



# AEL-5000 Series

## AC & DC Electronic Load

### FEATURES

- Turbo Mode (Multiplier Mode) Can Withstand up to 2 Times the Rating Current and Power of the Electronic Load in a Short Period of Time
- Operating Mode: CC, linear CC, CR, CV, CP and AC Rectifier Loads
- Measurement Items: Voltage Value( $V_{rms}$ ,  $V_{peak}$ ,  $V_{max.}$ ,  $V_{min.}$ ), Current Value( $I_{rms}$ ,  $I_{peak}$ ,  $I_{max.}$ ,  $I_{min.}$ ), Watt Value, Volt-ampere Value(VA), Frequency Value, Crest Factor, Power Factor, Voltage Total Distortion(V THD, VH), Current Total Distortion (I THD, IH), Etc
- Eight Units Connected in Parallel up to 180kW for Single-phase and 540kW for Three-phase
- Support Loading and Unloading Angle Control, Loading and Unloading Angle Control Can be set at the Full Range of 0-359 Degrees
- Support Positive Half Cycle or Negative Half Cycle Load
- Support SCR/TRIAC Current Phase Modulation Waveform, 90-degree Trailing Edge and Leading Edge
- Support the Capacitive Load (Inrush Current) when the Power Supply is Turned on and the Transient Current (Surge Current) Test when the Load is Suddenly Connected (Hot Plug-in) During Operation
- Crest Factor Range: 1.414~5.0
- Power Factor Range: 0.1~1.0 Leading or Trailing
- Frequency Range: DC, 40~440Hz (AEL-5003-480-18.75/AEL-5004-480-28: DC, 40~70Hz), and 800Hz and 1kHz Need to be Customized
- Optional Control Interfaces: GPIB, RS-232, USB, LAN

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원문: GW Instek AEL-5000 데이터시트 · 제조사 원문 자료입니다. 사양은 제조사 사정에 따라 변경될 수 있습니다.

## AC &amp; DC Electronic Load

## AEL-5000 Series



AEL-5002-350-18.75  
AEL-5003-350-28  
AEL-5004-350-37.5  
AEL-5002-425-18.75  
AEL-5003-425-28  
AEL-5004-425-37.5  
AEL-5003-480-18.75  
AEL-5004-480-28

AEL-5006-350-56  
AEL-5008-350-75  
AEL-5006-425-56  
AEL-5008-425-75

AEL-5012-350-112.5  
AEL-5012-425-112.5

AEL-5015-350-112.5  
AEL-5015-425-112.5

AEL-5019-350-112.5  
AEL-5019-425-112.5

AEL-5023-350-112.5  
AEL-5023-425-112.5



| MODEL              | Power (W) |              | Current(Ampere)         |                           | Voltage(Volt)       |
|--------------------|-----------|--------------|-------------------------|---------------------------|---------------------|
|                    | Turbo OFF | Turbo ON     | Turbo OFF               | Turbo ON                  |                     |
| AEL-5002-350-18.75 | 1875 W    | 3750W (x2)*  | 18.75 Arms / 56.25Apeak | 37.5Arms/56.25Apeak (x2)* | 50~350Vrms / 500Vdc |
| AEL-5003-350-28    | 2800W     | 5600W (x2)*  | 28 Arms / 84Apeak       | 56Arms/84Apeak (x2)*      |                     |
| AEL-5004-350-37.5  | 3750 W    | 7500W (x2)*  | 37.5 Arms / 112.5Apeak  | 75.0Arms/112.5Apeak (x2)* |                     |
| AEL-5002-425-18.75 | 1875 W    | 3750W (x2)*  | 18.75 Arms / 56.25Apeak | 37.5Arms/56.25Apeak (x2)* | 50~425Vrms / 600Vdc |
| AEL-5003-425-28    | 2800W     | 5600W (x2)*  | 28 Arms / 84Apeak       | 56Arms/84Apeak (x2)*      |                     |
| AEL-5004-425-37.5  | 3750 W    | 7500W (x2)*  | 37.5 Arms / 112.5Apeak  | 75.0Arms/112.5Apeak (x2)* |                     |
| AEL-5006-350-56    | 5600 W    | 11200W (x2)* | 56.0 Arms / 168Apeak    | 112.0Arms/ 168Apeak (x2)* | 50~350Vrms / 500Vdc |
| AEL-5008-350-75    | 7500 W    | 15000W (x2)* | 75.0 Arms / 225Apeak    | 150.0Arms/225Apeak (x2)*  |                     |
| AEL-5012-350-112.5 | 11250W    | 22500W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5015-350-112.5 | 15000W    | 30000W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  | 50~425Vrms / 600Vdc |
| AEL-5019-350-112.5 | 18750W    | 37500W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5023-350-112.5 | 22500W    | 45000W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5006-425-56    | 5600 W    | 11200W (x2)* | 56.0 Arms / 168Apeak    | 112.0Arms/ 168Apeak (x2)* | 50~425Vrms / 600Vdc |
| AEL-5008-425-75    | 7500 W    | 15000W (x2)* | 75.0 Arms / 225Apeak    | 150.0Arms/225Apeak (x2)*  |                     |
| AEL-5012-425-112.5 | 11250W    | 22500W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5015-425-112.5 | 15000W    | 30000W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  | 50~480Vrms / 700Vdc |
| AEL-5019-425-112.5 | 18750W    | 37500W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5023-425-112.5 | 22500W    | 45000W (x2)* | 112.5 Arms / 337.5Apeak | 225Arms/337.5Apeak (x2)*  |                     |
| AEL-5003-480-18.75 | 2800W     | 5600W (x2)*  | 18.75 Arms / 56.25Apeak | 37.5Arms/56.25Apeak (x2)* | 50~480Vrms / 700Vdc |
| AEL-5004-480-28    | 3750 W    | 7500W (x2)*  | 28 Arms / 84Apeak       | 56Arms/84Apeak (x2)*      |                     |

\* Power and current boost rate of Turbo ON

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## AC & DC Electronic Load

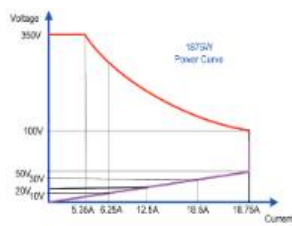
### FEATURES

- 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
- 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
- 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 °C
- Optional interface : GPIB · RS232 · USB · LAN
- The most complete measurement capabilities

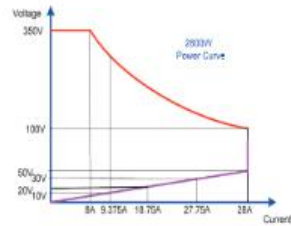
AEL-5000 Series AC & DC electronic load built-in 16-bit A/D and DSP precision measurement circuit, provides accurate measurements, measurement items have Vrms, Arms, Watt, VA, CF, PF, THD, VTHD, ITHD, Ipeak, Amax, Amin, Vmax, and Vmin In addition to these measurement functions, it also provides time measurement · products such as UPS, fuses and circuit breakers etc. trip or blow time and transfer time for Off-line UPS

## AC &amp; DC Electronic Load

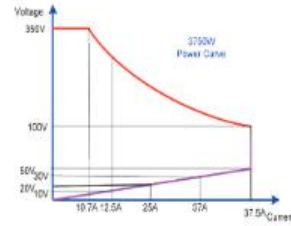
## POWER CURVE



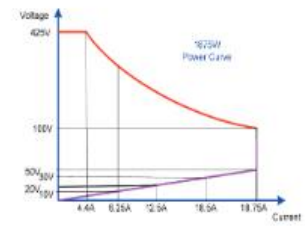
AEL-5002-350-18.75



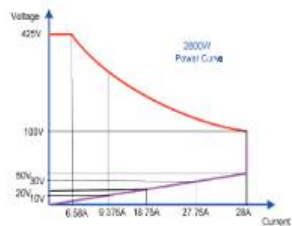
AEL-5003-350-28



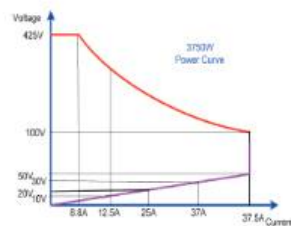
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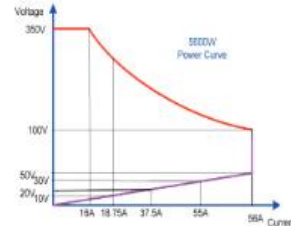
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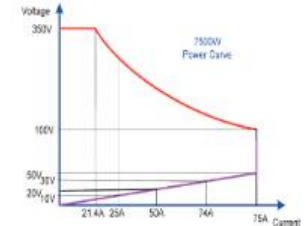
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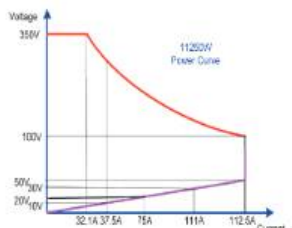
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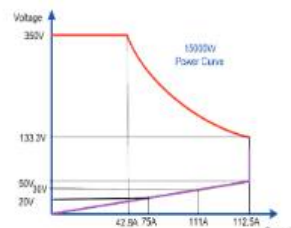
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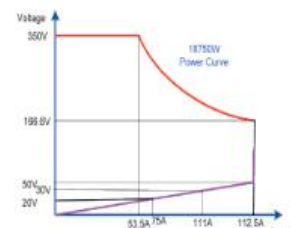
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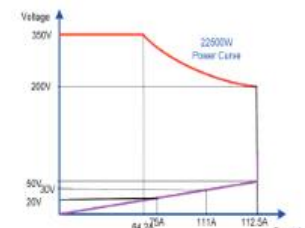
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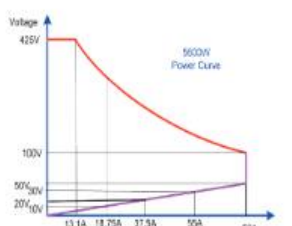
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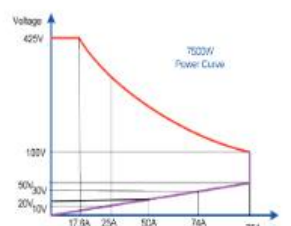
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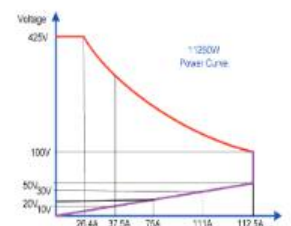
AEL-5023-350-112.5



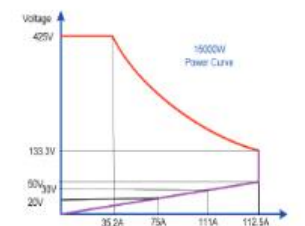
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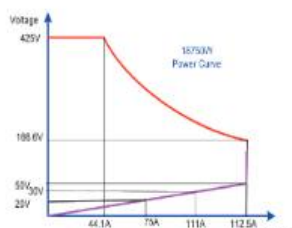
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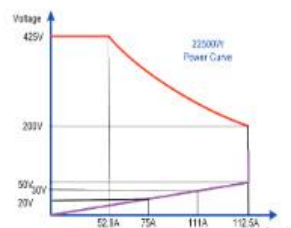
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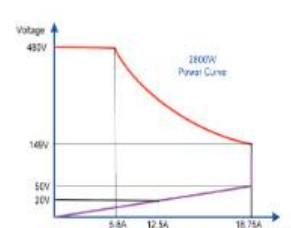
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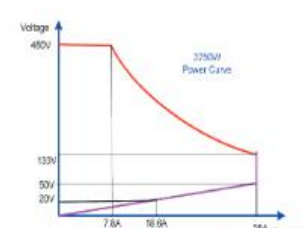
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AEL-5023-425-112.5



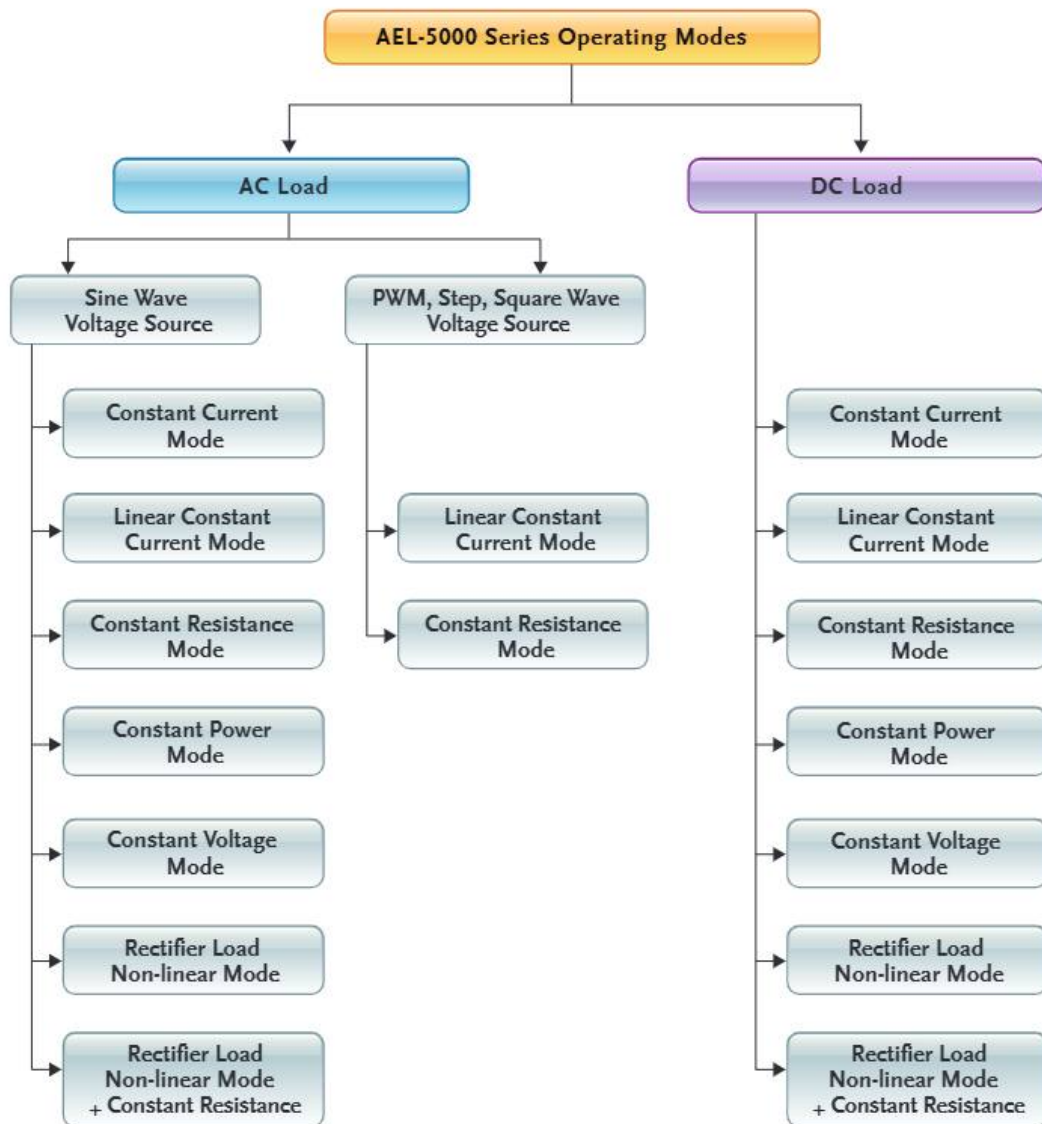
AEL-5003-480-18.75



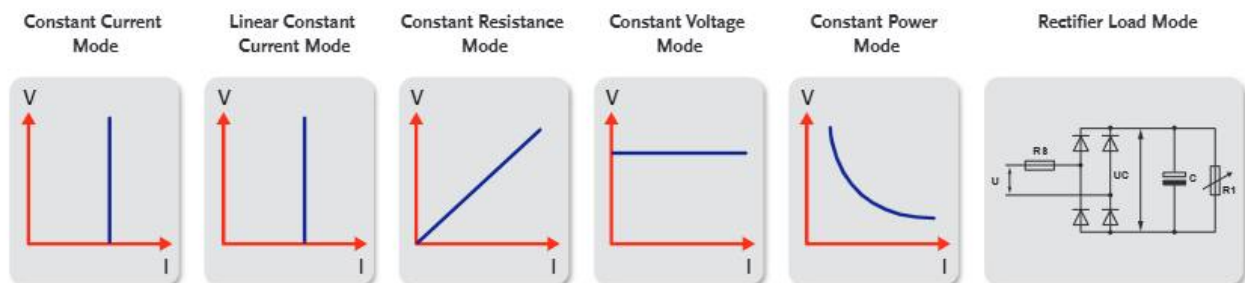
AEL-5004-480-28

# AC & DC Electronic Load

## COMPLETE AC AND DC LOAD MODES



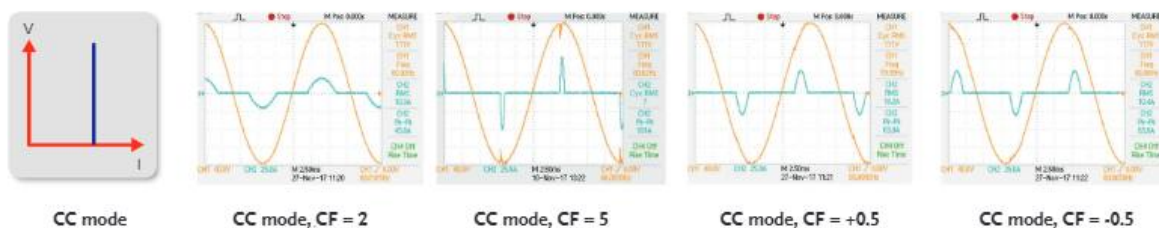
### AC LOAD MODE



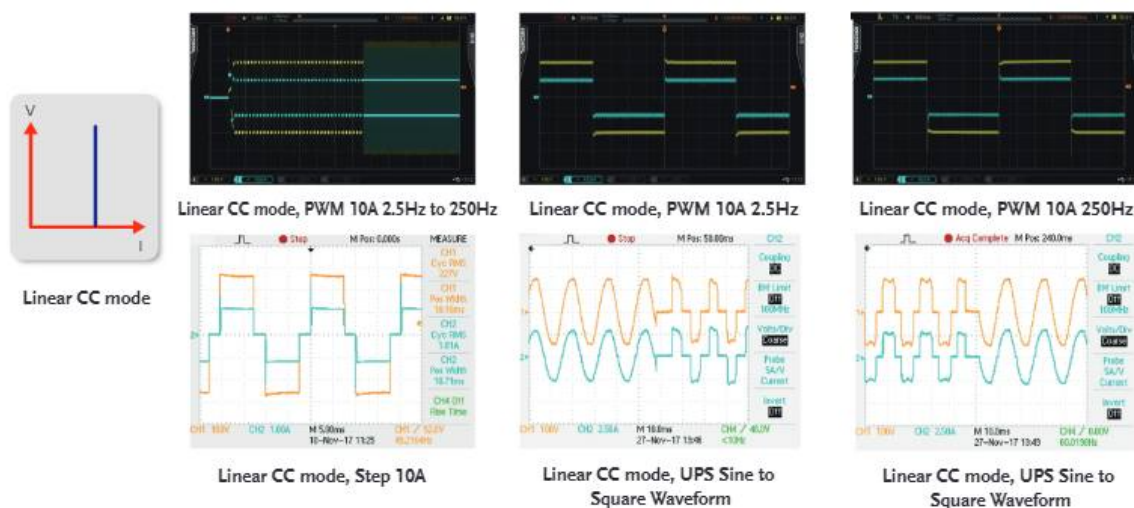
# AC & DC Electronic Load

## AC LOAD MODE

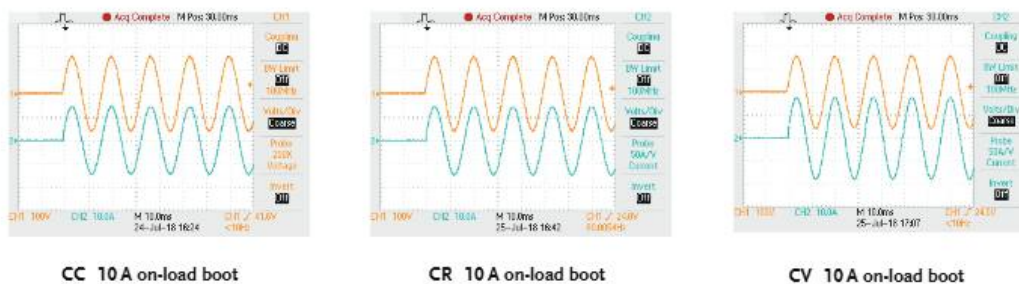
CC Mode : In the constant current mode of AC Load, can be applied to sine wave voltage source, providing CF, PF test of linear load.



Linear Constant Current Mode : Can be applied to sine wave and non-sine wave voltage source, as shown in the PWM inverter driver, step voltage source, and off-line UPS sine wave switch to square wave, square wave switch to sine wave.

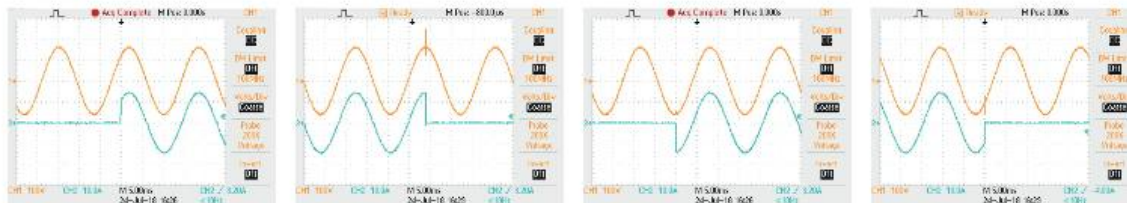


Supported on-load start-up : at first set Load ON to support on-load start-up, inverter or uninterruptible power supply is start-up directly with the set load current, used to verify whether the Inverter is stable when the load is connected during start-up.



## AC & DC Electronic Load

Supports the loading and unloading current angle control ; the loading and unloading current angle range of 0-359 degrees can be programmed to verify whether the Inverter output voltage transient response is stable during the actual electrical appliance is connected or turn ON / OFF randomly it can be used to verify the Overshoot / Undershoot response is within the desire range.



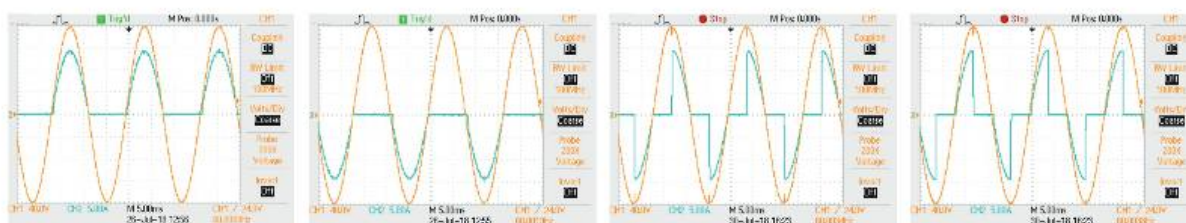
45 degrees loading

90 degrees unloading

270 degrees loading

315 degrees unloading

Support positive half-cycle or negative half-cycle loading ; it can be 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.



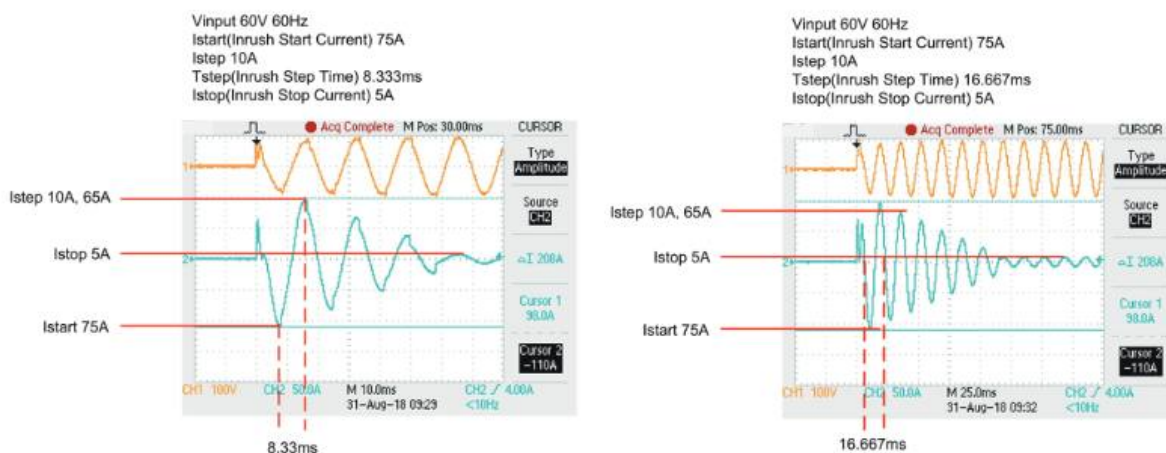
positive half-cycle

negative half-cycle

90 degrees TRIAC/SCR current waveforms Leading edge

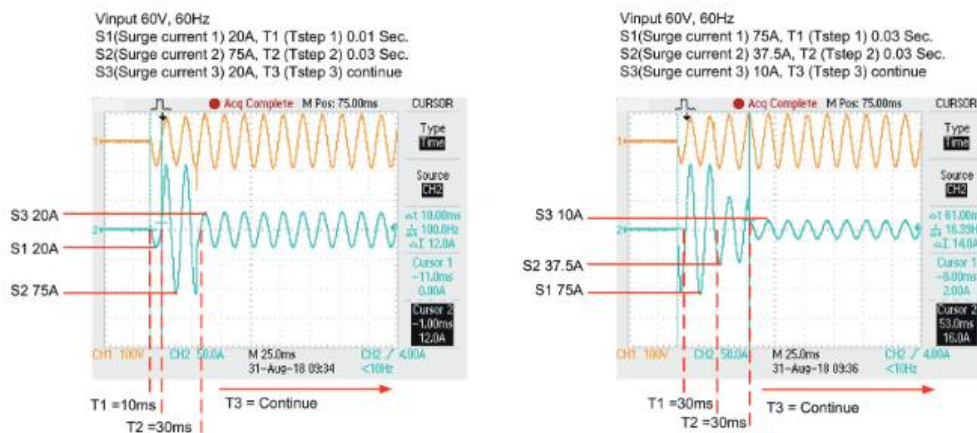
90 degrees current waveforms Leading edge

Support the Inrush Current of the inverter at startup and Power Plug-in test when the power supply is turned on to verify the Inrush Current and the sudden connection of the appliance when the power is turned on (Surge Current), to verify if whether the Inverter output voltage transient response is stable, as shown in the figure below.



Inrush current test at boot

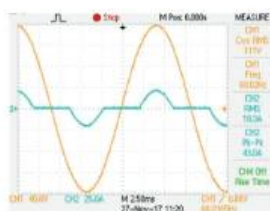
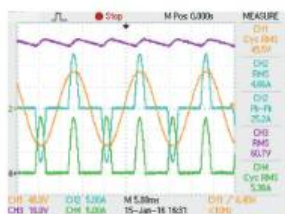
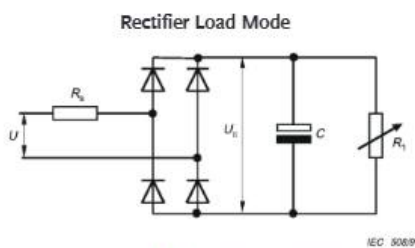
# AC & DC Electronic Load



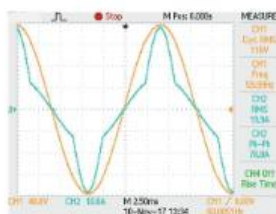
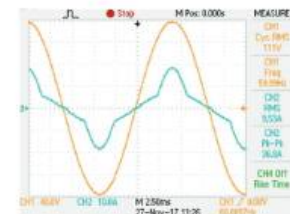
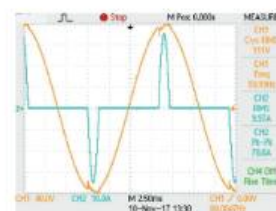
Inrush Current test at boot

## AC RECTIFIED LOAD SIMULATION MEET THE IEC62040-3 AND IEC61683 TEST SPECIFICATIONS

AEL-5000 Series AC & DC electronic load AC rectified load mode is fully compliance with the IEC test specification requirements for the UPS, IEC 62040-3 UPS Efficiency Measurement Non-Linear and IEC 61683 Resistive Plus Non-Linear, respectively, AEL-5000 Series AC rectifier load mode uses CC + CR load mode and maintain current THD at 80%, to simulate the actual PV Inverter connected to the electronic device.



Non-Linear CC mode for UPS test

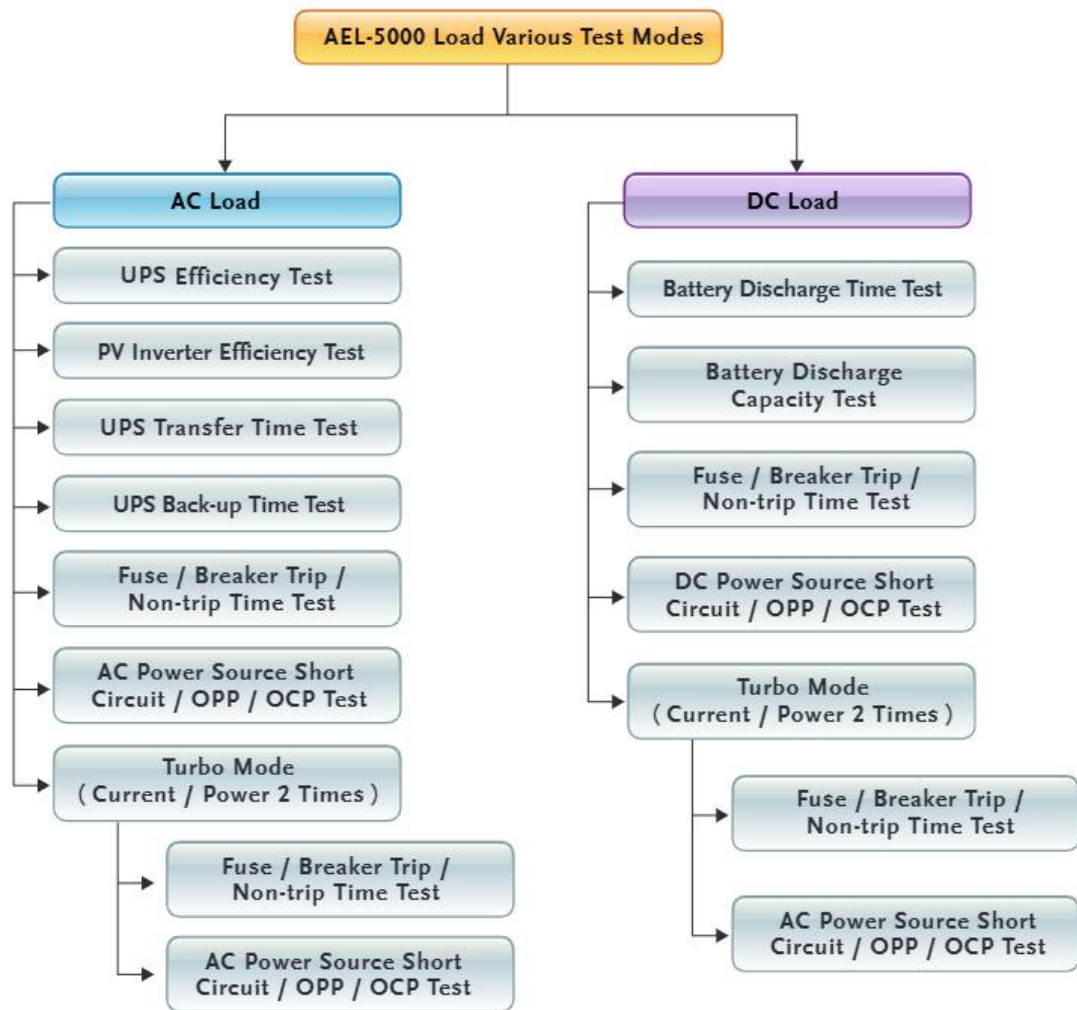


110V, 5A + 22ohm Test Waveform 110V, 10A + 11ohm Test Waveform  
PV Inverter test Non-Linear CC + Resistive mode (CC+CR)

# AC & DC Electronic Load

## AEL-5000 LOAD VARIOUS TEST MODES

The AEL-5000 Series AC & DC electronic load features built-in test modes for a variety of products. Including AC Load of UPS, Inverter, Fuse/Breaker, AC Power Source and DC Load of Battery, Fuse/Breaker, DC Power Source etc..as shown below.



# AC & DC Electronic Load

## CURRENT PROTECTION COMPONENT TEST

Current protection component includes Fuse, Circuit breakers and a new PTC Resettable fuse etc., its function is when the circuit current exceeds the design of the rated value, that is, if the load exceeds the design of the current capacity, the circuit will be disconnected, in order to avoid overheating, even fire. Fuse is a one-time use of the protection components, Breaker and PTC can be reused.

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

Due to this feature, the AEL-5000 Series AC & DC electronic load, in particular for the verification of current protection components, has developed a Fuse Test function to test and verify such protection element with an electronic load of rated current and power. When Turbo mode is set to ON, the test current can be up to double the maximum current within 1 second of test period. Take AEL-5004-350-37.5 as an example, the maximum test current can be doubled to 75A. That is, when the Turbo mode of the AEL-5000 Series is ON, the test current value can reach to 2 units AEL-5000 Series (normal mode) within 1



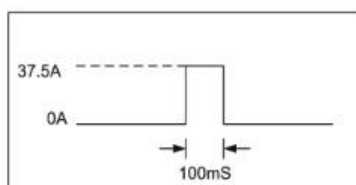
Fuse



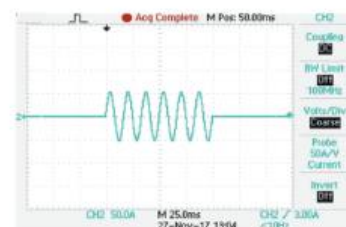
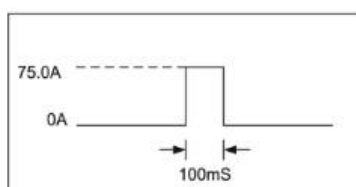
Breaker



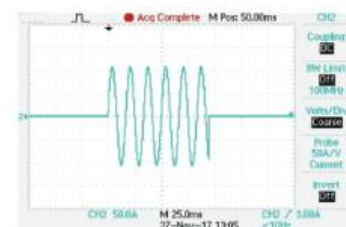
PTC

Turbo OFF, Short 100ms 37.5A  
Test result screen

Turbo OFF, Short 100ms 37.5A Setting

Turbo OFF, Short 100ms 37.5A  
The actual test waveformTurbo ON, Short 100ms 75.0A  
Test result screen

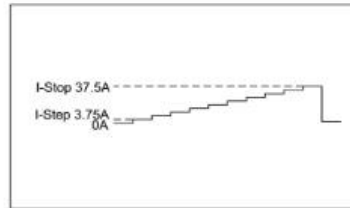
Turbo ON, Short 100ms 75.0A Setting

Turbo ON, Short 100ms 75.0A  
The actual test waveform

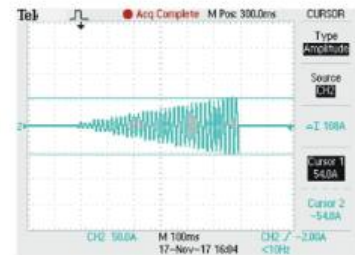
## AC & DC Electronic Load



Turbo OFF, OCP Istep 3.75 A Istop 37.5A  
Test result screen



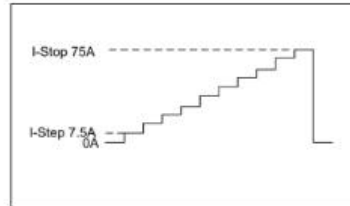
Turbo OFF, OCP Istep 3.75 A Istop 37.5A  
Setting



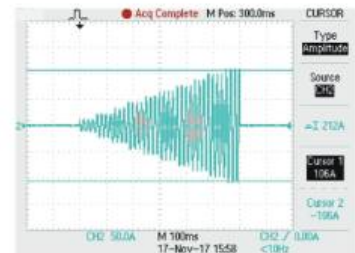
Turbo OFF, OCP Istep 3.75 A Istop 37.5A  
The actual test waveform



Turbo ON, OCP Istep 7.5 A Istop 75A  
Test result screen



Turbo ON, OCP Istep 7.5 A Istop 75.0A  
Setting



Turbo ON, OCP Istep 7.5 A Istop 75.0A  
The actual test waveform

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

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

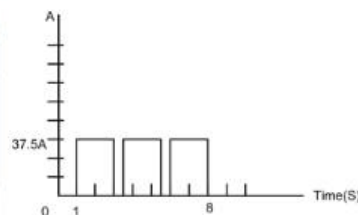
In the Trip fuse test, it is used to test when there is too large abnormal current the Fuse or Bleaker must be able to provide the protection of the circuit break, that means current protection components need the fuse action, therefore the test current needs to be larger than the fuse current rating.

When the AEL-5000 Series AC & DC electronic load detects a voltage lower than 1.0V, the LCD displays the number of Repeat Cycle and Current Protection Fusing Time XXXX.X sec.

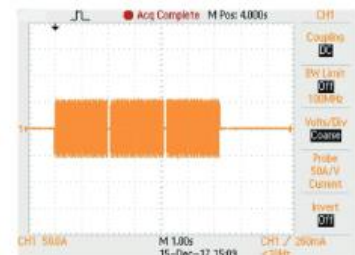
In the Non-Trip (no Blown) test, the current protection component is required to achieve non-blow action, so the test current needs to be lower than the fuse current rating that is used to verify the fuse must not blow during normal current range. When the AEL-5000 Series AC & DC electronic load is not blown after the test time (Pulse Time) and the repeated Repeat number, the LCD displays the information of the Repeat number.



TurboOFF, Fuse mode  
Test result screen



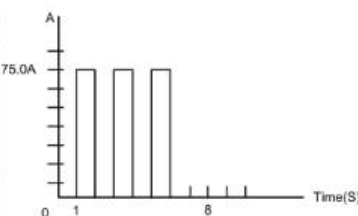
SettingTurboOFF, Fuse ON  
CC pulse 37.5A, 2s, Test 3 cycles



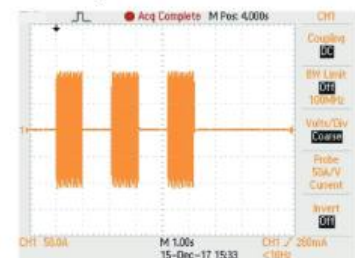
Turbo : OFF, Fuse ON, CC pulse 37.5A, 2s,  
Test 3 cycles the actual test waveform



Turbo ON, Fuse mode  
Test result screen



SettingTurboON, Fuse ON  
CC pulse 75.0A, 1s, Test 3 cycles

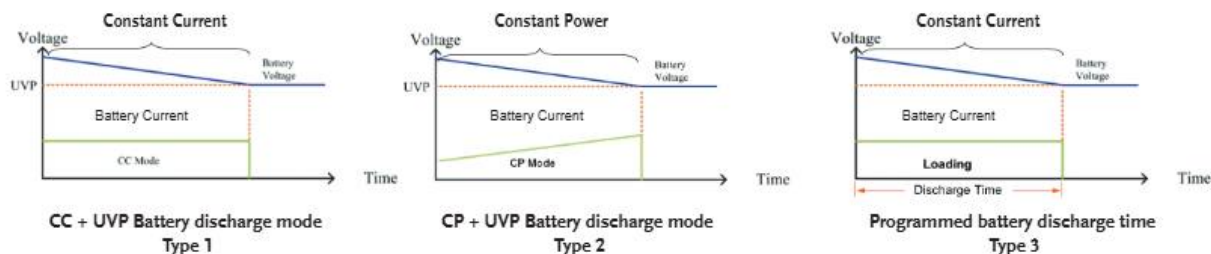


Turbo : ON, Fuse ON, CC pulse 75A, 1s,  
Test 3 cycles the actual test waveform

## AC & DC Electronic Load

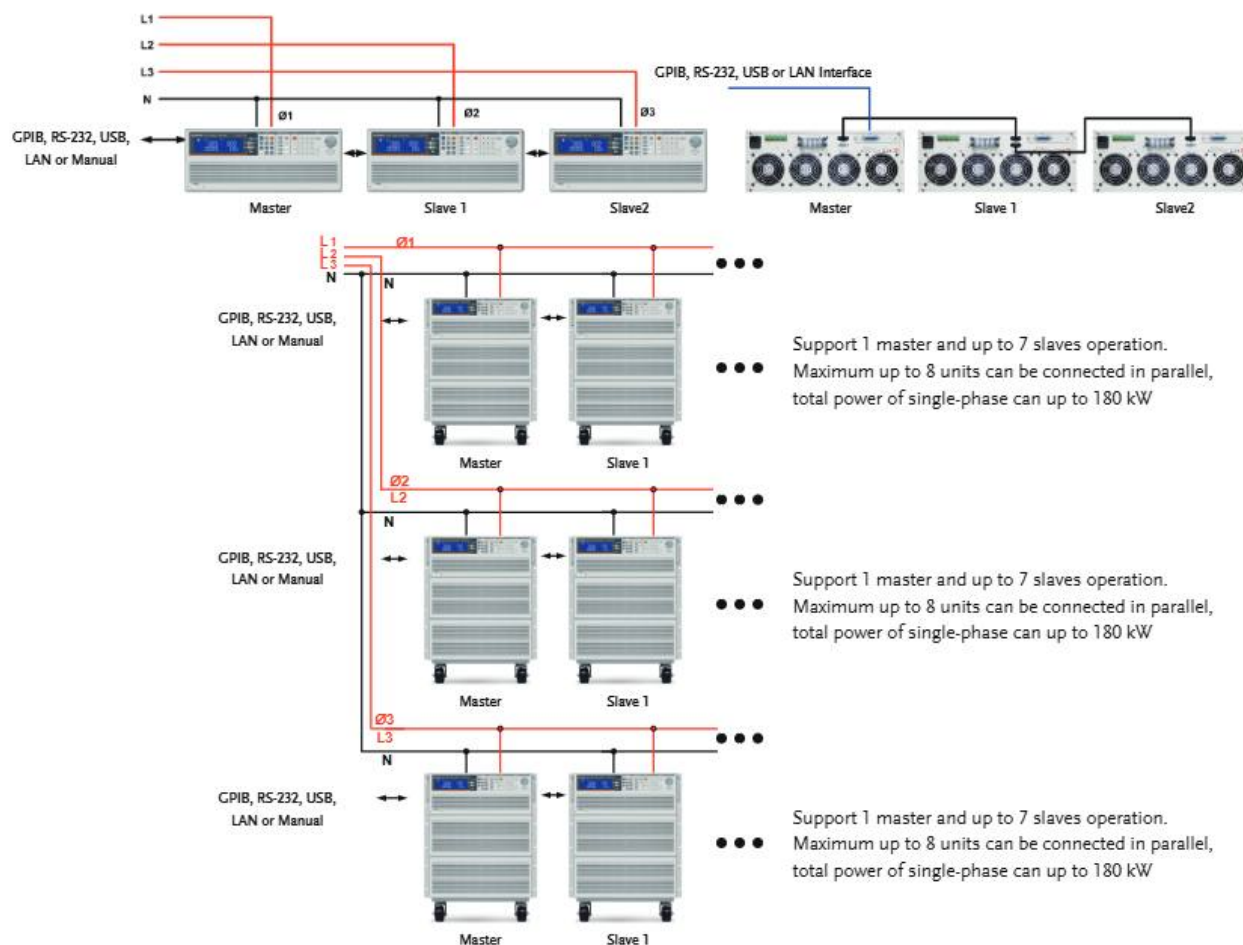
### BATTERY TEST FUNCTION

AEL-5000 Series AC & DC electronic load has built-in new TYPE1 ~ TYPE3 battery discharge test, you can select the desired battery test mode, the test results can be directly displayed on the LCD display for battery AH capacity, the voltage value after discharge and the cumulative discharge time.



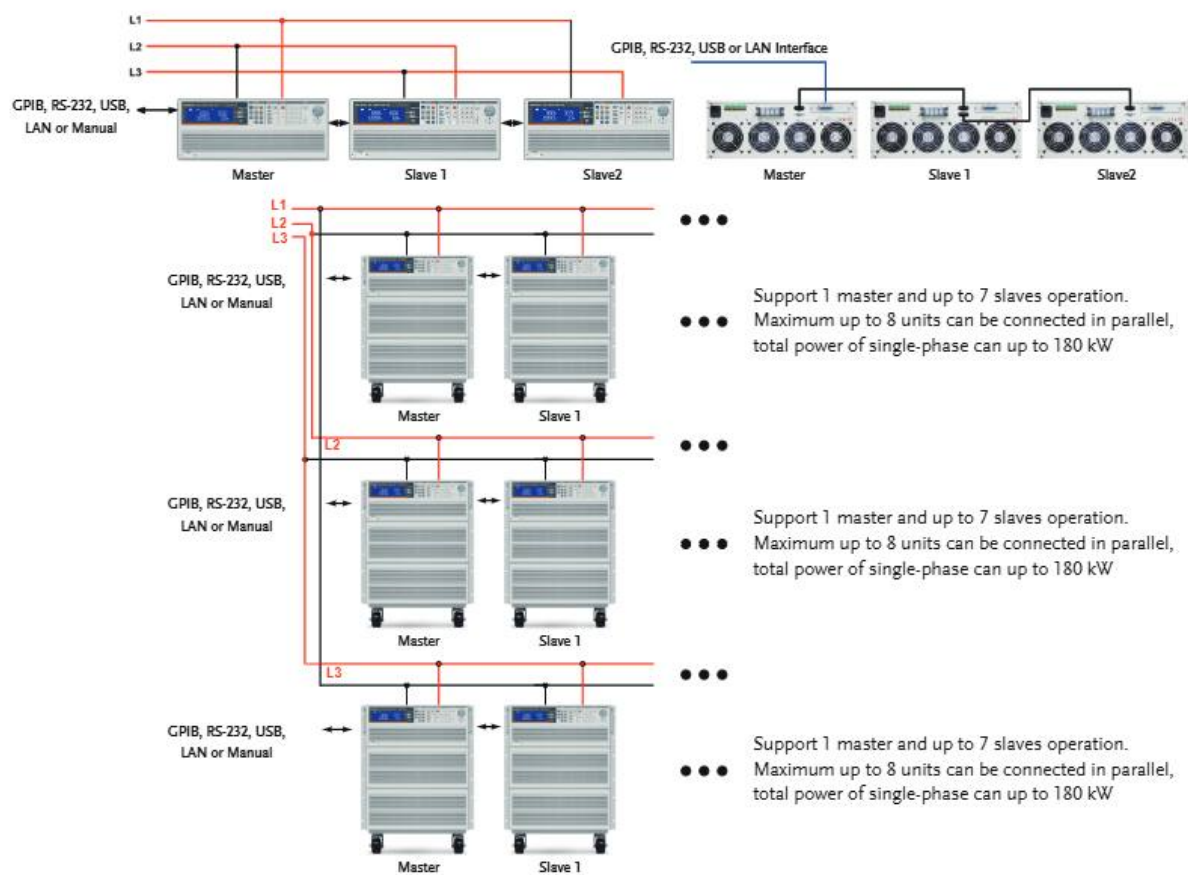
### PARALLEL AND THREE-PHASE CONTROL

The AEL-5000 Series AC & DC load provides multiple units in parallel, three-phase applications that allows users to test applications with greater power or three-phase AC power, this is more flexibility to use the AEL-5000 Series AC & DC Electronic Load for control. In parallel / three-phase operation, the user operates the unit as the operation of a single machine, as long as the Master can be operated, Slave1 and Slave2 will automatically sink the load and measurement. Parallel and three-phase connection as shown below.

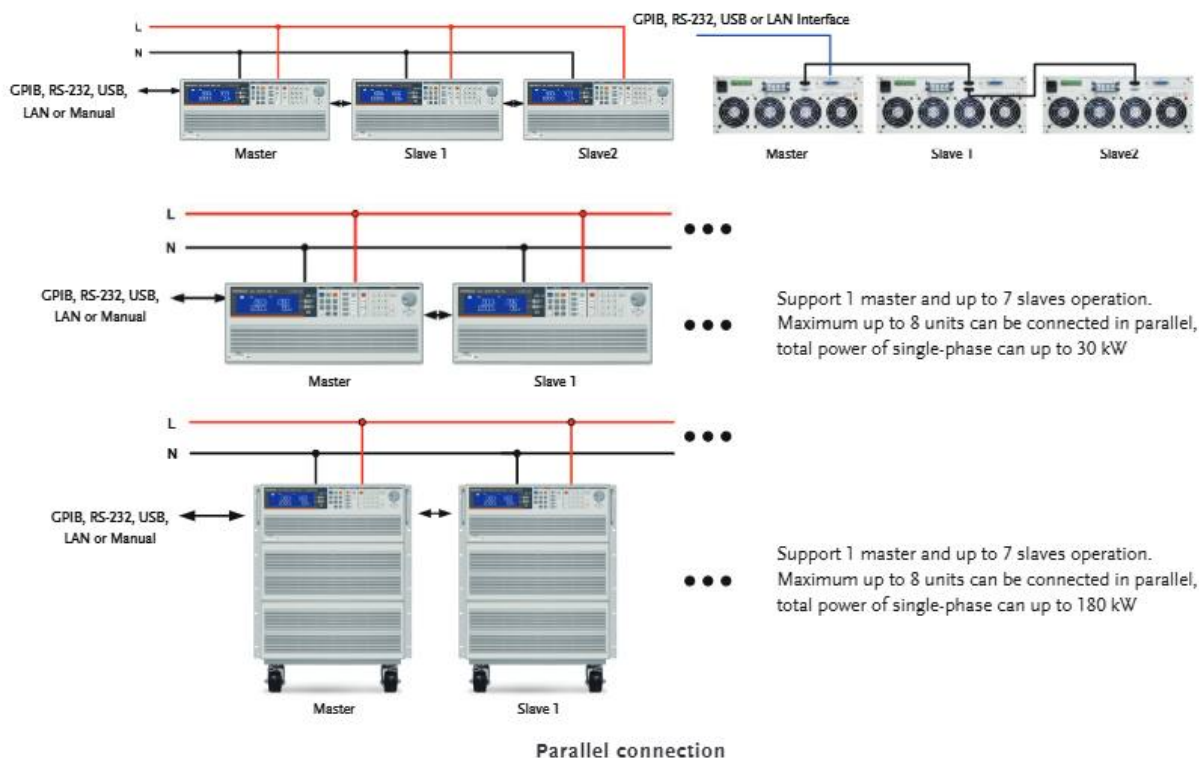


Maximum power of single-phase can up to 180kW, 3-phase total power up to 540kW 3-phase or Y Connection

## AC & DC Electronic Load



Maximum power of single-phase can up to 180kW, 3-phase total power up to 540kW 3-phase or Y Connection parallel connection



Parallel connection

# AC & DC Electronic Load

## PANEL INSTRUCTIONS



|   |                                                                                                                                                                                                                                                                                                                                                                              |   |                                                                                                                                                                               |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | LCD Multi-function display<br>Four meters can display the voltage value at the same time the Voltage(Vrms, Vpeak, Vmax., Vmin) · Current (Irms, Ipeak, Imax., Imin.) · Watt, Voltampere(VA) · Frequency · Crest Factor · Power Factor · Total Harmonic Distortion of Voltag(VTHD) · Voltage Harmonic(VH) · Total Harmonic Distortion of Current(ITHD) · Current Harmonic(IH) | 3 | Operate function keys<br>Mode · Preset ON / OFF · Load ON / OFF · Sense ON / OFF · Level A / B · Config · Limit · Recall · Store · SEQ · Local · System operate function keys |
|   |                                                                                                                                                                                                                                                                                                                                                                              | 4 | Waveform library keys<br>Can be quickly set CF $\sqrt{2}$ / 2 / 2.5 / 3 / 3.5+/- PF0.6 / 0.7 / 0.8 / 0.9 / 1.0 FREQ Auto / 50Hz / 60Hz / 400Hz                                |
|   |                                                                                                                                                                                                                                                                                                                                                                              | 5 | Test function keys<br>Can select Short / OPP / OCP / Non-L / NL-CR / Fuse / Batt (Battery Discharge) / Trans (UPS transfer time) test functions.                              |
| 2 | Meter switch button<br>V / A / W keys can set the display Rms / Peak / Max / Min, Meter key can select PF / CF / FREQ · switchable display WATT / VA / VAR keys · THD key choose to display THD                                                                                                                                                                              | 6 | Numeric keypad                                                                                                                                                                |
|   |                                                                                                                                                                                                                                                                                                                                                                              | 7 | Knob setting                                                                                                                                                                  |
|   |                                                                                                                                                                                                                                                                                                                                                                              | 8 | Switch                                                                                                                                                                        |
|   |                                                                                                                                                                                                                                                                                                                                                                              | 9 | Cursor and button setting                                                                                                                                                     |



|    |                                                                |    |                                                                                                                                                                                 |
|----|----------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | AC power input connector                                       | 13 | Master-slave control connector<br>Master : Connect the top or bottom to the next unit<br>Slave : The top connects to the previous unit and the bottom connects to the next unit |
| 11 | Vmonitor - Imonitor - Analog input - SYNC input Input terminal |    |                                                                                                                                                                                 |
| 12 | Vload, Vsense Input terminal                                   | 14 | Communication interface (GPIBRS-232USBLAN)                                                                                                                                      |

## AC &amp; DC Electronic Load

| SPECIFICATIONS                                                                         |                                                                                                      |                          |                          |                          |                          |                          |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| MODEL                                                                                  | AEL-5002-350-18.75                                                                                   | AEL-5003-350-28          | AEL-5004-350-37.5        | AEL-5002-425-18.75       | AEL-5003-425-28          | AEL-5004-425-37.5        |
| Power (W)                                                                              | 1875 W                                                                                               | 2800W                    | 3750 W                   | 1875 W                   | 2800W                    | 3750 W                   |
| Current(Amps)                                                                          | 18.75 Arms / 56.25Apeak                                                                              | 28 Arms / 84Apeak        | 37.5 Arms / 112.5Apeak   | 18.75 Arms / 56.25Apeak  | 28 Arms / 84Apeak        | 37.5 Arms / 112.5Apeak   |
| Voltage(Volt)                                                                          | 50-350Vrms / 500Vdc                                                                                  |                          |                          |                          |                          |                          |
| FREQUENCY Range                                                                        | DC, 40-440Hz(CC,CP Mode), DC-440Hz(LIN,CR,CV Mode)                                                   |                          |                          |                          |                          |                          |
| PROTECTIONS                                                                            |                                                                                                      |                          |                          |                          |                          |                          |
| Over Power Protection                                                                  | ≧ 1968.75Wrms or Programmable                                                                        |                          |                          |                          |                          |                          |
| Over Current Protection                                                                | ≧ 19.687 Arms or Programmable                                                                        |                          |                          |                          |                          |                          |
| Over Voltage Protection                                                                | ≧ 367.5 Vrms / 525Vdc                                                                                |                          |                          |                          |                          |                          |
| Over Temp. Protection                                                                  | Yes                                                                                                  |                          |                          |                          |                          |                          |
| OPERATION MODE                                                                         |                                                                                                      |                          |                          |                          |                          |                          |
| Constant Current Mode for Sine-Wave                                                    | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Range                                                                                  | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| Resolution                                                                             | 0.3125mA/16bits                                                                                      | 0.5mA/16bits             | 0.625mA/16bits           | 0.3125mA/16bits          | 0.5mA/16bits             | 0.625mA/16bits           |
| Accuracy                                                                               | ± 0.1% of setting ± 0.2% of range                                                                    |                          |                          |                          |                          |                          |
| Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Range                                                                                  | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| Resolution                                                                             | 0.3125mA/16bits                                                                                      | 0.5mA/16bits             | 0.625mA/16bits           | 0.3125mA/16bits          | 0.5mA/16bits             | 0.625mA/16bits           |
| Accuracy                                                                               | ± 0.1% of setting ± 0.2% of range                                                                    |                          |                          |                          |                          |                          |
| Constant Resistance Mode                                                               | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Range                                                                                  | 3.2 ohm ~ 64k ohm                                                                                    | 2.0 ohm ~ 40k ohm        | 1.6 ohm ~ 32k ohm        | 3.2 ohm ~ 64k ohm        | 2.0 ohm ~ 40k ohm        | 1.6 ohm ~ 32k ohm        |
| Resolution <sup>1</sup>                                                                | 0.002083mS/16bits                                                                                    | 0.003125mS/16bits        | 0.004167mS/16bits        | 0.002083mS/16bits        | 0.003125mS/16bits        | 0.004167mS/16bits        |
| Accuracy                                                                               | ± 0.2% of setting ± 0.3% of range                                                                    |                          |                          |                          |                          |                          |
| Constant Voltage Mode                                                                  | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Range                                                                                  | 50-350Vrms / 500Vdc                                                                                  |                          |                          |                          |                          |                          |
| Resolution                                                                             | 0.01V                                                                                                |                          |                          |                          |                          |                          |
| Accuracy                                                                               | ± 0.1% of setting ± 0.1% of range                                                                    |                          |                          |                          |                          |                          |
| Constant Power Mode                                                                    | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Range                                                                                  | 1875W                                                                                                | 2800W                    | 3750W                    | 1875W                    | 2800W                    | 3750W                    |
| Resolution                                                                             | 0.1W                                                                                                 | 0.1W                     | 0.1W                     | 0.1W                     | 0.1W                     | 0.1W                     |
| Accuracy <sup>1</sup>                                                                  | ± 0.5% of (setting + range) ± 0.5% of (setting - range)                                              |                          |                          |                          |                          |                          |
| CREST FACTOR (CC & CP MODE ONLY)                                                       |                                                                                                      |                          |                          |                          |                          |                          |
| Range                                                                                  | 0.5                                                                                                  |                          |                          |                          |                          |                          |
| Resolution                                                                             | 0.1                                                                                                  |                          |                          |                          |                          |                          |
| Accuracy                                                                               | ± 0.5% / 10ms ± 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                                                                          | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| PF Range                                                                               | 0-1                                                                                                  |                          |                          |                          |                          |                          |
| Measuring Efficiency for PV Systems, Power Conditions for THD 99%                      | Resistive + Non-Linear Mode                                                                          |                          |                          |                          |                          |                          |
| Operating Frequency                                                                    | Auto, 40-440Hz                                                                                       |                          |                          |                          |                          |                          |
| Current Range                                                                          | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| Reactive Range                                                                         | 3.2 ohm ~ 64k ohm                                                                                    | 2.0 ohm ~ 40k ohm        | 1.6 ohm ~ 32k ohm        | 3.2 ohm ~ 64k ohm        | 2.0 ohm ~ 40k ohm        | 1.6 ohm ~ 32k ohm        |
| UPS Back-Up Function(CC,LIN,CR,CP)                                                     |                                                                                                      |                          |                          |                          |                          |                          |
| UVP (VTH)                                                                              | 50-350Vrms / 500Vdc                                                                                  |                          |                          |                          |                          |                          |
| UPS Back-Up Time                                                                       | 1-99999 Sec. (±27H)                                                                                  |                          |                          |                          |                          |                          |
| Battery Discharge Function(CC,LIN,CR,CP)                                               |                                                                                                      |                          |                          |                          |                          |                          |
| UVP (VTH)                                                                              | 50-350Vrms / 500Vdc                                                                                  |                          |                          |                          |                          |                          |
| Battery Discharge Time                                                                 | 1-99999 Sec. (±27H)                                                                                  |                          |                          |                          |                          |                          |
| UPS Transfer Time                                                                      |                                                                                                      |                          |                          |                          |                          |                          |
| Current Range                                                                          | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| UVP (VTH)                                                                              | 25V                                                                                                  |                          |                          |                          |                          |                          |
| Time Range                                                                             | 0-100ms                                                                                              |                          |                          |                          |                          |                          |
| Fuse Test Mode                                                                         |                                                                                                      |                          |                          |                          |                          |                          |
| Max. Current                                                                           | 18.75Arms                                                                                            | 28.0Arms                 | 37.5Arms                 | 18.75Arms                | 28.0Arms                 | 37.5Arms                 |
| Trip & Non-Trip Time                                                                   | 0.01~0.1 Sec.                                                                                        | 0.01~0.1 Sec.            | 0.01~0.1 Sec.            | 0.01~0.1 Sec.            | 0.01~0.1 Sec.            | 0.01~0.1 Sec.            |
| OFF Time                                                                               | 0.1~0.999 Sec.                                                                                       | 0.1~0.999 Sec.           | 0.1~0.999 Sec.           | 0.1~0.999 Sec.           | 0.1~0.999 Sec.           | 0.1~0.999 Sec.           |
| Repeat Cycle                                                                           | 0-99999                                                                                              | 0-99999                  | 0-99999                  | 0-99999                  | 0-99999                  | 0-99999                  |
| Short/CPP/OPP Test Function                                                            |                                                                                                      |                          |                          |                          |                          |                          |
| Short Time                                                                             | 0.1~10Sec. or Cont.                                                                                  | 0.1~10Sec. or Cont.      | 0.1~10Sec. or Cont.      | 0.1~10Sec. or Cont.      | 0.1~10Sec. or Cont.      | 0.1~10Sec. or Cont.      |
| OPP/OPP Stop Time                                                                      | 100ms, up to 10 Steps                                                                                | 100ms, up to 10 Steps    | 100ms, up to 10 Steps    | 100ms, up to 10 Steps    | 100ms, up to 10 Steps    | 100ms, up to 10 Steps    |
| OPP Istop                                                                              | 18.75Arms                                                                                            | 28.0Arms                 | 37.5Arms                 | 18.75Arms                | 28.0Arms                 | 37.5Arms                 |
| OPP Pstop                                                                              | 1875W                                                                                                | 2800W                    | 3750W                    | 1875W                    | 2800W                    | 3750W                    |
| Programmable Inrush Current Simulation: Inrush - Inrush / Trip                         |                                                                                                      |                          |                          |                          |                          |                          |
| Inrush Start Current                                                                   | 0-37.5A                                                                                              | 0-56A                    | 0-75A                    | 0-37.5A                  | 0-56A                    | 0-75A                    |
| Inrush Stop Time                                                                       | 0.1ms~100ms                                                                                          | 0.1ms~100ms              | 0.1ms~100ms              | 0.1ms~100ms              | 0.1ms~100ms              | 0.1ms~100ms              |
| Inrush Stop Current                                                                    | 0-37.5A                                                                                              | 0-56A                    | 0-75A                    | 0-37.5A                  | 0-56A                    | 0-75A                    |
| Programmable Surge Current Simulation: S1/T1 - S2/T2 - S3/T3                           |                                                                                                      |                          |                          |                          |                          |                          |
| S1 and S2 Current                                                                      | 0-37.5A                                                                                              | 0-56A                    | 0-75A                    | 0-37.5A                  | 0-56A                    | 0-75A                    |
| T1 and T2 Time                                                                         | 0.01~0.999 Sec.                                                                                      | 0.01~0.999 Sec.          | 0.01~0.999 Sec.          | 0.01~0.999 Sec.          | 0.01~0.999 Sec.          | 0.01~0.999 Sec.          |
| S3 Current                                                                             | 0-18.75A                                                                                             | 0-28A                    | 0-37.5A                  | 0-18.75A                 | 0-28A                    | 0-37.5A                  |
| T3 Time                                                                                | 0.01~0.999 Sec. or Cont.                                                                             | 0.01~0.999 Sec. or Cont. | 0.01~0.999 Sec. or Cont. | 0.01~0.999 Sec. or Cont. | 0.01~0.999 Sec. or Cont. | 0.01~0.999 Sec. or Cont. |
| MEASUREMENTS                                                                           |                                                                                                      |                          |                          |                          |                          |                          |
| VOLTAGE READBACK V METER                                                               |                                                                                                      |                          |                          |                          |                          |                          |
| Range                                                                                  | 500V                                                                                                 |                          |                          |                          |                          |                          |
| Resolution                                                                             | 0.01V                                                                                                |                          |                          |                          |                          |                          |
| Accuracy                                                                               | ± 0.05% of (reading + range)                                                                         |                          |                          |                          |                          |                          |
| Parameter                                                                              | Vrms, V Max/Min, V-1/2pk                                                                             |                          |                          |                          |                          |                          |
| CURRENT READBACK A METER                                                               |                                                                                                      |                          |                          |                          |                          |                          |
| Range                                                                                  | 9.375Arms/18.75Arms                                                                                  | 14Arms/28Arms            | 18.75Arms/37.5Arms       | 9.375Arms/18.75Arms      | 14Arms/28Arms            | 18.75Arms/37.5Arms       |
| Resolution                                                                             | 0.2mA/0.4mA                                                                                          | 0.3mA/0.6mA              | 0.4mA/0.8mA              | 0.2mA/0.4mA              | 0.3mA/0.6mA              | 0.4mA/0.8mA              |
| Accuracy                                                                               | ± 0.05% of (reading + range) ± 0.1% of (reading - range)                                             |                          |                          |                          |                          |                          |
| Parameter                                                                              | Irms, I Max/Min, I-1/2pk                                                                             |                          |                          |                          |                          |                          |
| WATT READBACK W METER                                                                  |                                                                                                      |                          |                          |                          |                          |                          |
| Range                                                                                  | 1875W                                                                                                | 2800W                    | 3750W                    | 1875W                    | 2800W                    | 3750W                    |
| Resolution                                                                             | 0.0125W                                                                                              | 0.05W                    | 0.0625W                  | 0.0125W                  | 0.05W                    | 0.0625W                  |
| Accuracy <sup>1</sup>                                                                  | ± 0.5% of (reading + range) ± 0.5% of (reading - range)                                              |                          |                          |                          |                          |                          |
| Parameter                                                                              | VrmsArms Correspond To Vrms and Arms                                                                 |                          |                          |                          |                          |                          |
| POWER FACTOR METER                                                                     |                                                                                                      |                          |                          |                          |                          |                          |
| Range                                                                                  | 0.5                                                                                                  |                          |                          |                          |                          |                          |
| Accuracy                                                                               | ± 0.001~0.001 (PF) (PF)                                                                              |                          |                          |                          |                          |                          |
| Frequency Meter(Hz)                                                                    | DC, 40-440Hz                                                                                         |                          |                          |                          |                          |                          |
| Range                                                                                  | 0.1%                                                                                                 |                          |                          |                          |                          |                          |
| Other Parameter METER                                                                  |                                                                                                      |                          |                          |                          |                          |                          |
| VA, VAR, CF, I, Ipeak, Ilim, Imin, Vmax, Vmin, IHD, VHD, ITHD, VTHD                    | Yes                                                                                                  |                          |                          |                          |                          |                          |
| 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                                                       | Positive 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 units                                                                 |                          |                          |                          |                          |                          |
| External Programming Input (OPTION)                                                    | F.S. / 10Vdc, Resolution 0.1V                                                                        |                          |                          |                          |                          |                          |
| External SYNC Input                                                                    | Yes                                                                                                  |                          |                          |                          |                          |                          |
| Vsensor (Isolated)                                                                     | ±500V / ±10V                                                                                         |                          |                          |                          |                          |                          |
| Imonitor (Isolated)                                                                    | ±56.25Apk / ±10Vpk                                                                                   |                          |                          |                          |                          |                          |
| Interface (OPTION)                                                                     | GPIB : RS-232 ; LAN : USB                                                                            |                          |                          |                          |                          |                          |
| MAX. Power Consumption                                                                 | 150VA                                                                                                |                          |                          |                          |                          |                          |
| Operation Temperature (°C)                                                             | 0 ~ 40 °C                                                                                            |                          |                          |                          |                          |                          |
| Current of Input Impedance(mA)@50/60Hz                                                 | ~V/0.45 ; ~V/0.2                                                                                     |                          |                          |                          |                          |                          |
| Dimensions (H x W x D)                                                                 | 177 x 440 x 252.6 mm                                                                                 | 177 x 440 x 252.6 mm     | 177 x 440 x 252.6 mm     | 177 x 440 x 252.6 mm     | 177 x 440 x 252.6 mm     | 177 x 440 x 252.6 mm     |
| Weight                                                                                 | 21.5kg                                                                                               | 27.5kg                   | 31.5kg                   | 21.5kg                   | 27.5kg                   | 31.5kg                   |

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

All specifications apply for 50/60Hz  
 All specifications subject to change without notice

## AC &amp; DC Electronic Load

| SPECIFICATIONS                                                                         |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| MODEL                                                                                  | AEL-5006-350-56                                                                                                                      | AEL-5008-350-75                      | AEL-5012-350-112.5                   | AEL-5015-350-112.5                      | AEL-5019-350-112.5                      | AEL-5023-350-112.5                      |                                         |
| Power (W)                                                                              | 5600 W                                                                                                                               | 7500 W                               | 11250 W                              | 15000 W                                 | 18750 W                                 | 22500 W                                 |                                         |
| Current(Amps)                                                                          | 56 Arms / 168Apk                                                                                                                     | 75 Arms / 225Apk                     | 112.5 Arms / 337.5Apk                | 112.5 Arms / 337.5Apk                   | 112.5 Arms / 337.5Apk                   | 112.5 Arms / 337.5Apk                   |                                         |
| Voltage(Volt)                                                                          | 50-350Vrms / 500Vdc                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| FREQUENCY Range                                                                        | DC, 40-440Hz(CC,CP Mode), DC-440Hz(LIN,CR,CV Mode)                                                                                   |                                      |                                      |                                         |                                         |                                         |                                         |
| PROTECTIONS                                                                            |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Over Power Protection                                                                  | ~ 5800Wrms or Programmable                                                                                                           | ~ 7875Wrms or Programmable           | ~ 11812.5Wrms or Programmable        | ~ 11812.5Wrms or Programmable           | ~ 11867.5Wrms or Programmable           | ~ 12625Wrms or Programmable             |                                         |
| Over Current Protection                                                                | ~ 58.8 Arms, 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 Voltage 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, ± 0.5% of setting, range, ± 0.5% of range, ± 0.5% of range                              |                                      |                                      |                                         |                                         |                                         |                                         |
| 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, ± 0.5% of setting, range, ± 0.5% of range, ± 0.5% of range                              |                                      |                                      |                                         |                                         |                                         |                                         |
| 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 <sup>1</sup>                                                                | 0.01666mS/16bits                                                                                                                     | 0.02083mS/16bits                     | 0.03124mS/16bits                     | 0.03124mS/16bits                        | 0.03124mS/16bits                        | 0.03124mS/16bits                        |                                         |
| Accuracy                                                                               | ± 0.2% of setting, range, ± 0.5% of setting, range, ± 0.5% of setting, range, ± 0.5% of setting, range                               |                                      |                                      |                                         |                                         |                                         |                                         |
| Constant Voltage Mode                                                                  |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | 50-350Vrms / 500Vdc                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| Resolution                                                                             | 0.1V                                                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Accuracy                                                                               | ± 0.2% of ( setting + range ) ± 0.5% of ( setting + range ) ± 0.5% of ( setting + range )                                            |                                      |                                      |                                         |                                         |                                         |                                         |
| Constant Power Mode                                                                    |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | 5600W                                                                                                                                | 7500W                                | 11250W                               | 15000 W                                 | 18750W                                  | 22500W                                  |                                         |
| Resolution                                                                             | 0.1W                                                                                                                                 | 0.1W                                 | 1W                                   | 1W                                      | 1W                                      | 1W                                      |                                         |
| Accuracy <sup>14</sup>                                                                 | ± 0.5% of ( setting + range ) ± 0.5% of ( setting + range ) ± 0.5% of ( setting + range )                                            |                                      |                                      |                                         |                                         |                                         |                                         |
| GUEST FACTOR (CC & CP MODE ONLY)                                                       |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | ~2~5                                                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Resolution                                                                             | 0.1                                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| Accuracy                                                                               | (0.5% / line) + 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                                                              |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Operating Frequency                                                                    | Non-Linear Mode<br>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 50%                    |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Operating Frequency                                                                    | Resistive + Non-Linear Mode<br>Auto: 40-440Hz                                                                                        |                                      |                                      |                                         |                                         |                                         |                                         |
| Current Range                                                                          | 0-56A                                                                                                                                | 0-75A                                | 0-112.5A                             | 0-112.5A                                | 0-112.5A                                | 0-112.5A                                |                                         |
| Reactive 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                 |                                         |
| UPS Back-Up Function(CC,LIN,CR,CV)                                                     |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| UPS V (VTH)                                                                            | 50-350Vrms / 500Vdc<br>1-99999 Sec. (-27H)                                                                                           |                                      |                                      |                                         |                                         |                                         |                                         |
| UPS Back-Up Time                                                                       | 50-350Vrms / 500Vdc<br>1-99999 Sec. (-27H)                                                                                           |                                      |                                      |                                         |                                         |                                         |                                         |
| Battery Discharge Function(CC,LIN,CR,CV)                                               |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| UPS (VTH)                                                                              | 50-350Vrms / 500Vdc<br>1-99999 Sec. (-27H)                                                                                           |                                      |                                      |                                         |                                         |                                         |                                         |
| Battery Discharge Time                                                                 | 50-350Vrms / 500Vdc<br>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                                |                                         |
| UPS (VTH)                                                                              | 2.5V                                                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Time range                                                                             | 0.15ms-999.99ms                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Fuse Test Mode                                                                         |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Max. Current                                                                           | Turbo OFF(CC-3)<br>Turbo ON(CC-3)<br>Turbo ON(CC-2)<br>Turbo OFF(TIME-2)<br>Turbo ON(TIME-2)<br>Turbo ON(TIME-1)<br>Turbo ON(TIME-1) | 56Arms<br>112Arms (x2) <sup>14</sup> | 75Arms<br>150Arms (x2) <sup>14</sup> | 112.5Arms<br>225Arms (x2) <sup>14</sup> | 112.5Arms<br>225Arms (x2) <sup>14</sup> | 112.5Arms<br>225Arms (x2) <sup>14</sup> | 112.5Arms<br>225Arms (x2) <sup>14</sup> |
| Trip & Non-Trip Time                                                                   | 0.01-232.32 Sec.<br>0.01-0.10 Sec.<br>0.01-600.00 Sec.<br>0.1-999.9 Sec.<br>±0.001 Sec.<br>0-99999                                   |                                      |                                      |                                         |                                         |                                         |                                         |
| OFF Time                                                                               |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Meas. Accuracy                                                                         | 0.1-100ms or Cont.                                                                                                                   |                                      |                                      |                                         |                                         |                                         |                                         |
| Repeat Cycle                                                                           | 0.1-1 Sec.<br>100ms                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| Short/OPP/OCF Test Function                                                            |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Short Time                                                                             | Turbo OFF<br>Turbo ON<br>Turbo OFF                                                                                                   | 0.1-100ms or Cont.                   |                                      |                                         |                                         |                                         |                                         |
| OPP/OCF Step Time                                                                      | Turbo ON<br>Turbo OFF                                                                                                                | 100ms                                |                                      |                                         |                                         |                                         |                                         |
| OCF Istap                                                                              | Turbo OFF<br>Turbo ON<br>Turbo OFF                                                                                                   | 56Arms<br>112Arms<br>150Arms         | 75Arms<br>150Arms<br>225Arms         | 112.5Arms<br>225Arms<br>225Arms         | 112.5Arms<br>225Arms<br>225Arms         | 112.5Arms<br>225Arms<br>225Arms         | 112.5Arms<br>225Arms<br>225Arms         |
| OPP Pitop                                                                              | Turbo ON<br>Turbo OFF                                                                                                                | 5600W<br>11200W                      | 7500W<br>15000W                      | 11250W<br>22500W                        | 15000W<br>30000W                        | 18750W<br>37500W                        | 22500W<br>45000W                        |
| Programmable Inrush Current Simulation: Istart - Istap / Thyp                          |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Istart, Inrush Start Current                                                           | 0-112A                                                                                                                               | 0-150A                               | 0-225A                               | 0-225A                                  | 0-225A                                  | 0-225A                                  |                                         |
| Istap, Inrush Stop Time                                                                | 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                                                                         | 0-56A                                                                                                                                | 0-75A                                | 0-112.5A                             | 0-112.5A                                | 0-112.5A                                | 0-112.5A                                |                                         |
| S3 Current                                                                             | 0-56A                                                                                                                                | 0-75A                                | 0-112.5A                             | 0-112.5A                                | 0-112.5A                                | 0-112.5A                                |                                         |
| T3 Time                                                                                | 0.01-999.99ms 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 ) ± 0.5% of ( reading + range ) ± 0.5% of ( reading + range )                                            |                                      |                                      |                                         |                                         |                                         |                                         |
| Parameter                                                                              | Irms,I Max/Min, Ipk                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| WATT READBACK W METER                                                                  |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | 5600W                                                                                                                                | 7500W                                | 11250W                               | 15000W                                  | 18750W                                  | 22500W                                  |                                         |
| Resolution                                                                             | 0.1W                                                                                                                                 | 0.125W                               | 0.125W                               | 0.25W                                   | 0.3125W                                 | 0.375W                                  |                                         |
| Accuracy <sup>14</sup>                                                                 | ± 0.5% of ( reading + range ) ± 0.5% of ( reading + range ) ± 0.5% of ( reading + range )                                            |                                      |                                      |                                         |                                         |                                         |                                         |
| VX METER                                                                               |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Power Factor METER                                                                     | VrmsArms Correspond To Vrms and Arms                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | ~0.000-1.000                                                                                                                         |                                      |                                      |                                         |                                         |                                         |                                         |
| Accuracy                                                                               | ± 0.002 (0.001 PF) F                                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Frequency METER(Hz)                                                                    | DC, 40-440Hz                                                                                                                         |                                      |                                      |                                         |                                         |                                         |                                         |
| Range                                                                                  | 0.1Hz                                                                                                                                |                                      |                                      |                                         |                                         |                                         |                                         |
| Accuracy                                                                               | 0.1%                                                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| Other Parameter METER                                                                  |                                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| 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                                                       | Positive 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 up to 7 slave unit                                                                                                 |                                      |                                      |                                         |                                         |                                         |                                         |
| External Programming Input (OPTION)                                                    | F.S. / 10Vdc, Resolution 0.1V                                                                                                        |                                      |                                      |                                         |                                         |                                         |                                         |
| External SYNC Input                                                                    | Yes                                                                                                                                  |                                      |                                      |                                         |                                         |                                         |                                         |
| Vsense (isolated)                                                                      | ±500V ± 10Vpk                                                                                                                        |                                      |                                      |                                         |                                         |                                         |                                         |
| Inserter (isolated)                                                                    | ±188Apk ± 10Vpk                                                                                                                      |                                      |                                      |                                         |                                         |                                         |                                         |
| Interface (OPTION)                                                                     | GPIB / RS-232 / LAN / USB                                                                                                            |                                      |                                      |                                         |                                         |                                         |                                         |
| MAX. Power Consumption                                                                 | 270VA                                                                                                                                | 270VA                                | 390VA                                | 510VA                                   | 630VA                                   | 750VA                                   |                                         |
| Operation Temperature <sup>12</sup>                                                    | 0-40 °C                                                                                                                              |                                      |                                      |                                         |                                         |                                         |                                         |
| Current of input impedance(mA)@50/60Hz                                                 | ~V <sup>12</sup> 0.8 ; ~V <sup>12</sup> 6.6                                                                                          |                                      |                                      |                                         |                                         |                                         |                                         |
| @ 400Hz                                                                                | ~V <sup>12</sup> 1.2 ; ~V <sup>12</sup> 8.8                                                                                          |                                      |                                      |                                         |                                         |                                         |                                         |
| Dimension (H x W x D)                                                                  | 437.8 x 480 x 292 mm                                                                                                                 | 437.8 x 480 x 292 mm                 | 437.8 x 480 x 292 mm                 | 437.8 x 480 x 292 mm                    | 437.8 x 480 x 292 mm                    | 437.8 x 480 x 292 mm                    |                                         |
| Weight                                                                                 | 58 kg                                                                                                                                | 70 kg                                | 105kg                                | 140kg                                   | 160kg                                   | 180kg                                   |                                         |

<sup>1</sup> ms (millisec) is the unit of conductance(G), one siemens equal to 1/Ω

<sup>2</sup> Operating temperature range is 0-40°C, all specification apply for 25°C ± 5°C, Except as noted

<sup>3</sup> Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OPP/OPP test function

<sup>4</sup> The specification apply for current less than 20Arms

± All specifications apply for 50/60Hz

± All specifications subject to change without notice

## AC &amp; DC Electronic Load

| SPECIFICATIONS                                                                         |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| MODEL                                                                                  | AEL-5006-425-56                                                                                                       | AEL-5008-425-75                             | AEL-5012-425-112.5                    | AEL-5015-425-112.5                       | AEL-5019-425-112.5                       | AEL-5023-425-112.5                       | AEL-5023-425-112.5                       |
| Power (W)                                                                              | 5600 W                                                                                                                | 7500 W                                      | 11250W                                | 15000 W                                  | 18750W                                   | 22500W                                   | 22500W                                   |
| Current(Amps)                                                                          | 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                  | 112.5 Arms / 337.5Apeak                  |
| Voltage(Volt)                                                                          | 50~425Vrms / 600Vdc                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| FREQUENCY Range                                                                        | DC, 40~440Hz(CC,CP Mode), DC~440Hz(LIN,CH,CV Mode)                                                                    |                                             |                                       |                                          |                                          |                                          |                                          |
| PROTECTIONS                                                                            |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Over Power Protection                                                                  | ≤ 5826Wrms or Programmable                                                                                            | ≤ 7875Wrms or Programmable                  | ≤ 11812.5Wrms or Programmable         | ≤ 15750Wrms or Programmable              | ≤ 19687.5Wrms or Programmable            | ≤ 23625Wrms or Programmable              | ≤ 23625Wrms or Programmable              |
| Over Current Protection                                                                | ≤ 58.8 Arms, 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           | ≤ 118.125 Arms or Programmable           |
| Over Voltage Protection                                                                | ≤ 440Vrms/630Vdc                                                                                                      |                                             |                                       |                                          |                                          |                                          |                                          |
| 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                                 | 0~112.5A                                 |
| Resolution                                                                             | 1mA/16bits                                                                                                            | 1.25mA/16bits                               | 1.875mA/16bits                        | 1.875mA/16bits                           | 1.875mA/16bits                           | 1.875mA/16bits                           | 1.875mA/16bits                           |
| Accuracy                                                                               | ± 0.1% of setting, 0.2% of range, ± 50/60Hz, ± 0.5% of setting, range, ± 2C and 600Hz                                 |                                             |                                       |                                          |                                          |                                          |                                          |
| 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                                 | 0~112.5A                                 |
| Resolution                                                                             | 1mA/16bits                                                                                                            | 1.25mA/16bits                               | 1.875mA/16bits                        | 1.875mA/16bits                           | 1.875mA/16bits                           | 1.875mA/16bits                           | 1.875mA/16bits                           |
| Accuracy                                                                               | ± 0.1% of setting, 0.2% of range, ± 50/60Hz, ± 0.5% of setting, range, ± 2C and 600Hz                                 |                                             |                                       |                                          |                                          |                                          |                                          |
| Constant Resistance Mode                                                               |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | 1 ohm ~ 20k ohm                                                                                                       | 0.8 ohm ~ 16k ohm                           | 0.533 ohm ~ 10.66k ohm                | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   |
| Resolution/1                                                                           | 0.01666mS/16bits                                                                                                      | 0.02083mS/16bits                            | 0.03124mS/16bits                      | 0.03124mS/16bits                         | 0.03124mS/16bits                         | 0.03124mS/16bits                         | 0.03124mS/16bits                         |
| Accuracy                                                                               | ± 0.2% of setting, range, ± 50/60Hz, ± 0.5% of setting, range, ± 2C and 600Hz                                         |                                             |                                       |                                          |                                          |                                          |                                          |
| Constant Voltage Mode                                                                  |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | 50~425Vrms / 600Vdc                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Resolution                                                                             | 0.1V                                                                                                                  |                                             |                                       |                                          |                                          |                                          |                                          |
| Accuracy                                                                               | ± 0.2% of ( setting + range ) ± 50/60Hz                                                                               |                                             |                                       |                                          |                                          |                                          |                                          |
| Constant Power Mode                                                                    |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | 5600W                                                                                                                 | 7500W                                       | 11250W                                | 15000 W                                  | 18750W                                   | 22500W                                   | 22500W                                   |
| Resolution                                                                             | 0.1W                                                                                                                  | 0.1W                                        | 1W                                    | 1W                                       | 1W                                       | 1W                                       | 1W                                       |
| Accuracy                                                                               | ± 0.5% of ( setting + range ) ± 50/60Hz, ± 0.5% of ( setting + range )                                                |                                             |                                       |                                          |                                          |                                          |                                          |
| CREST FACTOR (CC & CP MODE ONLY)                                                       |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | √2~5                                                                                                                  |                                             |                                       |                                          |                                          |                                          |                                          |
| Resolution                                                                             | 0.1                                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Accuracy                                                                               | (0.1% / rms) ± 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 Efficiency Measurement                                                             |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Operating Frequency                                                                    | Non-Linear Mode                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Current Range                                                                          | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 |
| PF Range                                                                               | 0~1                                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Measuring Efficiency For PV Systems, Power Conditions for THD 80%                      |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Operating Frequency                                                                    | Resistive + Non-Linear Mode                                                                                           |                                             |                                       |                                          |                                          |                                          |                                          |
| Current Range                                                                          | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 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 ~ 10.66k ohm                | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   | 0.533 ohm ~ 10.66k ohm                   |
| UPS Back-Up Function(CC/LIN,CH/CP)                                                     |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| UVP (VTH)                                                                              | 50~425Vrms / 600Vdc                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| UVP Back-Up Time                                                                       | 1~99999 Sec. (±2%)                                                                                                    |                                             |                                       |                                          |                                          |                                          |                                          |
| Battery Discharge Function(CC/LIN,CH/CP)                                               |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| UVP (VTH)                                                                              | 50~425Vrms / 600Vdc                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Battery Discharge Time                                                                 | 1~99999 Sec. (±2%)                                                                                                    |                                             |                                       |                                          |                                          |                                          |                                          |
| UPS Transfer Time                                                                      |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Current Range                                                                          | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 |
| UVP (VTH)                                                                              | 2.5V                                                                                                                  |                                             |                                       |                                          |                                          |                                          |                                          |
| Time range                                                                             | 0.15ms~999.99ms                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Fuse Test Mode                                                                         |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Max. Current                                                                           | Turbo OFF (C1~3)<br>Turbo ON (C2)<br>Turbo ON (C4)~3<br>Turbo OFF (Time1~3)<br>Turbo ON (Time1~2)<br>Turbo ON (Time3) | 56Arms<br>112Arms (±2) % <sup>1</sup>       | 75Arms<br>150Arms (±2) % <sup>1</sup> | 112.5Arms<br>225Arms (±2) % <sup>1</sup> | 112.5Arms<br>225Arms (±2) % <sup>1</sup> | 112.5Arms<br>225Arms (±2) % <sup>1</sup> | 112.5Arms<br>225Arms (±2) % <sup>1</sup> |
| Trip & Non-Trip Time                                                                   | 0.01~233.33 Sec.<br>0.01~0.50 Sec.<br>0.01~600.00 Sec.<br>0.1~999.9 Sec.<br>±0.001 Sec.<br>0~99999                    |                                             |                                       |                                          |                                          |                                          |                                          |
| OFF Time                                                                               | 0.1~999.9 Sec.                                                                                                        |                                             |                                       |                                          |                                          |                                          |                                          |
| Mass. Accuracy                                                                         | 0.1~999.9 Sec.                                                                                                        |                                             |                                       |                                          |                                          |                                          |                                          |
| Repeat Cycle                                                                           | 0~99999                                                                                                               |                                             |                                       |                                          |                                          |                                          |                                          |
| Short/OPP/OCF Test Function                                                            |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Short Time                                                                             | Turbo OFF<br>Turbo ON<br>Turbo OFF                                                                                    | 0.1~10Sec. or Cont.<br>0.1~15Sec.<br>10Arms |                                       |                                          |                                          |                                          |                                          |
| OPP/OCF Stop Time                                                                      | Turbo ON<br>Turbo OFF                                                                                                 | 100ms. up to 10 Steps                       |                                       |                                          |                                          |                                          |                                          |
| OCF Istap                                                                              | Turbo OFF<br>Turbo ON                                                                                                 | 56Arms<br>112Arms                           | 75Arms<br>150Arms                     | 112.5Arms<br>225Arms                     | 112.5Arms<br>225Arms                     | 112.5Arms<br>225Arms                     | 112.5Arms<br>225Arms                     |
| OCF Pstop                                                                              | Turbo OFF<br>Turbo ON                                                                                                 | 5600W<br>11200W                             | 7500W<br>15000W                       | 11250W<br>22500W                         | 15000W<br>30000W                         | 18750W<br>37500W                         | 22500W<br>45000W                         |
| Programmable Inrush Current Simulation: Instart - Istap / Tstop                        |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Instart, Inrush Start Current                                                          | 0~112A                                                                                                                | 0~150A                                      | 0~225A                                | 0~225A                                   | 0~225A                                   | 0~225A                                   | 0~225A                                   |
| Inrush Step Time                                                                       | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 |
| Instop, Inrush Stop Current                                                            | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 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                                   | 0~225A                                   |
| T1 and T2 Time                                                                         | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 |
| S3 Current                                                                             | 0~56A                                                                                                                 | 0~75A                                       | 0~112.5A                              | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 | 0~112.5A                                 |
| T3 Time                                                                                | 0.01~9.999Sec. or Cont.                                                                                               |                                             |                                       |                                          |                                          |                                          |                                          |
| MEASUREMENTS                                                                           |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| VOLTAGE READBACK V METER                                                               |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | 800V                                                                                                                  |                                             |                                       |                                          |                                          |                                          |                                          |
| 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                      | 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                              | 1.2mA/2.4mA                              |
| Accuracy                                                                               | ± 0.1% of ( reading + range ) ± 50/60Hz                                                                               |                                             |                                       |                                          |                                          |                                          |                                          |
| Parameter                                                                              | Vrms,I Max/Min,±Ipk                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| WATT READBACK W METER                                                                  |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | 5600W                                                                                                                 | 7500W                                       | 11250W                                | 15000W                                   | 18750W                                   | 22500W                                   | 22500W                                   |
| Resolution                                                                             | 0.1W                                                                                                                  | 0.125W                                      | 0.1875W                               | 0.25W                                    | 0.3125W                                  | 0.375W                                   | 0.375W                                   |
| Accuracy                                                                               | ± 0.5% of ( reading + range ) ± 50/60Hz, ± 0.5% of ( reading + range )                                                |                                             |                                       |                                          |                                          |                                          |                                          |
| VA METER                                                                               |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| VrmsArms Compared To Vrms and Arms                                                     |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Power Factor METER                                                                     |                                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Range                                                                                  | +/- 0.000~1.000                                                                                                       |                                             |                                       |                                          |                                          |                                          |                                          |
| Accuracy                                                                               | ± 0.002 ± 0.001 (PF) ± 1                                                                                              |                                             |                                       |                                          |                                          |                                          |                                          |
| 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 Instart / UPS start up                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Load ON / OFF Angle                                                                    | 0 ~ 319 degree can be programmed for the angle of load ON and load OFF loading                                        |                                             |                                       |                                          |                                          |                                          |                                          |
| Half Cycle and SCR/TRIAC Loading                                                       | Positive 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 up to 3 slave unit                                                                                  |                                             |                                       |                                          |                                          |                                          |                                          |
| External Programming Input (OPTION)                                                    | F.S. / 10Vdc, Resolution 0.1V                                                                                         |                                             |                                       |                                          |                                          |                                          |                                          |
| External SYNC Input                                                                    | Yes                                                                                                                   |                                             |                                       |                                          |                                          |                                          |                                          |
| Vmonitor (Isolated)                                                                    | ±600V / ±10V                                                                                                          |                                             |                                       |                                          |                                          |                                          |                                          |
| Imonitor (Isolated)                                                                    | ±168Apk / ±10Vpk                                                                                                      |                                             |                                       |                                          |                                          |                                          |                                          |
| Interface (OPTION)                                                                     | GPIB ; RS-232 ; LAN ; USB                                                                                             |                                             |                                       |                                          |                                          |                                          |                                          |
| MAX. Power Consumption                                                                 | 270VA                                                                                                                 | 270VA                                       | 390VA                                 | 510VA                                    | 630VA                                    | 750VA                                    | 750VA                                    |
| Operation Temperature °C                                                               | 0 ~ 40 °C                                                                                                             |                                             |                                       |                                          |                                          |                                          |                                          |
| Current of Input Impedance(mA)@50/60Hz                                                 | ~V <sup>0.9</sup> ; ~V <sup>0.6</sup>                                                                                 | ~V <sup>1.2</sup> ; ~V <sup>0.8</sup>       | ~V <sup>1.8</sup> ; ~V <sup>1.2</sup> | ~V <sup>2.4</sup> ; ~V <sup>1.6</sup>    | ~V <sup>3.0</sup> ; ~V <sup>2.2</sup>    | ~V <sup>3.6</sup> ; ~V <sup>2.6</sup>    | ~V <sup>3.6</sup> ; ~V <sup>2.6</sup>    |
| Dimension (H x W x D)                                                                  | 427.5 x 480 x 593 mm                                                                                                  | 427.5 x 480 x 593 mm                        | 427.5 x 480 x 593 mm                  | 427.5 x 480 x 593 mm                     | 427.5 x 480 x 593 mm                     | 427.5 x 480 x 593 mm                     | 427.5 x 480 x 593 mm                     |
| Weight                                                                                 | 58 kg                                                                                                                 | 70 kg                                       | 105kg                                 | 140kg                                    | 175kg                                    | 210kg                                    | 210kg                                    |

≈ 1 ms (millisiemens) is the unit of conductance(C), 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/OPP/OPP test function  
 ≈ 4 The specification apply for current less than 20Arms

≈ All specifications apply for 50/60Hz  
 ≈ All specifications subject to change without notice

## AC &amp; DC Electronic Load

| SPECIFICATIONS                                                                         |                                                                                                                                                                                           |                                                                                                                                       |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| MODEL                                                                                  | AEL-5003-480-18.75                                                                                                                                                                        | AEL-5004-480-28                                                                                                                       |
| Power (W)                                                                              | 2800W                                                                                                                                                                                     | 3750 W                                                                                                                                |
| Current(Amps)                                                                          | 18.75 Arms / 36.25Apeak                                                                                                                                                                   | 28 Arms / 84Apeak                                                                                                                     |
| Voltage(Volt)                                                                          | 50-480Vrms / 300Vdc<br>DC, 40-70Hz(CC, CP Mode) ; DC-70Hz(LN, CR, CV Mode)                                                                                                                |                                                                                                                                       |
| PROTECTIONS                                                                            |                                                                                                                                                                                           |                                                                                                                                       |
| Over Power Protection                                                                  | ~29450Wrms or Programmable                                                                                                                                                                | ~39175Wrms or Programmable                                                                                                            |
| Over Current Protection                                                                | ~19.687 Arms or Programmable                                                                                                                                                              | ~29.4 Arms or Programmable                                                                                                            |
| Over Voltage Protection                                                                | ~504Vrms / 735Vdc                                                                                                                                                                         |                                                                                                                                       |
| Over Temp. Protection                                                                  | Yes                                                                                                                                                                                       |                                                                                                                                       |
| OPERATION MODE                                                                         |                                                                                                                                                                                           |                                                                                                                                       |
| Constant Current Mode for Sine-Wave                                                    |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 0-18.75A                                                                                                                                                                                  | 0-28A                                                                                                                                 |
| Resolution                                                                             | 0.3125mA/16bits                                                                                                                                                                           | 0.3mA/16bits                                                                                                                          |
| Accuracy                                                                               | ± 0.1% of setting ± 0.2% of range @ 50/60Hz, ± 0.5% of setting range @ DC and 600Hz                                                                                                       |                                                                                                                                       |
| Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 0-18.75A                                                                                                                                                                                  | 0-28A                                                                                                                                 |
| Resolution                                                                             | 0.3125mA/16bits                                                                                                                                                                           | 0.3mA/16bits                                                                                                                          |
| Accuracy                                                                               | ± 0.1% of setting ± 0.2% of range @ 50/60Hz, ± 0.5% of setting range @ DC and 600Hz                                                                                                       |                                                                                                                                       |
| Constant Resistance Mode                                                               |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 4 ohm ~ 80k ohm                                                                                                                                                                           | 2.5 ohm ~ 50k ohm                                                                                                                     |
| Resolution <sup>1)</sup>                                                               | 0.00418mΩ/16bits                                                                                                                                                                          | 0.00054mΩ/16bits                                                                                                                      |
| Accuracy                                                                               | ±0.2% of setting range @ 50/60Hz, ± 0.5% of setting 2% of range @ DC and 600Hz                                                                                                            |                                                                                                                                       |
| Constant Voltage Mode                                                                  |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 50-480Vrms / 300Vdc                                                                                                                                                                       |                                                                                                                                       |
| Resolution                                                                             | 0.0125V                                                                                                                                                                                   |                                                                                                                                       |
| Accuracy                                                                               | ±(0.1% of setting + 0.1% of range)                                                                                                                                                        |                                                                                                                                       |
| Constant Power Mode                                                                    |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 2800W                                                                                                                                                                                     | 3750W                                                                                                                                 |
| Resolution                                                                             | 0.1W                                                                                                                                                                                      | 0.1W                                                                                                                                  |
| Accuracy <sup>4)</sup>                                                                 | ±0.5% of (setting + range) @ 50/60Hz, ±0.5% of (setting + range)                                                                                                                          |                                                                                                                                       |
| CREST FACTOR (CC & CP MODE ONLY)                                                       |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | √2-5                                                                                                                                                                                      |                                                                                                                                       |
| Resolution                                                                             | 0.1                                                                                                                                                                                       |                                                                                                                                       |
| Accuracy                                                                               | [0.5% / (rms) + 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                                                              |                                                                                                                                                                                           |                                                                                                                                       |
| Operating Frequency                                                                    | Non-Linear Mode<br>Auto: 40-70Hz                                                                                                                                                          |                                                                                                                                       |
| Current Range                                                                          | 0-18.75A                                                                                                                                                                                  | 0-28A                                                                                                                                 |
| PF Range                                                                               | 0-1                                                                                                                                                                                       |                                                                                                                                       |
| Measuring Efficiency for PV Systems, Power Conditions for THD 80%                      |                                                                                                                                                                                           |                                                                                                                                       |
| Operating Frequency                                                                    | Resistive + Non-Linear Mode<br>Auto: 40-70Hz                                                                                                                                              |                                                                                                                                       |
| Current Range                                                                          | 0-18.75A                                                                                                                                                                                  | 0-28A                                                                                                                                 |
| Resistive Range                                                                        | 4 ohm ~ 80k ohm                                                                                                                                                                           | 2.5 ohm ~ 50k ohm                                                                                                                     |
| UPS Back-Up Function(CC,LN,CR,CP)                                                      |                                                                                                                                                                                           |                                                                                                                                       |
| UVF [VTH]                                                                              | 50-480Vrms / 300Vdc                                                                                                                                                                       |                                                                                                                                       |
| UPS Back-Up Time                                                                       | 1-99999 Sec. (≥27H)                                                                                                                                                                       |                                                                                                                                       |
| Battery Discharge Function(CC,LN,CR,CP)                                                |                                                                                                                                                                                           |                                                                                                                                       |
| UVF [VTH]                                                                              | 50-480Vrms / 300Vdc                                                                                                                                                                       |                                                                                                                                       |
| Battery Discharge Time                                                                 | 1-99999 Sec. (≥27H)                                                                                                                                                                       |                                                                                                                                       |
| UPS Transfer Time                                                                      |                                                                                                                                                                                           |                                                                                                                                       |
| Current Range                                                                          | 0-18.75A                                                                                                                                                                                  | 0-28A                                                                                                                                 |
| UVF [VTH]                                                                              | 2.5V                                                                                                                                                                                      |                                                                                                                                       |
| Time range                                                                             | 0.15ms~999.99ms                                                                                                                                                                           |                                                                                                                                       |
| Fuse Test Mode                                                                         |                                                                                                                                                                                           |                                                                                                                                       |
| Max. Current                                                                           | Turbo OFF(CC1-3)<br>Turbo ON(CC1-3)<br>Turbo OFF(CC1-2)<br>Turbo ON(CC1-2)<br>Turbo OFF(T1-3)<br>Turbo ON(T1-3)<br>Turbo OFF(T2-3)<br>Turbo ON(T2-3)<br>Turbo OFF(T3-3)<br>Turbo ON(T3-3) | 18.75Arms<br>37.5Arms (≥2) F3<br>0.01~332.32 Sec.<br>0.01~0.50 Sec.<br>0.01~400.00 Sec.<br>0.01~999.99 Sec.<br>±0.001 Sec.<br>0-99999 |
| Trip & Non-Trip Time                                                                   | 28.0Arms (≥2) F3<br>56.0Arms (≥2) F3                                                                                                                                                      |                                                                                                                                       |
| OPP Time                                                                               | 0-34A μ                                                                                                                                                                                   |                                                                                                                                       |
| Meas. Accuracy                                                                         | 0.1ms~100ms                                                                                                                                                                               |                                                                                                                                       |
| Repeat Cycle                                                                           | 100ms, up to 10 Steps                                                                                                                                                                     |                                                                                                                                       |
| Short/OPP/OCF Test Function                                                            |                                                                                                                                                                                           |                                                                                                                                       |
| Short Time                                                                             | Turbo OFF<br>Turbo ON                                                                                                                                                                     |                                                                                                                                       |
| OPP/OCF Step Time                                                                      | Turbo OFF<br>Turbo ON                                                                                                                                                                     |                                                                                                                                       |
| OCF Isop                                                                               | Turbo OFF<br>Turbo ON                                                                                                                                                                     |                                                                                                                                       |
| OPP Pstop                                                                              | Turbo OFF<br>Turbo ON                                                                                                                                                                     |                                                                                                                                       |
| Programmable Inrush Current Simulation: Inrush - Isop / Temp                           |                                                                                                                                                                                           |                                                                                                                                       |
| Inrush Start Current                                                                   | 0-37.5k                                                                                                                                                                                   |                                                                                                                                       |
| Inrush Step Time                                                                       | 0-18.75A                                                                                                                                                                                  |                                                                                                                                       |
| Inrush, Inrush Stop Current                                                            | 0-37.5A                                                                                                                                                                                   |                                                                                                                                       |
| Programmable Surge Current Simulation: S1/T1 - S2/T2 - S3/T3                           |                                                                                                                                                                                           |                                                                                                                                       |
| S1 and S2 Current                                                                      | 0-37.5A                                                                                                                                                                                   |                                                                                                                                       |
| T1 and T2 Time                                                                         | 0-18.75A                                                                                                                                                                                  |                                                                                                                                       |
| S3 Current                                                                             | 0-18.75A                                                                                                                                                                                  |                                                                                                                                       |
| T3 Time                                                                                | 0.01~0.999Sec. or Cent.                                                                                                                                                                   |                                                                                                                                       |
| MEASUREMENTS                                                                           |                                                                                                                                                                                           |                                                                                                                                       |
| VOLTAGE READBACK V METER                                                               |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 700V                                                                                                                                                                                      |                                                                                                                                       |
| Resolution                                                                             | 0.0125V                                                                                                                                                                                   |                                                                                                                                       |
| Accuracy                                                                               | ±0.05% of (reading + range)                                                                                                                                                               |                                                                                                                                       |
| Parameter                                                                              | Vrms, V Max/Min, V Avg                                                                                                                                                                    |                                                                                                                                       |
| CURRENT READBACK A METER                                                               |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 0.375Arms/18.75Arms                                                                                                                                                                       |                                                                                                                                       |
| Resolution                                                                             | 0.2mA/0.4mA                                                                                                                                                                               |                                                                                                                                       |
| Accuracy                                                                               | ±0.05% of (reading + range) @ 50/60Hz<br>rms, 1 Max/Min, V Avg                                                                                                                            |                                                                                                                                       |
| Parameter                                                                              | VrmsArms Correspond To Vrms and Arms                                                                                                                                                      |                                                                                                                                       |
| WATT READBACK W METER                                                                  |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | 2800W                                                                                                                                                                                     |                                                                                                                                       |
| Resolution                                                                             | 0.05W                                                                                                                                                                                     |                                                                                                                                       |
| Accuracy <sup>4)</sup>                                                                 | ±0.5% of (reading + range) @ 50/60Hz, ±0.5% of (reading + range)                                                                                                                          |                                                                                                                                       |
| VA METER                                                                               |                                                                                                                                                                                           |                                                                                                                                       |
| Range                                                                                  | VrmsArms Correspond To Vrms and Arms                                                                                                                                                      |                                                                                                                                       |
| Accuracy                                                                               | ±0.000-1.000                                                                                                                                                                              |                                                                                                                                       |
| Frequency METER(Hz)                                                                    | ±(0.001 + [0.501 / PF]) F                                                                                                                                                                 |                                                                                                                                       |
| Range                                                                                  | DC, 40-70Hz                                                                                                                                                                               |                                                                                                                                       |
| Accuracy                                                                               | 0.1%                                                                                                                                                                                      |                                                                                                                                       |
| Other Parameter METER                                                                  |                                                                                                                                                                                           |                                                                                                                                       |
| VA, VAR, CF, I, Ipeak, Imax, Imin, Vmax, Vmin, ITHD, VTHD, 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                                                       | Positive or Negative half cycle, 0° Trailing edge or Leading edge current waveform can be programmed                                                                                      |                                                                                                                                       |
| Master/Slave (3 Phase or Parallel Application)                                         | Yes, 1 master and upto 7 slave units                                                                                                                                                      |                                                                                                                                       |
| External Programming Input (OPTION)                                                    | F.S / 10kΩ, Resolution 0.1V                                                                                                                                                               |                                                                                                                                       |
| External SYNC Input                                                                    | TTL                                                                                                                                                                                       |                                                                                                                                       |
| Vmonitor (Isolated)                                                                    | ±100V / ±10V                                                                                                                                                                              |                                                                                                                                       |
| Inverter (Isolated)                                                                    | ±50-25Apeak / ±10Vpk                                                                                                                                                                      |                                                                                                                                       |
| Interface (OPTION)                                                                     | GPIB ; RS-232 ; LAN ; USB                                                                                                                                                                 |                                                                                                                                       |
| MAX. Power Consumption                                                                 | 150VA                                                                                                                                                                                     |                                                                                                                                       |
| Operation Temperature <sup>2)</sup>                                                    | 0 ~ +40 °C                                                                                                                                                                                |                                                                                                                                       |
| Current of Input Impedance(mA)@50/60Hz ; @ 400Hz                                       | ~1/0.3 ; ~1/2.2                                                                                                                                                                           |                                                                                                                                       |
| Dimensions(H x W x D)                                                                  | 177 ± 440 ± 552.6 mm                                                                                                                                                                      |                                                                                                                                       |
| Weight                                                                                 | 27.5kg                                                                                                                                                                                    |                                                                                                                                       |

±1 ms (millisiemens) is the unit of conductance(C), 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/OPP/OPP test function

±4 The specification apply for current less than 20Arms

±5 All specifications apply for 50/60Hz

±6 All specifications subject to change without notice

PEL-022 GPIB Card



PEL-023 RS-232 Card



PEL-024 LAN Card



PEL-025 USB Card

PEL-028 HANDLES, U-shaped handle  
(for AEL-5006/5008/5012/5015)PEL-029 HANDLES Rack Accessories  
(for AEL-5002/5003/5004)

# AC & DC Electronic Load

## ORDERING INFORMATION

|                    |                    |                         |
|--------------------|--------------------|-------------------------|
| AEL-5002-350-18.75 | 350V/18.75A/1875W  | AC & DC Electronic Load |
| AEL-5003-350-28    | 350V/28A/2800W     | AC & DC Electronic Load |
| AEL-5004-350-37.5  | 350V/37.5A/3750W   | AC & DC Electronic Load |
| AEL-5006-350-56    | 350V/56A/5600W     | AC & DC Electronic Load |
| AEL-5008-350-75    | 350V/75A/7500W     | AC & DC Electronic Load |
| AEL-5012-350-112.5 | 350V/112.5A/11250W | AC & DC Electronic Load |
| AEL-5015-350-112.5 | 350V/112.5A/15000W | AC & DC Electronic Load |
| AEL-5019-350-112.5 | 350V/112.5A/18750W | AC & DC Electronic Load |
| AEL-5023-350-112.5 | 350V/112.5A/22500W | AC & DC Electronic Load |
| AEL-5002-425-18.75 | 425V/18.75A/1875W  | AC & DC Electronic Load |
| AEL-5003-425-28    | 425V/28A/2800W     | AC & DC Electronic Load |
| AEL-5004-425-37.5  | 425V/37.5A/3750W   | AC & DC Electronic Load |
| AEL-5006-425-56    | 425V/56A/5600W     | AC & DC Electronic Load |
| AEL-5008-425-75    | 425V/75A/7500W     | AC & DC Electronic Load |
| AEL-5012-425-112.5 | 425V/112.5A/11250W | AC & DC Electronic Load |
| AEL-5015-425-112.5 | 425V/112.5A/15000W | AC & DC Electronic Load |
| AEL-5019-425-112.5 | 425V/112.5A/18750W | AC & DC Electronic Load |
| AEL-5023-425-112.5 | 425V/112.5A/22500W | AC & DC Electronic Load |
| AEL-5003-480-18.75 | 480V/18.75A/2800W  | AC & DC Electronic Load |
| AEL-5004-480-28    | 480V/28A/3750W     | AC & DC Electronic Load |

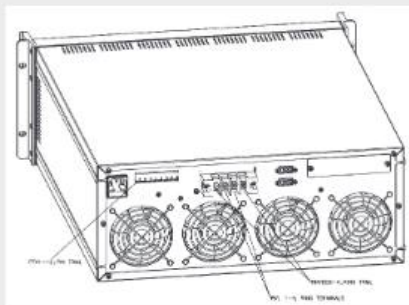


### AEL-5015-425-112.5

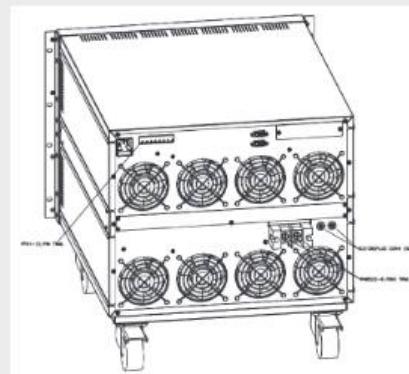
Power rating: 15-→ 15kW  
Maximum output voltage: 425-→ 425V  
Maximum output current: 112.5-→ 112.5A

## STANDARD ACCESSORIES

AEL-5000 Series operation manual  
HD-DSUB : 15pin MALE to MALE 150cm x 1  
PTV1-12 PIN TRML : Please refer to Fig.1 x 6



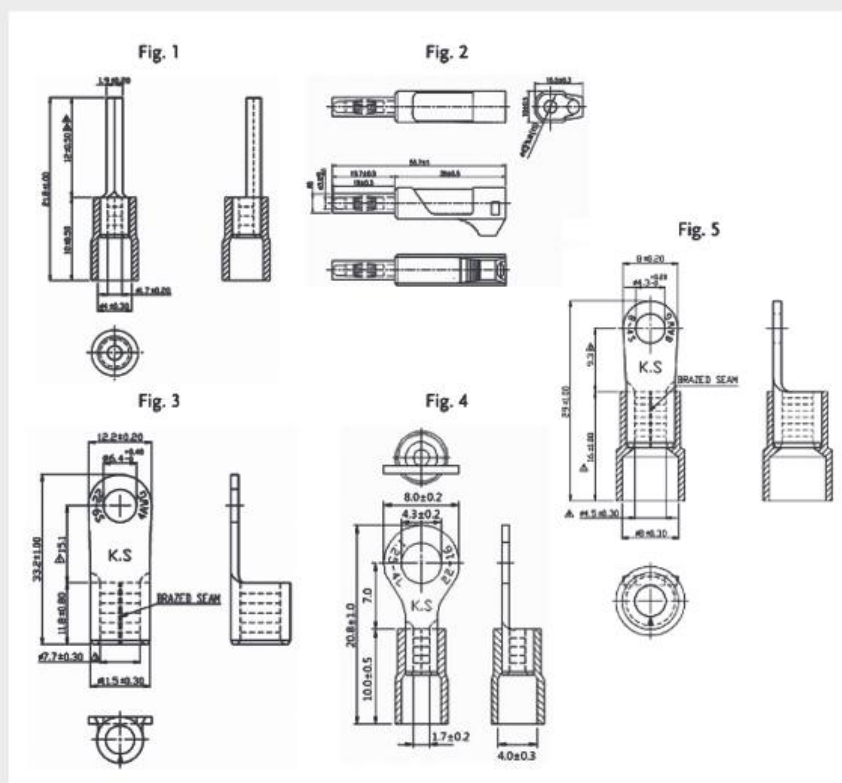
AEL-5002-xxx-18.75/AEL-5003-xxx-28/AEL-5004-xxx-37.5  
PVL 1-4 RING TERMINALS : Please refer to Fig.4 x 2  
RNYBS8-4 RING TRML : Please refer to Fig.5 x 2



AEL-5006-xxx-56/AEL-5008-xxx-75/AEL-5012-xxx-112.5/  
AEL-5015-xxx-112.5/AEL-5019-xxx-112.5/AEL-5023-xxx-112.5  
SLS10B RED PLUG CONN 20A RED : Please refer to Fig.2;  
The terminal is used for Vsense x 1  
SLS10B BLK PLUG CONN 20A BLK : Please refer to Fig.2;  
The terminal is used for Vsense x 1  
RNB S22-6 RING TRML, #4 : Please refer to Fig.3 x 2

## AC & DC Electronic Load

## ORDERING INFORMATION



## OPTIONAL ACCESSORIES

|                |                                                                             |                |                                      |
|----------------|-----------------------------------------------------------------------------|----------------|--------------------------------------|
| <b>PEL-022</b> | GPIO Card                                                                   | <b>GTL-246</b> | USB Cable, USB 2.0, A-B Type, 1200mm |
| <b>PEL-023</b> | RS-232 Card                                                                 | <b>GTL-248</b> | GPIO Cable, Double Shielded, 2000mm  |
| <b>PEL-024</b> | LAN Card                                                                    | <b>GTL-250</b> | GPIO Cable, Double Shielded, 600mm   |
| <b>PEL-025</b> | USB Card                                                                    |                |                                      |
| <b>PEL-028</b> | HANDLES, U-shaped handle(fixed to the bracket)(for AEL-5006/5008/5012/5015) |                |                                      |
| <b>PEL-029</b> | HANDLES Rack Accessories(for AEL-5002/5003/5004)                            |                |                                      |
| <b>PEL-030</b> | GPIO+RS-232 Card                                                            |                |                                      |

Note: \* Regarding the product delivery date, please contact your regional sales representative.

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