

# PROGRAMMABLE DUAL-RANGE D.C. POWER SUPPLY



## PSM-2010/3004/6003



Patent No: ZL 03 3 01174.5

## FEATURES

- \* Single Output Dual Range Max. 200W
- \* High Resolution: 1mV/1mA
- \* Stable & Clear Power: 0.01% Load/Line Regulation, 350µVrms Ripple
- \* 100 Sets Memory
- \* Auto Step Running With Timer Setting
- \* Safety Design: OVP, OCP & OTP ; Output ON/OFF Control(OCP Provides Delay Setting to Prevent Trip of High Start-Up Current)
- \* Self-Test and Software Calibration
- \* Highly Visible Vacuum-Fluorescent Display
- \* Front and Rear Output Terminal
- \* Standard Interface : RS-232C, GPIB
- \* Option : European Jack Type Terminal

## Rear Panel



The PSM-Series are single output / dual range, 120 or 200W, programmable linear DC power supplies. OVP, OCP, OTP, and output On/Off control protect the PSM-Series and their load from unexpected conditions. High resolution, high regulation, and low ripple are maintained at 1mV/1mA, 0.01%, and <math><350\mu\text{Vrms}</math>, respectively. Operation and configuration is simplified with a digital interface and a clear LCD display. Standard features include; store/recall output memories, automatic stepping with timers for continuous testing and self-testing and software calibration features to reduce maintenance overhead. SCPI programming, LabVIEW drivers, RS-232C and GPIB interfaces enable easy automated test system integration and remote control. The PSM-Series are an ideal choice for high precision applications such as QA verification and product development.

| SPECIFICATIONS  |   |                                    |   |
|---|---|------------------------------------|---|
|   | PSM-2010  | PSM-3004                           | PSM-6003  |
| <b>DC OUTPUT</b>  |   |                                    |   |
| Low Range   | 0 ~ 8V/20A  | 0 ~ 15V/7A                         | 0 ~ 30V/6A  |
| High Range  | 0 ~ 20V/10A   | 0 ~ 30V/4A                         | 0 ~ 60V/3.3A  |
| <b>CONSTANT VOLTAGE OPERATION</b>   |   |                                    |   |
| Regulation (% of output + offset)   | Load regulation $\leq 0.01\% + 2\text{mV}$<br>Line regulation $\leq 0.01\% + 2\text{mV}$                                  |                                    |   |
| Ripple & Noise  | $< 350\mu\text{Vrms}/3\text{mVpp}$  | $< 350\mu\text{Vrms}/2\text{mVpp}$ | $\leq 50\text{V}: < 500\mu\text{Vrms}/3\text{mVpp}$<br>$> 50\text{V}: < 1\text{mVrms}/3\text{mVpp}$ |
| <b>CONSTANT CURRENT OPERATION</b>   |   |                                    |   |
| Regulation (% of output + offset)   | Load regulation $\leq 0.01\% + 250\mu\text{A}$<br>Line regulation $\leq 0.01\% + 250\mu\text{A}$                          |                                    |   |
| Ripple & Noise  | $< 2\text{mArms}$   |                                    |   |
| <b>RESOLUTION</b>   |   |                                    |   |
| Programming   | Voltage<br>1mV<br>Current<br>1mA  | 1mV<br>0.5mA                       | 2mV<br>0.5mA  |
| Readback  | Voltage<br>0.5mV<br>Current<br>1mA  | 0.5mV<br>0.1mA                     | 1mV<br>0.5mA  |
| Front Panel   | Voltage<br>1mV<br>Current<br>1mA (<math><10\text{A}</math>), 10mA ( $\geq 10\text{A}</math>)$                             |                                    |   |
| OVP/OCP   | Voltage<br>10mV<br>Current<br>10mA  |                                    |   |
| <b>ACCURACY</b>   |   |                                    |   |
| Programming   | Voltage<br>0.05% + 10mV<br>Current<br>0.2% + 10mA   |                                    |   |
| Readback  | Voltage<br>0.05% + 5mV<br>Current<br>0.15% + 5mA  |                                    |   |
| OVP/OCP   | Voltage<br>0.1% + 10mV<br>Current<br>0.4% + 10mA  |                                    |   |
| <b>TRANSIENT RESPONSE</b>   |   |                                    |   |
|   | $< 50\mu\text{sec}$ ( for output to recover within 15mV following a change in output current from full load to half load) |                                    |   |
| <b>COMMAND PROCESSING TIME</b>  |   |                                    |   |
|   | 100 ms  |                                    |   |
| <b>VOLTAGE PROGRAMMING RESPONSE TIME (for resistive load)</b>                 |   |                                    |   |
| Voltage Up  | Full Load<br>No Load  | 95 ms<br>45 ms                     | 50 ms<br>20 ms  |
| Voltage Down  | Full Load<br>No Load  | 30 ms<br>450 ms                    | 45 ms<br>400 ms   |
| <b>STABILITY (% of output + offset)</b>                                       |   |                                    |   |
| Voltage   | 0.02% + 1mV   |                                    |   |
| Current   | 0.1% + 1mA  |                                    |   |
| <b>MEMORY</b>   |   |                                    |   |
| Store/Recall  | 100 sets  |                                    |   |
| <b>TEMPERATURE COEFFICIENT PER °C <math>\pm</math> (% of Output + Offset)</b> |   |                                    |   |
| Voltage   | 0.01% + 3mV   |                                    |   |
| Current   | 0.02% + 3mA   |                                    |   |
| <b>POWER SOURCE</b>   |   |                                    |   |
| AC 100V/120V/220V $\pm 10\%$ , 230V : - 6% ~ + 10%, 50/60Hz                   |   |                                    |   |
| <b>INTERFACE</b>  |   |                                    |   |
| Standard RS-232C, GPIB  |   |                                    |   |
| <b>DIMENSIONS &amp; WEIGHT</b>  |   |                                    |   |
| 230(W) x 140(H) x 380(D) ; Approx. 10kg                                       |   |                                    |   |

## ORDERING INFORMATION

|                 |   |
|-----------------|---|
| <b>PSM-2010</b> | 200W Single Output, Programmable Power Supply |
| <b>PSM-6003</b> | 200W Single Output, Programmable Power Supply |
| <b>PSM-3004</b> | 120W Single Output, Programmable Power Supply |

### ACCESSORIES :

User manual x 1, Power cord x 1, Test lead GTL-104 x 1, European test lead GTL-204 x 1, Ground lead GTL-201A x 1 (European terminal), Sense lead GTL-202 x 1 (European terminal)

### OPTION

Opt. 01: GRA-407 Rack Mounting ( 19" , 4U )

### OPTIONAL ACCESSORIES

**GTL-232** RS-232C Cable, 9-pin Female to 9-pin, Null Modem for PC Computer

### FREE DOWNLOAD

**PC Software Driver** PC Software including Data Log ; Remote Control Software  
Labview Driver ; PSM VB Example ; PSM VC++ Example



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