *3   | 37.5Arms (x2) *3      |
| Trip & Non-Trip Time                                                  | Turbo OFF(Time1~3) | 0.01~333.33sec.                                                                                      |                    |                       |                    |                       |
|                                                                       | Turbo ON(Time1~2)  | 0.01~0.50sec.                                                                                        |                    |                       |                    |                       |
|                                                                       | Turbo ON(Time3)    | 0.01~600.00sec.                                                                                      |                    |                       |                    |                       |
| OFF Time                                                              |                    | 0.1~999.9 Sec.                                                                                       |                    |                       |                    |                       |
| Meas. Accuracy                                                        |                    | ±0.003 Sec.                                                                                          |                    |                       |                    |                       |
| Repeat Cycle                                                          |                    | 0~99999                                                                                              |                    |                       |                    |                       |
| Short/OPP/OCF Test Function                                           |                    |                                                                                                      |                    |                       |                    |                       |
| Short Time                                                            | Turbo OFF          | 0.1S ~ 10Sec. Or Cont.                                                                               |                    |                       |                    |                       |
|                                                                       | Turbo ON           | 0.1S ~ 1Sec                                                                                          |                    |                       |                    |                       |
| OPP/OCF Step Time                                                     | Turbo OFF          | 100ms                                                                                                |                    |                       |                    |                       |
|                                                                       | Turbo ON           | 100ms, up to 10 Steps                                                                                |                    |                       |                    |                       |
| OCP Istop                                                             | Turbo OFF          | 37.5Arms                                                                                             | 28.0Arms           | 18.75Arms             | 28.0Arms           | 18.75Arms             |
|                                                                       | Turbo ON           | 75.0Arms *3                                                                                          | 56.0Arms *3        | 37.5Arms *3           | 56.0Arms *3        | 37.5Arms *3           |
| OPP Pstop                                                             | Turbo OFF          | 3750W                                                                                                | 2800W              | 1875W                 | 3750W              | 2800W                 |
|                                                                       | Turbo ON           | 7500W                                                                                                | 5600W              | 3750W                 | 7500W              | 5600W                 |
| Programmable Inrush current simulation: Istart - Istop / Tsep         |                    |                                                                                                      |                    |                       |                    |                       |
| Istart, Inrush Start Current                                          |                    | 0~75A                                                                                                | 0~56A              | 0~37.5A               | 0~56A              | 0~37.5A               |
| Inrush Step time                                                      |                    | 0.1mS~100mS                                                                                          |                    |                       |                    |                       |
| Istop, Inrush stop current                                            |                    | 0~37.5A                                                                                              | 0~28A              | 0~18.75A              | 0~28A              | 0~18.75A              |
| Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3          |                    |                                                                                                      |                    |                       |                    |                       |
| S1 and S2 Current                                                     |                    | 0~75A                                                                                                | 0~56A              | 0~37.5A               | 0~56A              | 0~37.5A               |
| T1 and T2 Time                                                        |                    | 0.01S~0.5Sec.                                                                                        |                    |                       |                    |                       |
| S3 Current                                                            |                    | 0~37.5A                                                                                              | 0~28A              | 0~18.75A              | 0~28A              | 0~18.75A              |
| T3 Time                                                               |                    | 0.01S ~ 9.99Sec. Or Cont.                                                                            |                    |                       |                    |                       |
| MEASUREMENTS                                                          |                    |                                                                                                      |                    |                       |                    |                       |
| VOLTAGE READBACK V METER                                              |                    |                                                                                                      |                    |                       |                    |                       |
| Range                                                                 |                    | 500V                                                                                                 |                    |                       | 700V               |                       |
| Resolution                                                            |                    | 0.01V                                                                                                |                    |                       | 0.0125V            |                       |
| 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 | 14Arms / 28Arms    | 9.375Arms / 18.75Arms |
| Resolution                                                            |                    | 0.4mA / 0.8mA                                                                                        | 0.3mA / 0.6mA      | 0.2mA / 0.4mA         | 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                 | 3750W              | 2800W                 |
| Resolution                                                            |                    | 0.0625W                                                                                              | 0.05W              | 0.03125W              | 0.0625W            | 0.05W                 |
| Accuracy                                                              |                    | ±0.5% 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 (Hz)                                                  |                    |                                                                                                      |                    |                       |                    |                       |
| Range                                                                 |                    | DC,40~440Hz                                                                                          |                    |                       | DC,40~70Hz         |                       |
| Accuracy                                                              |                    | 0.1%                                                                                                 |                    |                       |                    |                       |
| Other Parameter METER                                                 |                    |                                                                                                      |                    |                       |                    |                       |
| VA, VAR, CF_I, Ipeak, Imax., Imin. Vmax., Vmin., IHD, VHD, ITHD, VTHD |                    |                                                                                                      |                    |                       |                    |                       |
| OTHERS                                                                |                    |                                                                                                      |                    |                       |                    |                       |
| Start up loading                                                      |                    | Yes , Power on loading during Inverter / UPS start up                                                |                    |                       |                    |                       |
| Load ON / OFF Angle                                                   |                    | 0 ~ 359 degree can be programmed for the angle of load ON and load OFF loading                       |                    |                       |                    |                       |
| Half cycle and SCR/TRIAC loading                                      |                    | Postive or Negative half cycle, 90° Trailing edge or Leading edge current waveform can be programmed |                    |                       |                    |                       |
| Master/Slave (3 Phase Application)                                    |                    | Yes, 1 master and upto 7 slave units                                                                 |                    |                       |                    |                       |
| External programming input                                            |                    | F.S / 10Vdc, Resolution 0.1V                                                                         |                    |                       |                    |                       |
| External SYNC input                                                   |                    | TTL                                                                                                  |                    |                       |                    |                       |
| Vmonitor ( Isolated )                                                 |                    | ±500V / ±10V                                                                                         |                    |                       | ±700V / ±10V       |                       |
| Imonitor ( Isolated )                                                 |                    | ±112.5Apk / ±10Vpk                                                                                   | ±84Apk / ±10Vpk    | ±56.25Apk / ±10Vpk    | ±84Apk / ±10Vpk    | ±56.25Apk / ±10Vpk    |
| Interface ( OPTION )                                                  |                    | GPIB ; RS-232 ; LAN ; USB                                                                            |                    |                       |                    |                       |
| MAX. Power consumption                                                |                    |                                                                                                      | 150VA              |                       |                    |                       |
| Operation Temperature *2                                              |                    | 0 ~ 40 °C                                                                                            |                    |                       |                    |                       |
| Current of input impedance (mA) @50/60Hz ; @400Hz                     |                    | ~ V*0.6 ; ~ V*4.4                                                                                    | ~ V*0.45 ; ~ V*3.3 | ~ V*0.3 ; ~ V*2.2     | ~ V*0.4 ; ~ V*2.95 | ~ V*0.3 ; ~V*2.2      |
| Dimension ( H x W x D )                                               |                    | 177 x 440 x 558 mm                                                                                   |                    |                       |                    |                       |
| Weight                                                                |                    | 33.5Kg                                                                                               | 27.5Kg             | 21.5Kg                | 33.5Kg             | 27.5Kg                |

Input AC Power : 100~230 Vac +/- 10% , 50/60Hz  
 Cooling : Advanced Fan Cooled

\*1 ms (millisiemens) is the unit of conductance(G), one siemens equal to 1/Ω  
 \*2 Operating temperature range is 0~40℃, all specification apply for 25℃±5℃, Except as noted  
 \*3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OCF/OPP test function  
 \*4 The specification apply for current less than 20Arms

## Voltage Optional : 425Vrms / 600Vdc (except 3273 / 3274)

### Specifications

| MODEL                                                                                  | 32711                                                          | 32701                         | 32702                          | 32703                          | 32704                          | 32705                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Power (W)                                                                              | 5600 W                                                         | 7500 W                        | 11250W                         | 15000W                         | 18750W                         | 22500W                         |
| Current(Ampere)                                                                        | 56 Arms / 168Apeak                                             | 75 Arms / 225Apeak            | 112.5 Arms / 337.5Apeak        | 112.5 Arms / 337.5Apeak        | 112.5 Arms / 337.5Apeak        | 112.5 Arms / 337.5Apeak        |
| Voltage(Volt)                                                                          | 50~350Vrms / 500Vdc                                            |                               |                                |                                |                                |                                |
| FREQUENCY Range                                                                        | DC,40~440Hz (CC,CP Mode) , DC~440Hz (LIN,CR,CV Mode)           |                               |                                |                                |                                |                                |
| DC Section                                                                             |                                                                |                               |                                |                                |                                |                                |
| Current Range                                                                          | 56 A                                                           | 75 A                          | 112.5 A                        | 112.5 A                        | 112.5 A                        | 112.5 A                        |
| Voltage Range                                                                          | 5~500V                                                         |                               |                                |                                |                                |                                |
| Min. operating voltage                                                                 | 5V                                                             |                               |                                |                                |                                |                                |
| Slew Rate                                                                              | 50μs                                                           |                               |                                |                                |                                |                                |
| Operating Mode                                                                         | CC , CR , Linear CC , CP , CV , DC Rectified , DC Rectified+CR |                               |                                |                                |                                |                                |
| Test Function                                                                          | Battery , FUSE/Breaker , OPP/OCP/Short                         |                               |                                |                                |                                |                                |
| PROTECTIONS                                                                            |                                                                |                               |                                |                                |                                |                                |
| Over Power Protection                                                                  | ≧ 5880Wrms or Programmable                                     | ≧ 7875Wrms or Programmable    | ≧ 11812.5Wrms or Programmable  | ≧ 15750Wrms or Programmable    | ≧ 19687.5Wrms or Programmable  | ≧ 23625Wrms or Programmable    |
| Over Current Protection                                                                | ≧ 58.8Arms, or Programmable                                    | ≧ 78.75 Arms, or Programmable | ≧ 118.125 Arms or Programmable | ≧ 118.125 Arms or Programmable | ≧ 118.125 Arms or Programmable | ≧ 118.125 Arms or Programmable |
| Over Vlotage Protection                                                                | ≧ 367.5 Vrms / 525Vdc                                          |                               |                                |                                |                                |                                |
| Over Temp. Protection                                                                  | Yes                                                            |                               |                                |                                |                                |                                |
| OPERATION MODE                                                                         |                                                                |                               |                                |                                |                                |                                |
| Constant Current Mode for Sine-Wave                                                    |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | 0~56A                                                          | 0~75A                         | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       |
| Resolution                                                                             | 1mA/16bits                                                     | 1.25mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 |
| Accuracy                                                                               | ± ( 0.1% of setting + 0.2% of range ) @ 50/60Hz                |                               |                                |                                |                                |                                |
| Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | 0~56A                                                          | 0~75A                         | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       |
| Resolution                                                                             | 1mA/16bits                                                     | 1.25mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 | 1.875mA/16bits                 |
| Accuracy                                                                               | ± ( 0.1% of setting + 0.2% of range ) @ 50/60Hz                |                               |                                |                                |                                |                                |
| Constant Resistance Mode                                                               |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | 1 ohm~20K ohm                                                  | 0.8 ohm~16K ohm               | 0.533 ohm~10.666K ohm          | 0.533 ohm~10.666K ohm          | 0.533 ohm~10.666K ohm          | 0.533 ohm~10.666K ohm          |
| Resolution *1                                                                          | 0.016666mS/16bits                                              | 0.020832mS/16bits             | 0.031248mS/16bits              | 0.031248mS/16bits              | 0.031248mS/16bits              | 0.031248mS/16bits              |
| Accuracy                                                                               | ±0.2% of ( setting + range ) @ 50/60Hz                         |                               |                                |                                |                                |                                |
| Constant Voltage Mode                                                                  |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | 0 ~ 500V                                                       |                               |                                |                                |                                |                                |
| Resolution                                                                             | 0.1V                                                           |                               |                                |                                |                                |                                |
| Accuracy                                                                               | ±0.2% of ( setting + range ) @ 50/60Hz                         |                               |                                |                                |                                |                                |
| Constant Power Mode                                                                    |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | 5600W                                                          | 7500W                         | 11250W                         | 15000W                         | 18750W                         | 22500W                         |
| Resolution                                                                             | 0.1W                                                           | 0.1W                          | 1W                             | 1W                             | 1W                             | 1W                             |
| Accuracy                                                                               | ±0.5% of ( setting + range ) @ 50/60Hz                         |                               |                                |                                |                                |                                |
| CREST FACTOR (CC & CP MODE ONLY)                                                       |                                                                |                               |                                |                                |                                |                                |
| Range                                                                                  | √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                                                |                               |                                |                                |                                |                                |
| Operating Frequency                                                                    | Auto ; 40 ~ 440Hz                                              |                               |                                |                                |                                |                                |
| Current Range                                                                          | 0~56A                                                          | 0~75A                         | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       |
| PF Range                                                                               | 0~1                                                            |                               |                                |                                |                                |                                |
| MEASURING EFFICIENCY FOR PV SYSTEMS, POWER CONDITIONERS for THD 80%                    | Resistive + Non-Linear Mode                                    |                               |                                |                                |                                |                                |
|                                                                                        | Auto ; 40 ~ 440Hz                                              |                               |                                |                                |                                |                                |
| Current Range                                                                          | 0~56A                                                          | 0~75A                         | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       |
| Resistive Range                                                                        | 1 ohm~20K ohm                                                  | 0.8 ohm~16K ohm               | 0.533 ohm~10.666 Kohm          | 0.533 ohm~10.666 Kohm          | 0.533 ohm~10.666 Kohm          | 0.533 ohm~10.666 Kohm          |
| UPS Back-Up function(CC,LIN,CR,CP)                                                     |                                                                |                               |                                |                                |                                |                                |
| VTH                                                                                    | 0 ~ 500V                                                       |                               |                                |                                |                                |                                |
| UPS Back-Up Time                                                                       | 1 ~ 99999 Sec. (>27H)                                          |                               |                                |                                |                                |                                |
| Battery Discharge function(CC,LIN,CR,CP)                                               |                                                                |                               |                                |                                |                                |                                |
| VTH                                                                                    | 0 ~ 500V                                                       |                               |                                |                                |                                |                                |
| Battery Discharge Time                                                                 | 1 ~ 99999 Sec. (>27H)                                          |                               |                                |                                |                                |                                |
| UPS Transfer Time                                                                      |                                                                |                               |                                |                                |                                |                                |
| Current Range                                                                          | 0~56A                                                          | 0~75A                         | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       | 0~112.5A                       |
| VTH                                                                                    | 2.5V                                                           |                               |                                |                                |                                |                                |
| Time range                                                                             | 0.15mS ~ 999.99mS                                              |                               |                                |                                |                                |                                |

## Specifications

| MODEL                                                                  |                    | 32711                                                                                                | 32701              | 32702                 | 32703                 | 32704                 | 32705                 |
|------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Fuse Test mode                                                         |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Max. Current                                                           | Turbo OFF(CC1~3)   | 56Arms                                                                                               | 75Arms             | 112.5Arms             | 112.5Arms             | 112.5Arms             | 112.5Arms             |
|                                                                        | Turbo ON(CC3)      |                                                                                                      |                    |                       |                       |                       |                       |
|                                                                        | Turbo ON(CC1~2)    |                                                                                                      |                    |                       |                       |                       |                       |
| Trip & Non-Trip Time                                                   | Turbo OFF(Time1~3) | 0.01~333.33sec.                                                                                      |                    |                       |                       |                       |                       |
|                                                                        | Turbo ON(Time1~2)  | 0.01~0.50sec.                                                                                        |                    |                       |                       |                       |                       |
|                                                                        | Turbo ON(Time3)    | 0.01~600.00sec.                                                                                      |                    |                       |                       |                       |                       |
| OFF Time                                                               |                    | 0.1~999.9 Sec.                                                                                       |                    |                       |                       |                       |                       |
| Meas. Accuracy                                                         |                    | ±0.003 Sec.                                                                                          |                    |                       |                       |                       |                       |
| Repeat Cycle                                                           |                    | 0~99999                                                                                              |                    |                       |                       |                       |                       |
| Short/OPP/OCF Test Function                                            |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Short Time                                                             | Turbo OFF          | 0.1S ~ 10Sec. Or Cont.                                                                               |                    |                       |                       |                       |                       |
|                                                                        | Turbo ON           | 0.1S ~ 1Sec                                                                                          |                    |                       |                       |                       |                       |
| OPP/OCF Step Time                                                      | Turbo OFF          | 100ms                                                                                                |                    |                       |                       |                       |                       |
|                                                                        | Turbo ON           | 100ms, up to 10 Steps                                                                                |                    |                       |                       |                       |                       |
| OCP Istop                                                              | Turbo OFF          | 56Arms                                                                                               | 75Arms             | 112.5Arms             | 112.5Arms             | 112.5Arms             | 112.5Arms             |
|                                                                        | Turbo ON           | 112Arms                                                                                              | 150Arms            | 225Arms               | 225Arms               | 225Arms               | 225Arms               |
| OPP Pstop                                                              | Turbo OFF          | 5600W                                                                                                | 7500W              | 11250W                | 15000W                | 18750W                | 22500W                |
|                                                                        | Turbo ON           | 11200W                                                                                               | 15000W             | 22500W                | 30000W                | 37500W                | 45000W                |
| Programmable Inrush current simulation: Istart - Istop / Tsep          |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Istart, Inrush Start Current                                           |                    | 0~112A                                                                                               | 0~150A             | 0~225A                | 0~225A                | 0~225A                | 0~225A                |
| Inrush Step time                                                       |                    | 0.1mS~100mS                                                                                          |                    |                       |                       |                       |                       |
| Istop, Inrush stop current                                             |                    | 0~56A                                                                                                | 0~75A              | 0~112.5A              | 0~112.5A              | 0~112.5A              | 0~112.5A              |
| Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3           |                    |                                                                                                      |                    |                       |                       |                       |                       |
| S1 and S2 Current                                                      |                    | 0~112A                                                                                               | 0~150A             | 0~225A                | 0~225A                | 0~225A                | 0~225A                |
| T1 and T2 Time                                                         |                    | 0.01S~0.5Sec.                                                                                        |                    |                       |                       |                       |                       |
| S3 Current                                                             |                    | 0~56A                                                                                                | 0~75A              | 0~112.5A              | 0~112.5A              | 0~112.5A              | 0~112.5A              |
| T3 Time                                                                |                    | 0.01S ~ 9.99Sec. Or Cont.                                                                            |                    |                       |                       |                       |                       |
| MEASUREMENTS                                                           |                    |                                                                                                      |                    |                       |                       |                       |                       |
| VOLTAGE READBACK V METER                                               |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Range                                                                  |                    | 500V                                                                                                 |                    |                       |                       |                       |                       |
| Resolution                                                             |                    | 0.01V                                                                                                |                    |                       |                       |                       |                       |
| Accuracy                                                               |                    | ±0.05% of (reading + range)                                                                          |                    |                       |                       |                       |                       |
| Parameter                                                              |                    | Vrms,V Max/Min,+/-Vpk                                                                                |                    |                       |                       |                       |                       |
| CURRENT READBACK A METER                                               |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Range                                                                  |                    | 28Arms / 56Arms                                                                                      | 37.5Arms / 75Arms  | 56.25Arms / 112.5Arms | 56.25Arms / 112.5Arms | 56.25Arms / 112.5Arms | 56.25Arms / 112.5Arms |
| Resolution                                                             |                    | 0.6mA / 1.2mA                                                                                        | 0.8mA / 1.6mA      | 1.2mA / 2.4mA         | 1.2mA / 2.4mA         | 1.2mA / 2.4mA         | 1.2mA / 2.4mA         |
| Accuracy                                                               |                    | ±0.1% of ( reading + range ) @ 50/60Hz                                                               |                    |                       |                       |                       |                       |
| Parameter                                                              |                    | Irms,I Max/Min,+/-Ipk                                                                                |                    |                       |                       |                       |                       |
| WATT READBACK W METER                                                  |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Range                                                                  |                    | 5600W                                                                                                | 7500W              | 11250W                | 15000W                | 18750W                | 22500W                |
| Resolution                                                             |                    | 0.1W                                                                                                 | 0.125W             | 0.1875W               | 0.25W                 | 0.3125W               | 0.375W                |
| Accuracy                                                               |                    | ±0.5% of ( reading + range ) @ 50/60Hz                                                               |                    |                       |                       |                       |                       |
| 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 (Hz)                                                   |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Range                                                                  |                    | DC,40~440Hz                                                                                          |                    |                       |                       |                       |                       |
| Accuracy                                                               |                    | 0.1%                                                                                                 |                    |                       |                       |                       |                       |
| Other Parameter METER                                                  |                    |                                                                                                      |                    |                       |                       |                       |                       |
| VA, VAR, CF_I, Ipeak, Imax., Imin., Vmax., Vmin., IHD, VHD, ITHD, VTHD |                    |                                                                                                      |                    |                       |                       |                       |                       |
| OTHERS                                                                 |                    |                                                                                                      |                    |                       |                       |                       |                       |
| Start up loading                                                       |                    | Yes , Power on loading during Inverter / UPS start up                                                |                    |                       |                       |                       |                       |
| Load ON / OFF Angle                                                    |                    | 0 ~ 359 degree can be programmed for the angle of load ON and load OFF loading                       |                    |                       |                       |                       |                       |
| Half cycle and SCR/TRIAC loading                                       |                    | Postive or Negative half cycle, 90° Trailing edge or Leading edge current waveform can be programmed |                    |                       |                       |                       |                       |
| Master/Slave (3 phase or Parallel application)                         |                    | Yes, 1 master and upto 7 slave unit                                                                  |                    |                       |                       |                       |                       |
| External programming input                                             |                    | F.S / 10Vdc, Resolution 0.1V                                                                         |                    |                       |                       |                       |                       |
| External SYNC input                                                    |                    | TTL                                                                                                  |                    |                       |                       |                       |                       |
| Vmonitor (Isolated)                                                    |                    | ±500V / ±10V                                                                                         |                    |                       |                       |                       |                       |
| Imonitor (Isolated)                                                    |                    | ±168Apk / ±10Vpk                                                                                     | ±225Apk / ±10Vpk   | ±337.5Apk / ±10Vpk    | ±337.5Apk / ±10Vpk    | ±337.5Apk / ±10Vpk    | ±337.5Apk / ±10Vpk    |
| Interface (OPTION)                                                     |                    | GPIB : RS-232 : LAN : USB                                                                            |                    |                       |                       |                       |                       |
| MAX. Power consumption                                                 |                    | 270VA                                                                                                | 270VA              | 390VA                 | 510VA                 | 630VA                 | 750VA                 |
| Operation Temperature <sup>2</sup>                                     |                    | 0 ~ 40 °C                                                                                            |                    |                       |                       |                       |                       |
| Current of input impedance (mA) @ 50/60Hz ; @400Hz                     |                    | ~ V*0.9 ; ~ V*6.6                                                                                    | ~ V*1.2 ; ~ V*8.8  | ~ V*1.8 ; ~ V*13.2    | ~ V*2.4 ; ~ V*17.6    | ~ V*3.0 ; ~ V*22      | ~ V*3.6 ; ~ V*26.4    |
| Dimension(H x W x D)                                                   |                    | 458 x 480 x 593 mm                                                                                   | 458 x 480 x 593 mm | 636 x 480 x 593 mm    | 814 x 480 x 593 mm    | 1285 x 600 x 600 mm   | 1285 x 600 x 600 mm   |
| HxWxD(Not included wheels)                                             |                    | 355 x 480 x 593 mm                                                                                   | 355 x 480 x 593 mm | 533 x 480 x 593 mm    | 711 x 480 x 593 mm    | 1182 x 600 x 600 mm   | 1182 x 600 x 600 mm   |
| Weight                                                                 |                    | 58 kg                                                                                                | 70 kg              | 105kg                 | 140kg                 | 260kg                 | 295kg                 |

\*1 ms (millisiemens) is the unit of conductance(G), one siemens equal to 1/Ω

\*2 Operating temperature range is 0~40°C, all specification apply for 25°C±5°C, Except as noted

\*3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OCF/OPP test function

\*4 The specification apply for current less than 20Arms

Input AC Power : 100~230 Vac +/- 10% , 50/60Hz

Cooling : Advanced Fan Cooled

All specifications are subject to change without notice.