

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Казахстан (772)734-952-31

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

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Технические характеристики на нагрузки постоянного и переменного тока AEL-5000 AC/DC

Модели:	AEL-5002-350, AEL-5003-350, AEL-5004-350, AEL-5002-425, AEL-5003-425, AEL-5004-425.
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AEL-5000 AC/DC



Features

- ❖ CC, Linear CC, CR, CV, CP and AC Rectifier Load Mode
- ❖ Frequency Range : DC, 40~440Hz
- ❖ Turbo Mode for 2 Times the Current and Power of Electronic Load within 1 Second
- ❖ Three Units Parallel up to 90kW and Three-phase Δ or Y Load Connection Can be Synchronized Control by One Master Unit
- ❖ Loading and Unloading Angle Control; 0~359 Degree is Settable
- ❖ Positive Half-cycle or Negative Half-cycle Loading
- ❖ Supports SCR/TRIAC Current Phase Modulation Waveforms, 90 Degree Trailing Edge and Leading Edge
- ❖ Optional Interface : GPIB、RS232、USB、LAN

GW Instek launches 20 models of the AEL-5000 series AC/DC electronic loads depending on the power range. The power range of a single unit is from 1875W to 22500W, and up to 8 units can be connected in parallel. The maximum power of single-phase parallel connection can reach 180kW, and the total power of 3-phase can reach 540kW, which are suitable for UPS, Inverter/Breaker, AC Power Source, Battery, Fuse/Breaker, DC Power Source and other applications.

The AEL-5000 series has built-in precision measurement circuits such as 16-bit A/D and DSP to provide accurate measurement items, which include voltage root mean square value (Vrms), current root mean square value (Arms), and watt value (Watt), volt-ampere (VA), crest factor (CF), power factor (PF), total harmonic distortion (THD), voltage total harmonic distortion (VTHD), current total harmonic distortion (ITHD), peak current (Ipeak), maximum current (Amax), minimum current (Amin), maximum voltage (Vmax), minimum voltage (Vmin), time measurement. In addition, built-in 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 simulation, OCP, OPP and other test modes.

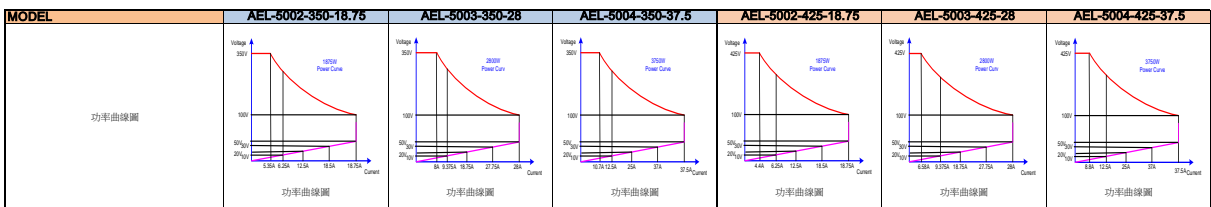
The AEL-5000 series has the Turbo mode (ON or OFF can be selected) design, which can increase the current and power of the electronic load by 2 times in one second. For test applications that require transient high power and large current such as transient overload test of protective components or short circuit of Fuse/Breaker and AC power supply, OCP and OPP tests etc.. The Turbo mode provides the most economical solution.





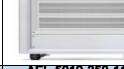

The AEL-5000 series also supports the Load On startup function (pre-set Load On). When the inverter or uninterruptible power supply is turned on, the series directly loads the set load current to verify that whether startup of the inverter or uninterrupted power supply connecting to the electrical appliance is stable. At the same time, the Load On start function can also set positive half cycle or negative half load to verify whether the output voltage of the inverter or uninterruptible power supply remains stable when the actual electrical appliance only has a positive half cycle or negative half cycle load current. Control load angle and unload angle can also be set (range 0~359 degrees) to verify the stability of the transient response of the inverter or uninterruptible power supply when the appliance is plugged in and unplugged. In addition, the series also supports SCR/TRIAC current phase modulation waveform, 90 degree Trailing Edge and Leading Edge settings. For the application of the adjustable bandwidth (BW) function, when the bandwidth of the DUT does not match the bandwidth of the AEL-5000 series, there will be oscillations. Users can reduce the BW setting value accordingly to meet the response speed of the DUT. Inrush Current verifies whether the transient response of the inverter output voltage is stable when the electrical appliance is turned on (Inrush Current) and when the electrical appliance is suddenly connected (Surge Current).

The entire series of AEL-5000 provides over-voltage warning, over-current, over-power, and over-temperature protection. Analog Input terminal can control constant current, constant power and other working modes through external voltage. Vmonitor/Imonitor terminal is used to connect external voltage/current monitoring device. In addition, a variety of optional control interfaces are provided such as GPIB, RS-232, USB, and LAN to meet the needs of system integration.

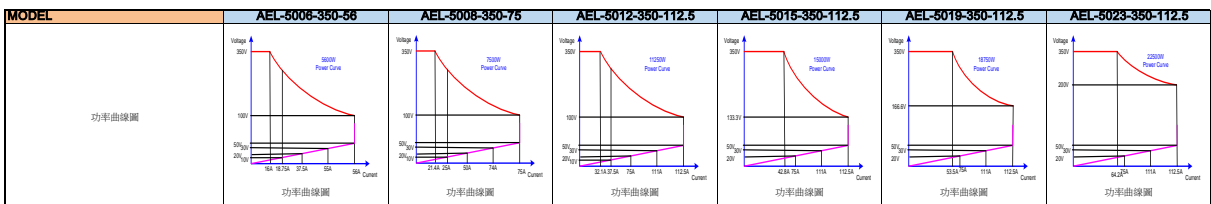
MODEL	AEL-5002-350-18.75	AEL-5003-350-28	AEL-5004-350-37.5	AEL-5002-425-18.75	AEL-5003-425-28	AEL-5004-425-37.5
Power (W)	1875 W	2800W	3750 W	1875 W	2800W	3750 W
Current(Ampere)	18.75 Arms / 56.25Apeak	28 Arms / 84Apeak	37.5 Arms / 112.5Apeak	18.75 Arms / 56.25Apeak	28 Arms / 84Apeak	37.5 Arms / 112.5Apeak
Voltage(Volt)	50~350Vrms / 600Vdc			50~425Vrms / 600Vdc		
FREQUENCY Range	DC,40~440Hz(CC,CP Mode), DC~440Hz(LIN,CR,CV Mode)			DC,40~440Hz(CC,CP Mode), DC~440Hz(LIN,CR,CV Mode)		
PROTECTIONS	DC,40~440Hz(CC,CP Mode), DC~440Hz(LIN,CR,CV Mode)			DC,40~440Hz(CC,CP Mode), DC~440Hz(LIN,CR,CV Mode)		
Over Power Protection	≧ 1968.75Wrms or Programmable	≧ 2940Wrms or Programmable	≧ 3937.5Wrms or Programmable	≧ 1968.75Wrms or Programmable	≧ 2940Wrms or Programmable	≧ 3937.5Wrms or Programmable
Over Current Protection	≧ 19.887 Arms or Programmable	≧ 29.4 Arms or Programmable	≧ 39.375 Arms, or Programmable	≧ 19.887 Arms or Programmable	≧ 29.4 Arms or Programmable	≧ 39.375 Arms, or Programmable
Over Voltage Protection	≧ 367.5 Vrms / 525Vdc			≧ 446.25 Vrms/630Vdc		
Over Temp. Protection	Yes			Yes		
OPERATION MODE						
Constant Current Mode for Sine-Wave						
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) @ 50/60Hz			± (0.1% of setting + 0.2% of range) @ 50/60Hz		
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave						
Range	0~18.75A	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) @ 50/60Hz			± (0.1% of setting + 0.2% of range) @ 50/60Hz		
Constant Resistance Mode						
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*1	0.0052083mS/16bits	0.0083333mS/16bits	0.010416mS/16bits	0.0052083mS/16bits	0.0083333mS/16bits	0.010416mS/16bits
Accuracy	±0.2% of (setting + range) @ 50/60Hz			±0.2% of (setting + range) @ 50/60Hz		
Constant Voltage Mode						
Range	50~350Vrms / 500Vdc			50~425Vrms / 600Vdc		
Resolution	0.01V			0.1V		
Accuracy	±(0.1% of setting + 0.1% of range)			±(0.1% of setting + 0.1% of range)		
Constant Power Mode						
Range	1875W	2800W	3750W	1875W	2800W	3750W
Resolution	0.1W	0.1W	0.1W	0.1W	0.1W	0.1W
Accuracy	±(0.1% of setting + 0.1% of range)			±(0.1% of setting + 0.1% of range)		
CREST FACTOR (CC & CP MODE ONLY)						
Range	√2~5			√2~5		
Resolution	0.1			0.1		
Accuracy	(0.5% / Irms) + 1%F.S.			(0.5% / Irms) + 1%F.S.		
POWER FACTOR (CC & CP MODE ONLY)						
Range	0~1 Lag or Lead			0~1 Lag or Lead		
Resolution	0.01			0.01		
Accuracy	1%F.S.			1%F.S.		
TEST MODE						
UPS Efficient Measurement	Non-Linear Mode			Non-Linear Mode		
Operating Frequency	Auto; 40~440Hz			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			0~1		
MEASURING EFFICIENCY FOR PV	Resistive + Non-Linear Mode			Resistive + Non-Linear Mode		
Operating Frequency	Auto; 40~440Hz			Auto; 40~440Hz		
Current Range	0~18.75A	0~28A	0~37.5A	0~18.75A	0~28A	0~37.5A
Resistive 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			50~425Vrms / 600Vdc		
UPS Back-Up Time	1~99999 Sec. (>27H)			1~99999 Sec. (>27H)		
Battery Discharge function(CC,LIN,CR,CP)						
UVP (VTH)	50~350Vrms / 500Vdc			50~425Vrms / 600Vdc		
Battery Discharge Time	1~99999 Sec. (>27H)			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)	2.5V			2.5V		
Time range	0.15ms~999.99ms			0.15ms~999.99ms		
Fuse Test mode						
Max. Current	Turbo OFF 18.75Arms Turbo ON 37.5Arms (x2) *3	28.0Arms 56.0Arms (x2) *3	37.5Arms 75.0Arms (x2) *3	18.75Arms 37.5Arms (x2) *3	28.0Arms 56.0Arms (x2) *3	37.5Arms 75.0Arms (x2) *3
Trip & Non-Trip Time	Turbo OFF Turbo ON	0.1~9999.9sec. 0.1~1.0sec.	0.1~9999.9sec. 0.1~1.0sec.	0.1~9999.9sec. 0.1~1.0sec.	0.1~9999.9sec. 0.1~1.0sec.	0.1~9999.9sec. 0.1~1.0sec.
Meas. Accuracy	±0.003 Sec.			±0.003 Sec.		
Repeat Cycle	0~255			0~255		
Short/OPP/OCF Test Function						
Short Time	Turbo OFF Turbo ON	0.1S ~ 10Sec. Or Cont. 0.1S ~ 1Sec	0.1S ~ 10Sec. Or Cont. 0.1S ~ 1Sec	0.1S ~ 10Sec. Or Cont. 0.1S ~ 1Sec	0.1S ~ 10Sec. Or Cont. 0.1S ~ 1Sec	0.1S ~ 10Sec. Or Cont. 0.1S ~ 1Sec
OPP/OCF Step Time	Turbo OFF Turbo ON	100ms 100ms. up to 10 Steps	100ms 100ms. up to 10 Steps	100ms 100ms. up to 10 Steps	100ms 100ms. up to 10 Steps	100ms 100ms. up to 10 Steps
OCP Istop	Turbo OFF Turbo ON	18.75Arms 37.5Arms	28.0Arms 56.0Arms	37.5Arms 75.0Arms	18.75Arms 37.5Arms	28.0Arms 56.0Arms
OPP Pstop	Turbo OFF Turbo ON	1875W 3750W	2800W 5600W	3750W 7500W	1875W 3750W	2800W 5600W
Programmable Inrush current simulation: Istart - Istop / Teep						
Istart, Inrush Start Current	0~37.5A	0~56A	0~75A	0~37.5A	0~56A	0~75A
Inrush Step time	0.1ms~100ms			0.1ms~100ms		
Istop, Inrush stop current	0~18.75A	0~28A	0~37.5A	0~18.75A	0~28A	0~37.5A
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	0.01S~0.5Sec.			0.01S~0.5Sec.		
S3 Current	0~18.75A	0~28A	0~37.5A	0~18.75A	0~28A	0~37.5A
T3 Time	0.01S ~ 9.99Sec. Or Cont.			0.01S ~ 9.99Sec. Or Cont.		
MEASUREMENTS						
VOLTAGE READBACK V METER						
Range	500V			600V		
Resolution	0.01V			0.01V		
Accuracy	±0.05% of (reading + range)			±0.05% of (reading + range)		
Parameter	Vrms,V Max/Min,+/-Vpk			Vrms,V Max/Min,+/-Vpk		
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			0.2mA/0.4mA		
Accuracy	±0.05% of (reading + range) @ 50/60Hz			±0.05% of (reading + range) @ 50/60Hz		
Parameter	Irms,I Max/Min,+/-Ipk			Irms,I Max/Min,+/-Ipk		
WATT READBACK W METER						
Range	1875W	2800W	3750W	1875W	2800W	3750W
Resolution	0.03125W	0.05W	0.0625W	0.03125W	0.05W	0.0625W
Accuracy	±0.1% of (reading + range)			±0.1% of (reading + range)		
VIA METER	Vrms>Arms Correspond To Vrms and Arms			Vrms>Arms Correspond To Vrms and Arms		
Power Factor METER						
Range	+/- 0.000~1.000			+/- 0.000~1.000		
Accuracy	±(0.002±(0.001/PF)*F)			±(0.002±(0.001/PF)*F)		
Frequency METER(V)						
Range	DC,40~440Hz			DC,40~440Hz		
Accuracy	0.1%			0.1%		
Other Parameter METER	VA, VAR, CF, I, Ipeak, Imax, Imin, Vmax, Vmin, IHD, VHD, ITHD, VTHD			VA, VAR, CF, I, Ipeak, Imax, Imin, Vmax, Vmin, IHD, VHD, ITHD, VTHD		
OTHERS						
Start up loading	Yes, Power on loading during Inverter / UPS start up			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			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			Positive or Negative half cycle, 90° Trailing edge or Leading edge current waveform can be programmed		
Master/Slave(3 phase or Parallel)	Yes, 1 master and upto 7 slave units			Yes, 1 master and upto 7 slave units		
External programming input(OPTION)	F.S / 10Vdc, Resolution 0.1V			F.S / 10Vdc, Resolution 0.1V		
External SYNC input	TTL			TTL		
Vmonitor (Isolated)	±500V / ±10V			±600V / ±10V		
Vmonitor (Isolated)	±84Apk / ±10Vpk			±84Apk / ±10Vpk		
Interface (OPTION)	GPIO ; RS-232 ; LAN ; USB			GPIO ; RS-232 ; LAN ; USB		
MAX. Power consumption	150VA			150VA		
Operation Temperature *2	0 ~ 40 °C			0 ~ 40 °C		
Current of input impedance(mA) @ 50/60Hz	-V/0.3 ; -V/2.2	-V/0.45 ; -V/3.3	-V/0.6 ; -V/4.4	-V/0.3 ; -V/2.2	-V/0.45 ; -V/3.3	-V/0.6 ; -V/4.4
Dimension(H x W x D)	177 x 440 x 558 mm	177 x 440 x 558mm	177 x 440 x 558 mm	177 x 440 x 558 mm	177 x 440 x 558mm	177 x 440 x 558 mm
Weight	21.5Kg			21.5Kg		

*1 ms (millisiemens) is the unit of conductance(G), one siemens equal to 1/Ω
 *2 Operating temperature range is 0~40°C, all specification apply for 25°C±5°C, Except as noted
 *3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OCF/OPP test function
 * All specifications apply for 50/60Hz.
 * All specifications subject to change without notice.



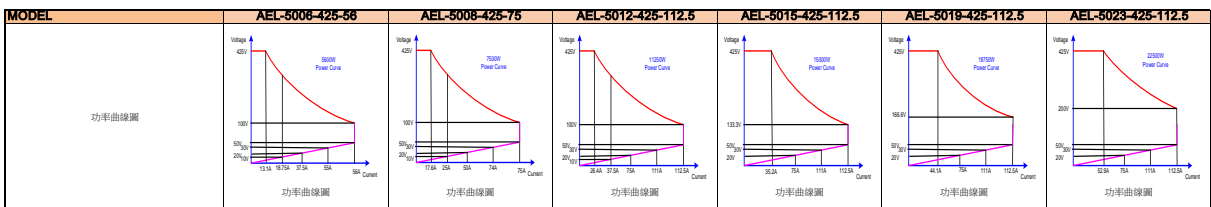
						
MODEL	AEL-5008-350-56	AEL-5008-350-75	AEL-5012-350-112.5	AEL-5015-350-112.5	AEL-5019-350-112.5	AEL-5023-350-112.5
Power (W)	5600 W	7500 W	11250 W	15000 W	18750 W	22500 W
Current(Ampere)	56 Arms / 168Apeak	75 Arms / 225Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak
Voltage(Volt)	50-350Vrms / 500Vdc					
FREQUENCY Range	DC,40-440Hz(CC,CP Mode) , DC-440Hz(LIN,CR,CV Mode)					
PROTECTIONS	Over Power Protection = 5880Wrms or Programmable = 7875Wrms or Programmable = 11812.5Wrms or Programmable = 11812.5Wrms or Programmable = 19687.5Wrms 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 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					
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave						
Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Resolution	1mA/16bits	1.25mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz					
Constant Resistance Mode						
Range	1 ohm - 20K ohm	0.8 ohm - 16K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm
Resolution*1	0.016666mS/16bits	0.020832mS/16bits	0.031248mS/16bits	0.031248mS/16bits	0.031248mS/16bits	0.031248mS/16bits
Accuracy	±0.2% of (setting + range) @ 50/60Hz					
Constant Voltage Mode						
Range	50-350Vrms / 500Vdc					
Resolution	0.1V					
Accuracy	±0.2% of (setting + range) @ 50/60Hz					
Constant Power Mode						
Range	5600W	7500W	11250W	15000 W	18750W	22500W
Resolution	0.1W	0.1W	1W	1W	1W	1W
Accuracy	±0.2% of (setting + range) @ 50/60Hz					
CREST FACTOR (CC & CP MODE ONLY)						
Range	v2-5					
Resolution	0.1					
Accuracy	(0.5% / Irms) + 1%F.S.					
POWER FACTOR (CC & CP MODE ONLY)						
Range	0-1 Lag or Lead					
Resolution	0.01					
Accuracy	1%F.S.					
TEST MODE						
UPS Efficient Measurement						
Operating Frequency	Non-Linear Mode Auto : 40-440Hz					
Current Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
PF Range	Resistive + Non-Linear Mode Auto : 40-440Hz					
MEASURING EFFICIENCY FOR PV						
Operating Frequency	Auto : 40-440Hz					
Current Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Resistive Range	1 ohm - 20K ohm	0.8 ohm - 16K ohm	0.533 ohm - 10.666K 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,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	0-56A	0-75A	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 75Arms 150Arms (x2) ⁻¹	Turbo ON 75Arms 150Arms (x2) ⁻¹	Turbo OFF 112.5Arms 225Arms (x2) ⁻¹	Turbo ON 112.5Arms 225Arms (x2) ⁻¹	Turbo OFF 112.5Arms 225Arms (x2) ⁻¹	Turbo ON 112.5Arms 225Arms (x2) ⁻¹
Trip & Non-Trip Time	Turbo OFF 0.1-9999.9sec. Turbo ON 0.1-1.0sec.					
Meas. Accuracy	±0.003 Sec.					
Repeat Cycle	0-255					
Short/OPP/OCF Test Function						
Short Time	Turbo OFF 0.1S - 10Sec. Or Cont. Turbo ON 0.1S - 1Sec					
OPP/OCF Step Time	Turbo OFF 100ms Turbo ON 100ms, up to 10 Steps					
OCF Istop	Turbo OFF 56Arms 112Arms Turbo ON 112Arms 225Arms					
OPP Pstop	Turbo OFF 5600W 11200W Turbo ON 15000W 22500W					
Programmable Inrush current simulation: Istart - Istop / Teop						
Istart, Inrush Start Current	0-112A	0-150A	0-225A	0-225A	0-225A	0-225A
Inrush Step time	0.1mS-100mS					
Istop, Inrush stop current	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3						
S1 and S2 Current	0-112A	0-150A	0-225A	0-225A	0-225A	0-225A
T1 and T2 Time	0.01S-0.5Sec.					
S3 Current	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
T3 Time	0.01S - 9.99Sec. Or Cont.					
MEASUREMENTS						
VOLTAGE READBACK A 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	0.8mA/1.2mA	0.8mA/1.6mA	1.2mA/2.4mA	1.2mA/2.4mA	1.2mA/2.4mA	1.2mA/2.4mA
Accuracy	±0.1% of (reading + range) @ 50/60Hz					
Parameter	Irms,I Max/Min,+/-Ipk					
WATT READBACK W METER						
Range	5600W	7500W	11250W	15000W	18750W	22500W
Resolution	0.1W	0.125W	0.1875W	0.25W	0.3125W	0.375W
Accuracy	±0.2% of (reading + range) @ 50/60Hz , ±0.4% of (reading + range) Vrms*Arms Correspond To Vrms and Arms					
VA METER						
Power Factor METER						
Range	+/- 0.000-1.000					
Accuracy	±(0.002±(0.001/PF)*F)					
FREQUENCY METER(V)						
Range	DC,40-440Hz					
Accuracy	0.1%					
Other Parameter METER	VA,VAR,CF,I,Ippeak,Imax,Imin,Vmax,Vmin,IHD,VHD,ITHD,VTHD					
OTHERS						
Start up loading	Yes, Power on loading during Inverter / UPS start up					
Load ON / OFF Angle	0 - 359 degree can be programmed for the angle of load ON and load OFF loading					
Half cycle and SCR/TRIAC loading	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 unit					
External programming input(OPTION)	F.S / 10Vdc, Resolution 0.1V					
External SYNC input	TTL					
Vmonitor (Isolated)	±500V / ±10V					
Imonitor (Isolated)	±168Apk / ±10Vpk	±225Apk / ±10Vpk	±337.5Apk / ±10Vpk	±337.5Apk / ±10Vpk	±337.5Apk / ±10Vpk	±337.5Apk / ±10Vpk
Interface (OPTION)	GPIO ; RS-232 ; LAN ; USB					
MAX. Power consumption	270VA	270VA	390VA	510VA	630VA	750VA
Operation Temperature *2	0 - 40 °C					
Current of input impedance(mA) @ 50/60Hz	-V*0.8 ; -V*0.6	-V*1.2 ; -V*0.8	-V*1.8 ; -V*1.2	-V*2.4 ; -V*1.8	-V*3.0 ; -V*2.2	-V*3.6 ; -V*2.4
Dimension(H x W x D)	458 x 480 x 590 mm	458 x 480 x 590 mm	636 x 480 x 590 mm	814 x 480 x 590 mm	1283 x 600 x 600 mm	1283 x 600 x 600 mm
Weight	58 kg	70 kg	105kg	140kg	260kg	295kg



*1 ms (millisec) is the unit of conductance(G), one siemens equal to 1/Ω
 *2 Operating temperature range is 0-40°C, all specification apply for 25°C±5°C, Except as noted
 *3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OPP/OCF test function
 * All specifications apply for 50/60Hz.
 * All specifications subject to change without notice.



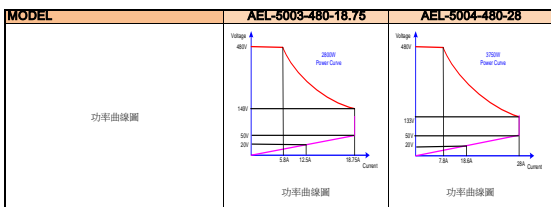
MODEL	AEL-5008-425-56	AEL-5008-425-75	AEL-5012-425-112.5	AEL-5015-425-112.5	AEL-5019-425-112.5	AEL-5023-425-112.5
Power (W)	5600 W	7500 W	11250 W	15000 W	18750 W	22500 W
Current(Ampere)	56 Arms / 168Apeak	75 Arms / 225Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak	112.5 Arms / 337.5Apeak
Voltage(Volt)	50-425Vrms / 600Vdc					
FREQUENCY Range	DC,40-440Hz(CC,CP Mode) , DC-440Hz(LIN,CR,CV Mode)					
PROTECTIONS						
Over Power Protection	≧5880Wrms or Programmable	≧7875Wrms or Programmable	≧11812.5Wrms or Programmable	≧15750Wrms or Programmable	≧19687.5Wrms or Programmable	≧23625Wrms or Programmable
Over Current Protection	≧ 58.8 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	≧ 446.25 Vrms/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
Resolution	1mA/16bits	1.25mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz					
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave						
Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Resolution	1mA/16bits	1.25mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits	1.875mA/16bits
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz					
Constant Resistance Mode						
Range	1 ohm - 20K ohm	0.8 ohm - 16K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm	0.533 ohm - 10.666K ohm
Resolution*1	0.016666mS/16bits	0.020832mS/16bits	0.031248mS/16bits	0.031248mS/16bits	0.031248mS/16bits	0.031248mS/16bits
Accuracy	±0.2% of (setting + range) @ 50/60Hz					
Constant Voltage Mode						
Range	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
Resolution	0.1W	0.1W	0.1W	0.1W	0.1W	0.1W
Accuracy	±0.2% of (setting + range) @ 50/60Hz					
CREST FACTOR (CC & CP MODE ONLY)						
Range	√2-5					
Resolution	0.1					
Accuracy	(0.5% / Irms) + 1%F.S.					
POWER FACTOR (CC & CP MODE ONLY)						
Range	0-1 Lag or Lead					
Resolution	0.01					
Accuracy	1%F.S.					
TEST MODE						
UPS Efficient Measurement						
Operating Frequency	Non-Linear Mode 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						
Operating Frequency	Resistive + Non-Linear Mode Auto : 40-440Hz					
Current Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Resistive Range	1 ohm - 20K ohm	0.8 ohm - 16K ohm	0.533 ohm - 10.666K 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,CP)						
UVP (VTH)	50-425Vrms / 600Vdc					
UPS Back-Up Time	1-99999 Sec. (>27H)					
Battery Discharge function(CC,LIN,CR,CP)						
UVP (VTH)	50-425Vrms / 600Vdc					
Battery Discharge Time	1-99999 Sec. (>27H)					
UPS Transfer Time						
Current Range	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
UVP (VTH)	2.5V					
Time range	0.15mS-999.99mS					
Fuse Test mode						
Max. Current	Turbo OFF 75Arms	Turbo ON 75Arms	Turbo OFF 112.5Arms	Turbo ON 112.5Arms	Turbo OFF 112.5Arms	Turbo ON 112.5Arms
	150Arms (x2) ⁻¹	150Arms (x2) ⁻¹	225Arms (x2) ⁻¹	225Arms (x2) ⁻¹	225Arms (x2) ⁻¹	225Arms (x2) ⁻¹
Trip & Non-Trip Time	Turbo OFF 0.1-9999.9sec. Turbo ON 0.1-1.0sec.					
Meas. Accuracy	±0.003 Sec.					
Repeat Cycle	0-255					
Short/OPP/OCF Test Function						
Short Time	Turbo OFF Turbo ON	0.1S - 10Sec. Or Cont. 0.1S - 1Sec				
OPP/OCF Step Time	Turbo OFF Turbo ON	100ms 100ms, up to 10 Steps				
OCF Istop	Turbo OFF Turbo ON	56Arms 112Arms	75Arms 150Arms	112.5Arms 225Arms	112.5Arms 225Arms	112.5Arms 225Arms
OPP Pstop	Turbo OFF Turbo ON	5600W 11200W	7500W 15000W	11250W 22500W	15000W 30000W	18750W 37500W
Programmable Inrush current simulation: Istart - Istop / Teop						
Istart, Inrush Start Current	0-112A	0-150A	0-225A	0-225A	0-225A	0-225A
Inrush Step time	0.1mS-100mS					
Istop, Inrush stop current	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3						
S1 and S2 Current	0-112A	0-150A	0-225A	0-225A	0-225A	0-225A
T1 and T2 Time	0.01S-0.5Sec.					
S3 Current	0-56A	0-75A	0-112.5A	0-112.5A	0-112.5A	0-112.5A
T3 Time	0.01S - 9.99Sec. Or Cont.					
MEASUREMENTS						
VOLTAGE READBACK A METER						
Range	600V					
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	0.8mA/1.2mA	0.8mA/1.6mA	1.2mA/2.4mA	1.2mA/2.4mA	1.2mA/2.4mA	1.2mA/2.4mA
Accuracy	±0.1% of (reading + range) @ 50/60Hz					
Parameter	Irms,I Max/Min,+/-Ipk					
WATT READBACK W METER						
Range	5600W	7500W	11250W	15000W	18750W	22500W
Resolution	0.1W	0.125W	0.1875W	0.25W	0.3125W	0.375W
Accuracy	±0.2% of (reading + range) @ 50/60Hz , ±0.4% of (reading + range) Vrms*Arms Correspond To Vrms and Arms					
VA METER						
Power Factor METER						
Range	+/- 0.000-1.000					
Accuracy	±(0.002±(0.001/PF)*F)					
FREQUENCY METER(V)						
Range	DC,40-440Hz					
Accuracy	0.1%					
Other Parameter METER	VA,VAR,CF,I,Ippeak,Imax,Imin,Vmax,Vmin,IHD,VHD,ITHD,VTHD					
OTHERS						
Start up loading	Yes, Power on loading during Inverter / UPS start up					
Load ON / OFF Angle	0 - 359 degree can be programmed for the angle of load ON and load OFF loading					
Half cycle and SCR/TRIAC loading	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 unit					
External programming input(OPTION)	F.S / 10Vdc, Resolution 0.1V					
External SYNC input	TTL					
Vmonitor (Isolated)	±800V / ±10V					
Imonitor (Isolated)	±168Apk / ±10Vpk ; ±225Apk / ±10Vpk ; ±337.5Apk / ±10Vpk ; ±337.5Apk / ±10Vpk ; ±337.5Apk / ±10Vpk ; ±337.5Apk / ±10Vpk					
Interface (OPTION)	GPIO ; RS-232 ; LAN ; USB					
MAX. Power consumption	270VA	270VA	390VA	510VA	630VA	750VA
Operation Temperature *2	0 - 40 °C					
Current of input impedance(mA) @ 50/60Hz	-V*0.8 ; -V*6.8	-V*1.2 ; -V*6.8	-V*1.8 ; -V*13.2	-V*2.4 ; -V*17.8	-V*3.0 ; -V*22	-V*3.6 ; -V*26.4
Dimension(H x W x D)	458 x 480 x 590 mm	458 x 480 x 590 mm	636 x 480 x 580 mm	814 x 480 x 580 mm	1283 x 600 x 600 mm	1283 x 600 x 600 mm
Weight	58 kg	70 kg	105kg	140kg	260kg	295kg

*1 ms (millisec) is the unit of conductance(G), one siemens equal to 1/Ω
*2 Operating temperature range is 0-40°C, all specification apply for 25°C±5°C, Except as noted
*3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OPP/OCF test function
* All specifications apply for 50/60Hz.
* All specifications subject to change without notice.



		
MODEL	AEL-5003-480-18.75	AEL-5004-480-28
Power (W)	2800W	3750 W
Current(Ampere)	18.75 Arms / 56.25Apeak	28 Arms / 84Apeak
Voltage(Volt)	50-480Vrms / 700Vdc	
FREQUENCY Range	DC,40-70Hz(CC,CP Mode), DC-70Hz(LIN,CR,CV Mode)	
PROTECTIONS		
Over Power Protection	≈2940Wrms or Programmable	≈3937.5Wrms or Programmable
Over Current Protection	≈ 19.887 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	0.5mA/16bits
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz	
Linear Constant Current Mode for Sine-Wave, Square-Wave or Quasi-Square Wave, PWM Wave		
Range	0-18.75A	0-28A
Resolution	0.3125mA/16bits	0.5mA/16bits
Accuracy	± (0.1% of setting + 0.2% of range) @ 50/60Hz	
Constant Resistance Mode		
Range	4 ohm - 80K ohm	2.5 ohm - 50K ohm
Resolution*1	0.004166mS/16bits	0.006666mS/16bits
Accuracy	±0.2% of (setting + range) @ 50/60Hz	
Constant Voltage Mode		
Range	50-480Vrms / 700Vdc	
Resolution	0.0125V	
Accuracy	±(0.1% of setting + 0.1% of range)	
Constant Power Mode		
Range	2800W	3750W
Resolution	0.1W	0.1W
Accuracy	±(0.1% of setting + 0.1% of range)	
CREST FACTOR (CC & CP MODE ONLY)		
Range	√2-5	
Resolution	0.1	
Accuracy	(0.5% / Irms) + 1%F.S.	
POWER FACTOR (CC & CP MODE ONLY)		
Range	0-1 Lag or Lead	
Resolution	0.01	
Accuracy	1%F.S.	
TEST MODE		
UPS Efficient Measurement	Non-Linear Mode	
Operating Frequency	Auto ; 40-70Hz	
Current Range	0-18.75A	0-28A
PF Range	0-1	
MEASURING EFFICIENCY FOR PV	Resistive + Non-Linear Mode	
Operating Frequency	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,LIN,CR,CP)		
UVP (VTH)	50-480Vrms / 700Vdc	
UPS Back-Up Time	1-99999 Sec. (>27H)	
Battery Discharge function(CC,LIN,CR,CP)		
UVP (VTH)	50-480Vrms / 700Vdc	
Battery Discharge Time	1-99999 Sec. (>27H)	
UPS Transfer Time		
Current Range	0-18.75A	0-28A
UVP (VTH)	2.5V	
Time range	0.15mS-999.99mS	
Fuse Test mode		
Max. Current	Turbo OFF 18.75Arms Turbo ON 37.5Arms (x2) *3	28.0Arms 56.0Arms (x2) *3
Trip & Non-Trip Time	Turbo OFF 0.1-9999.9sec. Turbo ON 0.1-1.0sec.	
Meas. Accuracy	±0.003 Sec.	
Repeat Cycle	0-255	
Short/OPP/OCF Test Function		
Short Time	Turbo OFF 0.1S - 10Sec. Or Cont. Turbo ON 0.1S - 1Sec	
OPP/OCF Step Time	Turbo OFF 100ms Turbo ON 100ms, up to 10 Steps	
OCP Istop	Turbo OFF 18.75Arms Turbo ON 37.5Arms	28.0Arms 56.0Arms
OPP Pstop	Turbo OFF 2800W Turbo ON 5600W	3750W 7500W
Programmable Inrush current simulation: Istart - Istop / Teop		
Istart, Inrush Start Current	0-37.5A	0-56A
Inrush Step time	0-18.75A	0-28A
Istop, Inrush stop current	0-18.75A	0-28A
Programmable Surge current simulation: S1/T1 - S2/T2 - S3/T3		
S1 and S2 Current	0-37.5A	0-56A
T1 and T2 Time		
S3 Current	0-18.75A	0-28A
T3 Time		
MEASUREMENTS		
VOLTAGE READBACK V METER		
Range	700V	
Resolution	0.0125V	
Accuracy	±0.05% of (reading + range)	
Parameter	Vrms,V Max/Min,+/-Vpk	
CURRENT READBACK A METER		
Range	9.375Arms/18.75Arms	14Arms/28Arms
Resolution	0.2mA/0.4mA	0.3mA/0.6mA
Accuracy	±0.05% of (reading + range) @ 50/60Hz	
Parameter	Irms,I Max/Min,+/-Ipk	
WATT READBACK W METER		
Range	2800W	3750W
Resolution	0.05W	0.0625W
Accuracy	±0.1% of (reading + range)	
VIA METER	Vrms*Arms Correspond To Vrms and Arms	
Power Factor METER		
Range	+/- 0.000-1.000	
Accuracy	±(0.002±(0.001/PF)*F)	
Frequency METER(V)		
Range	DC,40-70Hz	
Accuracy	0.1%	
Other Parameter METER		
	VA VAR CF I Ipeak I_max I_min Vmax V_min IHD VHD ITHD VTHD	
OTHERS		
Start up loading	Yes , Power on loading during Inverter / UPS start up	
Load ON / OFF Angle	0 - 359 degree can be programmed for the angle of load ON and load	
Half cycle and SCR/TRIAC loading	Positive or Negative half cycle, 90° Trailing edge or Leading edge	
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	TTL	
Vmonitor (Isolated)	±700V / ±10V	
Imonitor (Isolated)	±56.25Apk / ±10Vpk ±84Apk / ±10Vpk	
Interface (OPTION)	GPIB ; RS-232 ; LAN ; USB	
MAX. Power consumption	150VA	
Operation Temperature *2	0 - 40 °C	
Current of input impedance(mA) @ 50/60Hz	-V/D.3 ; -V/D.2 -V/D.4 ; -V/D.35	
Dimension(H x W x D)	177 x 440 x 558 mm	177 x 440 x 558 mm
Weight	27.5Kg	33.5Kg

*1 ms (millisec) is the unit of conductance(G), one siemens equal to 1/Ω
*2 Operating temperature range is 0-40°C, all specification apply for 25°C±5°C, Except as noted
*3 Turbo mode for up to 2X Current rating & Power rating support Fuse, Short/OPP/OCF test function
* All specifications apply for 50/60Hz.
* All specifications subject to change without notice.



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