



## PEL- 3000E Series

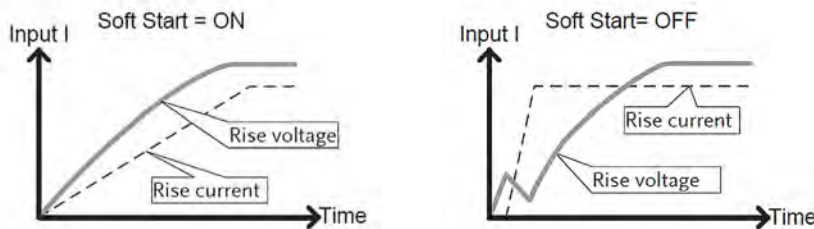
### FEATURES

- 1~150V(PEL-3031E)Min. Operating Voltage(dc):1V at 60A, 0.5V at 30A  
2.5~500V(PEL-3032E)Min. Operating Voltage(dc):2.5V at 15A, 1.25V at 7.5A
- 7 Operating Modes: CC, CV, CR, CP, CC+CV, CR+CV, CP+CV
- Normal Sequence Function: Max Steps: 1000 steps/Step Time:1ms~999h 59min 59s(3599940 sec)Fast Sequence Function: Max Steps:1000 steps/Step Time:25us~600ms
- Soft Start
- BATT Test Automation:Max Test Time:999h: 59min 59s(3599940 sec):Max Test AH:9999.99Ah
- OCP, OPP Test Automation
- Max. Slew Rate: 2.5A/ $\mu$ s
- Dynamic Mode
- Protection: OVP, OCP, OPP, OTP, RVP, UVP
- Remote Sense
- Integrate Voltage, Current and Power Measurement Functions
- External Voltage or Resistance Control
- Rear Panel BNC, Trigger IN/OUT
- Analog External Control
- USB/GPIB(Optional)

GW Instek launches new PEL-3000E series programmable single-channel electronic load. In the series, PEL-3031E provides 300W (1V~150V/60A) and PEL-3032E provides 300W (2.5V~500V/15A) current sink capability. Inherited from the PEL-3000 series, PEL-3031E has an easy-to-read LCD panel and user-friendly interface. This model features high speed and accurate measurement capability for electronic component, battery, portable charger and power products that require low to medium power consumption.

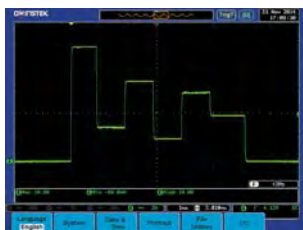
PEL-3000E series is not only ideal for charger/adaptor manufacturers with the requirements of over 60mA constant current load and measurement applications, but also for manufacturers of various power supply components and portable charging devices which demand the standby power consumption greater than 60mA. For manufacturers who require charger/adaptor with the constant current load and measurement applications lower than 60mA, we recommend the PEL-3000 series which has three current levels to meet low power consumption application requirements.

### SOFT START

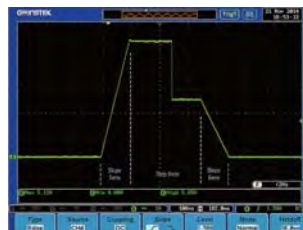


The soft start setting is used to limit the amount of input current at start-up. It can increase test reliability & stability.

### SEQUENCE FUNCTION



When operating the Sequence Function, PEL-3031E follows the time and load settings of step1, step2, step3, etc. so as to realize different load current variation.



Ramp function of PEL-3000E is able to set the current transition. When turned on, the current takes on a slope form; when turned off, the current takes on a step form.



Rear Panel

### APPLICATIONS

- Product's Output Characteristics Assessment For Power Supplies
- Battery Discharge Tests
- Quality Verification And Susceptibility Tests For Electronic Components Such as Power Switch, Relay, Connector, And Fuse, Etc.
- Diode Characteristics Tests Such as LED
- High Voltage Solar Panel And LED Driver

## SPECIFICATIONS

	Model	PEL-3031E		PEL-3032E	
		Power Range	300W Low 1 ~ 150V 0 ~ 6A 1V ~ 6A	300W High 1 ~ 150V 0 ~ 60A 1V ~ 60A	300W Low 2.5 ~ 500V 0 ~ 1.5A 2.5V ~ 1.5A
STATIC MODE	Constant Current Mode	0 ~ 6A 0 ~ 6.12A 0.2mA (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) +Vin/500kΩ (Full scale of high range)	0 ~ 60A 0 ~ 61.2A 2mA (T <sup>1</sup> )±(0.1% of set + 0.2% of FS)+Vin/500kΩ (Full scale of high range)	0 ~ 1.5A 0 ~ 1.53A 0.05mA (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) +Vin/500kΩ (Full scale of high range)	0 ~ 15A 0 ~ 15.3A 0.5mA (T <sup>1</sup> )±(0.1% of set + 0.2% of FS)+Vin/500kΩ (Full scale of high range)
	Constant Resistance Mode	60s ~ 0.002s(0.01666Ω ~ 500Ω) (300W/15V) ; 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/150V) 60s ~ 0.002s(0.01666Ω ~ 500Ω) (300W/15V) ; 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/150V) 0.002s(15V) ; 0.0002s(150V) (T <sup>1</sup> )±(0.3% of set + 0.6s) + 0.002ms		6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/50V) ; 0.6s ~ 0.00002s(1.6666Ω ~ 50kΩ) (300W/500V) 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/50V) ; 0.6s ~ 0.00002s(1.6666Ω ~ 50kΩ) (300W/500V) 0.0002s(50V) ; 0.00002s(500V) (T <sup>1</sup> )±(0.3% of set + 0.06s) + 0.002ms	
	Constant Voltage Mode	1 ~ 15V 0 ~ 15.3V 0.5mV (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) (Full scale of Low range)	1 ~ 150V 0 ~ 153V 5mV (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) (Full scale of High range)	2.5 ~ 50V 0 ~ 51V 1mV (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) (Full scale of Low range)	2.5 ~ 500V 0 ~ 510V 10mV (T <sup>1</sup> )±(0.1% of set + 0.1% of FS) (Full scale of High range)
	Constant Power Mode	0W ~ 30W(6A) 0W ~ 30.6W 1mW (T <sup>1</sup> )±(0.6% of set + 1.4% of FS (Full scale of H range) + Vin/2/500 kΩ	0W ~ 300W(60A) 0W ~ 306W 10mW	0W ~ 30W(1.5A) 0W ~ 30.6W 1mW	0W ~ 300W(15A) 0W ~ 306W 10mW
	Accuracy				
DYNAMIC MODE	General	0.05ms ~ 30ms/Res:1μs; 30ms ~ 30s/Res:1ms		0.05ms ~ 30ms/Res:1μs; 30ms ~ 30s/Res:1ms	
	T1& T2	1μs/1ms±200ppm		1μs/1ms±200ppm	
	Accuracy	0.001 ~ 0.25A/μs		0.25 ~ 62.5mA/μs	
	Slew Rate (Accuracy 10%)	0.001A/μs		0.25mA/μs	
	Slew Rate Resolution	±(10% + 15μs) *1 Time to reach from 10% to 90% when the current is varied from 2% to 100% (20% to 100% in L range) of the rated current.			
MEASUREMENT	Constant Current Mode	0 ~ 6A 0 ~ 6.12A 0.2mA ±0.8% FS	0 ~ 60A 0 ~ 61.2A 2mA ±0.8% FS	0 ~ 1.5A 0 ~ 1.53A 0.05mA ±0.8% FS	0 ~ 15A 0 ~ 15.3A 0.5mA ±0.8% FS
	Constant Resistance Mode	60s ~ 0.002s(0.01666Ω ~ 500Ω) (300W/15V) 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/150V) 60s ~ 0.002s(0.01666Ω ~ 500Ω) (300W/15V) 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/150V) 30000 steps (T <sup>1</sup> )±(1%set + 0.6s) + 0.002ms		6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/50V) 0.6s ~ 0.00002s(1.6666Ω ~ 50kΩ) (300W/500V) 6s ~ 0.0002s(0.1666Ω ~ 5kΩ) (300W/50V) 0.6s ~ 0.00002s(1.6666Ω ~ 50kΩ) (300W/500V) 30000 steps (T <sup>1</sup> )±(1%set + 0.06s) + 0.002ms	
	Setting Range				
	Resistance Resolution				
	Resistance Accuracy				
VOLTAGE READBACK	Range	0 ~ 15V	0 ~ 150V	0 ~ 50V	0 ~ 500V
	Resolution	0.5mV	5mV	2mV	20mV
	Accuracy	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of Low range)	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of High range)	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of Low range)	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of High range)
CURRENT READBACK	Range	0 ~ 6A	0 ~ 60A	0 ~ 1.5A	0 ~ 15A
	Resolution	0.2mA	2mA	0.05mA	0.5mA
	Accuracy	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of High range)	(T <sup>1</sup> )±(0.1% of rdg+0.2% of FS) (Full scale of High range)	(T <sup>1</sup> )±(0.1% of rdg+0.1% of FS) (Full scale of High range)	(T <sup>1</sup> )±(0.1% of rdg+0.2% of FS) (Full scale of High range)
POWER READBACK	H&L Range	0 ~ 300W	0 ~ 300W	0 ~ 300W	0 ~ 300W
	CP Mode L Range	0 ~ 30W	0 ~ 30W	0 ~ 30W	0 ~ 30W
FUNCTION	Sequence(Normal/Fast)	Normal sequence function: Max steps: 1000 steps/Step time: 1ms ~ 999h 59min 59s(3599940 sec) Fast sequence function: Max steps: 1000 steps/Step time: 25us ~ 600ms			
	BATT Test Automation	Max test time: 999h: 59m: 59s(3599940sec) Max test AH: 9999.99Ah OCP Autotest function, OPP Autotest Function Yes Analog External Control, Current Monitor Output, Trigger In/Out Terminal(BNC) 10 Sets OCP, OPP, UVP, OVP, OTP, RVP			
OTHER	Power Source	100 ~ 120VAC/200 ~ 240VAC, 47 ~ 63Hz			
	Interface	USB, GPIB(Optional), Analog control			
	Dimensions & Weight	213.8(W) x 124.0(H) x 400.5(D)mm, Approx. 7.5Kg			

Note : \*1 - If the ambient temperature is over 30 °C or below 20 °C, then T = ± [t - 25 °C] x 100ppm/°C x Set  
If the ambient temperature is in the range of 20°C-30°C, then T = 0 (t is the ambient temperature) Specifications subject to change without notice. EL-3000EGD2DS-2018.04-2000

### ORDERING INFORMATION

**PEL-3031E** 150V/60A/300W Programmable Single-channel D.C. Electronic Load  
**PEL-3032E** 500V/15A/300W Programmable Single-channel D.C. Electronic Load

### ACCESSORIES

Quick Start Guide, CD ROM (User Manual, Programming Manual)x1, Power Cord(Region dependent), Front Terminal Washers-spring Washer(M6)x2, GTL-105A Remote Sense Cables(Red x 1, Black x 1)

### OPTIONAL ASSESSORIES

**GTL-248** GPIB cable, 2.0m  
**GTL-246** USB cable, Type A – Type B  
**PEL-010** Dust Filter  
**PEL-004** GPIB option  
**GRA-414-J** Rack Mount Kit(JIS)  
**GRA-414-E** Rack Mount Kit(EIA)

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