PROGRAMMABLE SINGLE-CHANNEL D.C. ELECTRONIC LOAD

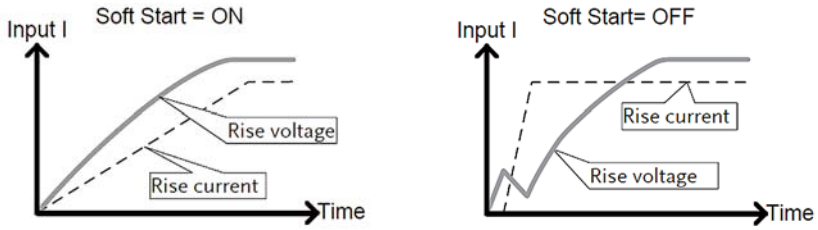
CE USB GPIB Analog Control

PEL- 3000E Series

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.

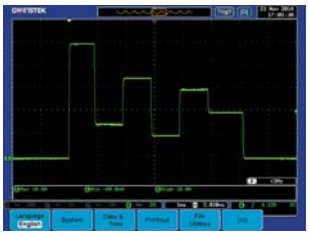
PEL-3000E series is not only ideal for charger/adaptor manufacturers with the requirements of over 60mA constant current load and measurement applications, but also for manufacturers of various power supply components and portable charging devices which demand the standby power consumption greater than 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.

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
- Fast/Normal Sequence Function
- Soft Start
- Battery Discharge Test
- OCP, OPP Test Automation
- Max. Slew Rate: 2.5A/μs
- 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)

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

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SPECIFICATIONS

	Model	PEL-3031E		PEL-3032E	
	Power	300W	300W	300W	300W
	Range	Low	High	Low	High
	Voltage	1 ~ 150V	1 ~ 150V	2.5 ~ 500V	2.5 ~ 500V
	Current	0 ~ 6A	0 ~ 60A	0 ~ 1.5A	0 ~ 15A
	Min. Operating Voltage(dc)	1V ~ 6A	1V ~ 60A	2.5V ~ 1.5A	2.5V ~ 15A
STATIC MODE	Constant Current Mode				
	Range	0 ~ 6A	0 ~ 60A	0 ~ 1.5A	0 ~ 15A
	Setting Range	0 ~ 6.12A	0 ~ 61.2A	0 ~ 1.53A	0 ~ 15.3A
	Resolution	0.2mA	2mA	0.05mA	0.5mA
	Accuracy	(T*1)±(0.1% of set + 0.1% of F.S)+Vin/500kΩ (Full scale of high range)	(T*1)±(0.1% of set + 0.2% of F.S)+Vin/500kΩ (Full scale of high range)	(T*1)±(0.1% of set + 0.1% of F.S)+Vin/500kΩ (Full scale of high range)	(T*1)±(0.1% of set + 0.2% of F.S)+Vin/500kΩ (Full scale of high range)
	Constant Resistance Mode				
	Range	60S ~ 0.002S(0.01666Ω ~ 500Ω)(300W/15V) ; 6S ~ 0.0002S(0.1666Ω ~ 5kΩ)(300W/150V)		6S ~ 0.0002S(0.16666Ω ~ 5kΩ)(300W/50V) ; 0.6S ~ 0.00002S(1.6666Ω ~ 50kΩ)(300W/500V)	
	Setting Range	60S ~ 0.002S(0.01666Ω ~ 500Ω)(300W/15V) ; 6S ~ 0.0002S(0.1666Ω ~ 5kΩ)(300W/150V)		6S ~ 0.0002S(0.16666Ω ~ 5kΩ)(300W/50V) ; 0.6S ~ 0.00002S(1.6666Ω ~ 50kΩ)(300W/500V)	
	Resolution(30000 Steps)	0.002S(15V) ; 0.0002S(150V)		0.0002S(50V) ; 0.00002S(500V)	
	Accuracy	(T*1)±(0.3% of set + 0.6S) + 0.002mS		(T*1)±(0.3% of set + 0.06S) + 0.002mS	
	Constant Voltage Mode				
	Range	1 ~ 15V	1 ~ 150V	2.5 ~ 50V	2.5 ~ 500V
	Setting Range	0 ~ 15.3V	0 ~ 153V	0 ~ 51V	0 ~ 510V
	Resolution	0.5mV	5mV	1mV	10mV
	Accuracy	(T*1)±(0.1% of set + 0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of set + 0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of set + 0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of set + 0.1% of F.S) (Full scale of High range)
	Constant Power Mode				
	Range	0W ~ 30W(6A)	0W ~ 300W(60A)	0W ~ 30W(1.5A)	0W ~ 300W(15A)
	Setting Range	0W ~ 30.6W	0W ~ 306W	0W ~ 30.6W	0W ~ 306W
	Resolution	1mW	10mW	1mW	10mW
	Accuracy	(T*1)±(0.6 % of set + 1.4 % of f.s (Full scale of H range)) + Vin∧2/500 kΩ			
DYNAMIC MODE	General				
	T1& T2	0.05mS ~ 30mS/Res : 1µS; 30mS ~ 30S/Res : 1mS		0.05mS ~ 30mS/Res : 1µS;	30mS ~ 30S/Res : 1mS
	Accuracy	1µS/1mS ± 200ppm	1µS/1mS ± 200ppm	1µS/1mS ± 200ppm	1µS/1mS ± 200ppm
	Slew Rate (Accuracy 10%)	0.001 ~ 0.25A/µS	0.01 ~ 2.5A/µS	0.25 ~ 62.5mA/µS	2.5 ~ 625mA/µS
	Slew Rate Resolution	0.001A/µS	0.01A/µS	0.25mA/µS	2.5mA/µS
	Slew Rate Accuracy of Setting	±(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.			
	Constant Current Mode				
	Current	0 ~ 6A	0 ~ 60A	0 ~ 1.5A	0 ~ 15A
	Setting Range	0 ~ 6.12A	0 ~ 61.2A	0 ~ 1.53A	0 ~ 15.3A
	Current Resolution	0.2mA	2mA	0.05mA	0.5mA
	Current Accuracy	±0.8% F.S.	±0.8% F.S.	±0.8% F.S.	±0.8% F.S.
	Constant Resistance Mode				
	Range	60S ~ 0.002S(0.01666Ω ~ 500Ω)(300W/15V) 6S ~ 0.0002S(0.1666Ω ~ 5kΩ)(300W/150V)		6S ~ 0.0002S(0.16666Ω ~ 5kΩ)(300W/50V) 0.6S ~ 0.00002S(1.6666Ω ~ 50kΩ)(300W/500V)	
	Setting Range	60S ~ 0.002S(0.01666Ω ~ 500Ω)(300W/15V) 6S ~ 0.0002S(0.1666Ω ~ 5kΩ)(300W/150V)		6S ~ 0.0002S(0.16666Ω ~ 5kΩ)(300W/50V) 0.6S ~ 0.00002S(1.6666Ω ~ 50kΩ)(300W/500V)	
	Resistance Resolution	30000 steps		30000 steps	
	Resistance Accuracy	(T*1)±(1%set + 0.6S) + 0.002mS		(T*1)±(1%set + 0.06S) + 0.002mS	
MEASUREMENT	Voltage Readback Range	0 ~ 15V	0 ~ 150V	0 ~ 50V	0 ~ 500V
	Resolution	0.5mV	5mV	2mV	20mV
	Accuracy	(T*1)±(0.1% of rdg+0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of rdg+0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg+0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of rdg+0.1% of F.S) (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*1)±(0.1% of rdg+0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg+0.2% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg+0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg+0.2% of F.S) (Full scale of High range)
GENERAL	Trigger In/out Terminal(BNC)	YES			
	Current Momitor Output	YES			
	Analog External Control	YES			
	Soft Start	YES			
	Sequence(Normal/Fast)	YES			
	BATT Test Automation	YES			
	OCP Autotest Function	YES			
	OPP Autotest Function	YES			
	Preset Data	10 Sets			
	Protection	OCP, OPP, UVP, OVP, OTP, RVP			
OTHER	Power Source	100 ~ 120VAC/ 200 ~ 240VAC, 47 ~ 63Hz			
	Interface	USB, GPIB(Option), 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 ℃ or below 20 ℃, then T = ± | t - 25 ℃ | x 100ppm/℃ x Set
If the ambient temperature is in the range of 20℃~30℃, then T = 0 (t is the ambient temperature)

Specifications subject to change without notice. EL-3000EGD1DH

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

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