PEL-3000 Series

CE | USB | GPIB | Analog Control | PC Software | LabVIEW Driver

The PEL-3000 Series programmable DC Electronic Load features high speed slew rate and high power capacity to meet the requirements in SPS (Switching Power Supply), DC to DC power converter, HEV (Hybrid Electric Vehicle) batteries testing applications.

The PEL-3000 is single channel, basically operates in one mode among the four C.V (Constant Voltage), C.C (Constant Current), C.P (Constant Power) and C.R (Constant Resistance) modes. It can also simulate a variety of dynamic load behavior under the CC and CR modes by the sequence function. The sequence function allows the load curve to be edited by specifying load current, rising and falling slew rate, current level, duration time and other parameters.

In addition to the digital interfaces of USB and GBIP, there is also external analog control interface which allows setting the operating parameters and monitoring the voltage and current at the PEL-3000 Series output. There are five models in PEL-3000 Series. The PEL-3021(175W), PEL-3041 (350W) and PEL-3111(1050W) are non-zero voltage input type which the minimum input voltage is 1.5V, another two types for the PEL-3020(175W) and PEL-3070(700W) are zero voltage input type. The power capacity can be stretched by connecting booster in parallel. The maximum power can reach to 9kW with 4 boosters connected.

The PEL-3000 Series are equipped with well protection mechanisms like OPP, OCP, OVP, OTP, UVP and reversed polarity protection, which will substantially increase the reliability. RS232C, USB host and device, GPIB and GO/NG interfaces are all provided. For remote control programming, the LabView driver and example code of VB, C, C++ are available. The PEL-3000 Series provides a rapid and effective test solution for product design and production line.

FEATURES

- Operating Mode : C.V/C.C/C.R/C.P
- High Precision, High Resolution (10μA), High Speed Variable Slew Rate (16A/μs)
- Supporting 0-V Input (PEL-3020/PEL-3070 Only)
- Sequence Function for High Efficient Load Simulations
- Parallel Connection of Inputs for Higher Capacity (With 4 Booster Units : Max 9kW)
- External Channel Control / Monitoring via Analog Control Connector
- Program Mode to Create Work Routines for Repetitive Tests
- Multiple-Interface : USB 2.0 Device / Host and GPIB
- Adjustable OPP/OCP/OVP Setting

Rear Panel

APPLICATIONS

- Laboratories and Educational Facilities
- Product Testing and Quality Assurance for Switching Power Supply, HEV Battery and DC to DC Converter Characteristics Testing
- Service Operation and Post-Sales Support
- Product Development and Debugging

GW INSTEK
Simply Reliable

SPECIFICATIONS

Model			PEL-3021	PEL-3041	PEL-3111	PEL-3020	PEL-3070
Operating Voltage(DC) Current Power			1.5V~150V 35A 175W	1.5V~150V 70A 350W	1.5V~150V 210A 1050W	0V~150V 35A 175W	0V~150V 140A 700W
CC MODE							
Operating Range			0A~35A/0A~3.5A/ 0A~0.35A	0A~70A/0A~7A/ 0A~0.7A	0A~210A/0A~21A/ 0A~2.1A	0A~35A/0A~3.5A/ 0A~0.35A	0A~140A/0A~14A/ 0A~1.4A
Accuracy of Setting			±(0.2 % of set + 0.1 % of f.s x 1) + Vin x 2/500kΩ ±(0.2 % of set + 0.1 % of f.s)				
CR MODE							
Operating Range	Range	H/M/L	23.3336S~400uS (42.857mΩ~2.5kΩ)	46.6672S~800uS (21.428mΩ~1.25kΩ)	140.0016S~2.4mS (7.1427mΩ~416.6667Ω)	23.3336S~400uS (42.857mΩ~2.5kΩ)	93.3344S~1.6mS (10.714mΩ~625Ω)
		H,M	2.33336S~40uS (428.566mΩ~25kΩ)	4.6667S~80uS (214.28mΩ~12.5kΩ)	14.0001S~242.4uS (71.427mΩ~4.16667kΩ)	2.33336S~40uS (428.566mΩ~25kΩ)	9.3334S~160uS (107.1416mΩ~6.25kΩ)
		L	0.233336S~4uS (4.28566Ω~250kΩ)	0.46667S~8uS (2.1428Ω~125kΩ)	1.40001S~24.24uS (714.27mΩ~41.6667kΩ)	0.233336S~4uS (4.28566Ω~250kΩ)	0.9333S~16uS (1.071416Ω~62.5kΩ)
Accuracy of Setting			±(0.5 % of set x 3 + 0.5 % of f.s. X 4) + Vin x 5/500 kΩ ; ±(0.5 % of set x 3 + 0.5 % of f.s.)				
CV MODE							
Operating Range	Range	H	1.5V~150V	1.5V~150V	1.5V~150V	0V~150V	0V~150V
		L	1.5V~15V	1.5V~15V	1.5V~15V	0V~15V	0V~15V
Accuracy of Setting	Range		±(0.1 % of set + 0.1 % of f.s)				
CP MODE							
Operating Range	Range	H	17.5W~175W	35W~350W	105W~1050W	17.5W~175W	70W~700W
		M	1.75W~17.5W	3.5W~35W	10.5W~105W	1.75W~17.5W	7W~70W
		L	0.175W~1.75W	0.35W~3.5W	1.05W~10.5W	0.175W~1.75W	0.7W~7W
SLEW RATE							
Setting Range (CC mode)	Range	H	2.5mA/us~2.5A/us	5mA/us~5A/us	16mA/us~16A/us	2.5mA/us~2.5A/us	10mA/us~10A/us
		M	250uA/us~250mA/us	500uA/us~500mA/us	1.6mA/us~1.6A/us	250uA/us~250mA/us	1mA/us~1A/us
		L	25uA/us~25mA/us	50uA/us~50mA/us	160uA/us~160mA/us	25uA/us~25mA/us	100uA/us~100mA/us
Setting Range (CR mode)	Range	H	250uA/us~250mA/us	500uA/us~500mA/us	1.6mA/us~1.6A/us	250uA/us~250mA/us	1mA/us~1A/us
		M	25uA/us~25mA/us	50uA/us~50mA/us	160uA/us~160mA/us	25uA/us~25mA/us	100uA/us~100mA/us
		L	2.5uA/us~2.5mA/us	5uA/us~5mA/us	16uA/us~16mA/us	2.5uA/us~2.5mA/us	10uA/us~10mA/us
METER							
Voltmeter	Accuracy		±(0.1 % of rdg + 0.1 % of f.s)				
Ammeter	Accuracy		±(0.2 % of rdg + 0.3 % of f.s)				
DYNAMIC MODE							
Operation mode T1&T2 Accuracy			CC and CR 0.025mS ~ 10mS / Res : 1uS ; 1mS ~ 30S / Res : 1mS 1uS / 1mS ± 100ppm				
Slew Rate	Range	H	2.5mA/us~2.5A/us	5mA/us~5A/us	16mA/us~16A/us	2.5mA/us~2.5A/us	10mA/us~10A/us
		M	250uA/us~250mA/us	500uA/us~500mA/us	1.6mA/us~1.6A/us	250uA/us~250mA/us	1mA/us~1A/us
		L	25uA/us~25mA/us	50uA/us~50mA/us	160uA/us~160mA/us	25uA/us~25mA/us	100uA/us~100mA/us
Current Accuracy			±0.4%F.S.				
DIMENSIONS & WEIGHT							
			214.5(W)x124(H)x400 (D)mm; Approx. 7kg	214.5(W)x124(H)x400 (D)mm; Approx. 8kg	429.5(W)x128(H)x400 (D)mm; Approx. 15kg	214.5(W)x124(H)x400 (D)mm; Approx. 7.5kg	214.5(W)x124(H)x400(D) mm; Approx. 16kg

Specifications subject to change without notice. EL-3000GD1DH

ORDERING INFORMATION

PEL-3021	175W Programmable DC Electronic Load
PEL-3041	350W Programmable DC Electronic Load
PEL-3111	1050W Programmable DC Electronic Load
PEL-3020	175W Programmable DC Electronic Load
PEL-3070	700W Programmable DC Electronic Load

ACCESSORIES

User Manual x 1, Power Cord x 1, Test Lead x 1, Sense Lead x 1,

OPTIONAL ASSESSORIES

GTL-248 GPIB Cable (2m)
GTL-246 USB Cable, USB 2.0A-B TYPE CABLE, 4P
GTL-251 GPIB-USB-HS (High Speed)

FREE DOWNLOAD

Driver LabView Driver

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