

SMART Programmable DC Power Supplies

Data Sheet



Features & Advanced functions

- ◇ High Efficiency with using Switching Technologies
- ◇ High Stability with using Linear Technologies
- ◇ Low Ripple & Noise with using Linear Technologies
- ◇ Small Size
- ◇ Over Voltage Protection (OVP)
- ◇ Over Current Protection (OCPH) ^{Note 1}
- ◇ Over Temperature Protection (OTP)
- ◇ Remote Control
 - ◆ RS-232C, USB Connector
 - ◆ RS-485 replacement (Optional)
- ◇ Advanced Functions
 - ◆ Over Current Protection (OCPL) Setting ^{Note 2}
 - ◆ Buzzer Off Setting
 - ◆ Short Protection Setting (1mΩ ~ 9.999Ω)
 - ◆ Voltage Slope Mode (0.01 ~ 9999s)
 - ◆ Current Slope Mode (0.01 ~ 9999s)
 - ◆ Hold Mode (1 ~ 9999s)
 - ◆ Slope-Hold Mode
- ◇ 19" Rack Mountable

Note

1. OCPH: Protection against over maximum current damage.
2. OCPL: Protection against over setting current damage.

Applications

- ◇ Component Aging Test
- ◇ Chlorine dioxide generators based on Electrolysis, Chemical Reaction Equipment
- ◇ Lamp Lighting (LED Test, CCFL Test and etc)
- ◇ Battery Charging, Capacitor Charging Test
- ◇ Industrial Electronic Design, Laboratory
- ◇ System Operations
- ◇ Experimental Education

TSP Series Power Supplies provide a pure DC source to your DUT with high efficiency.

Engineers don't need to consider any more which type of power supply will you use. If DC sources are needed for your systems or production tests, don't hesitate to choose TSP series regardless any application. TSP series will give you full satisfaction every time.

SMART DC Power Supply has been designed to overcome the trade-offs that have been occurred consequentially from switching technologies. It consists of two stage converters: One is to increase power supply efficiency with switching technologies and the other is to overcome the trade-offs with linear technologies. Resultantly SMART DC power supply can work as a linear mode power supply with high efficiency and small size.

The Short Protection in the advanced function will cut the output power off before you or your DUT get damaged. Also you can use various functions such as Over Current Protection, Voltage Slope Mode Operation, Current Slope Mode Operation and Hold Mode Operation with TSP series.

1.5kW SMART Programmable DC Power Supplies

TSP 1.5kW Series Specifications

TSP 1.5kW Series Electrical Characteristics

| Model | TSP3050 | TSP5030 | TSP10015 | TSP2008 | TSP3005 | TSP5003 |
|------------------------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Channels | 1 | | | | | |
| Voltage Range [V] | 0 ~ 30 | 0 ~ 50 | 0 ~ 100 | 0 ~ 200 | 0 ~ 300 | 0 ~ 500 |
| ◆ Accuracy | $\pm(0.01\% + 20\text{mV})$ | | $\pm(0.01\% + 200\text{mV})$ | | | |
| ◆ Resolution | 10mV | | 100mV | | | |
| Current Range [A] | 0 ~ 50 | 0 ~ 30 | 0 ~ 15 | 0 ~ 8 | 0 ~ 5 | 0 ~ 3 |
| ◆ Accuracy | $\pm(0.01\% + 20\text{mA})$ | | | $\pm(0.01\% + 2\text{mA})$ | | |
| ◆ Resolution | 10mA | | | 1mA | | |
| Line Regulation | $\leq 0.05\% \pm 1\text{mV}$ | | | | | |
| Load Regulation | $\leq 0.05\% \pm 1\text{mV}$ | | | | | |
| Ripple & Noise @ 20MHz | $\leq 2\text{mV}_{\text{RMS}}$ | $\leq 2\text{mV}_{\text{RMS}}$ | $\leq 3\text{mV}_{\text{RMS}}$ | $\leq 4\text{mV}_{\text{RMS}}$ | $\leq 5\text{mV}_{\text{RMS}}$ | $\leq 7\text{mV}_{\text{RMS}}$ |
| | $\leq 9\text{mV}_{\text{P-P}}$ | $\leq 11\text{mV}_{\text{P-P}}$ | $\leq 17\text{mV}_{\text{P-P}}$ | $\leq 27\text{mV}_{\text{P-P}}$ | $\leq 38\text{mV}_{\text{P-P}}$ | $\leq 60\text{mV}_{\text{P-P}}$ |
| Efficiency @ full load | 85% | 85% | 86% | 86% | 87% | 88% |
| Advanced Functions | | | | | | |
| ◆ OCPL Mode | ON/OFF (Local and Remote) | | | | | |
| ◆ Short Protection | Load resistance Limit = 0.001 ~ 9.999 Ω (Local Only) | | | | | |
| ◆ Slope Mode | Local : 1 ~ 9999s / Remote : 0.01 ~ 9999s | | | | | |
| ◆ Hold Mode | 1 ~ 9999s (Local Only) | | | | | |
| RS-232C/USB Bridge | Standard(RS-485 Replacement optional) | | | | | |
| AC Input | Single, 220V _{AC} /60Hz | | | | | |

TSP 1.5kW Series Environmental and Physical Characteristics

| Model | All Models on TSP 1.5kW series |
|-----------------------------|--------------------------------|
| Operating Temperature | 0 ~ +40°C |
| Storage Temperature | -20 ~ +60°C |
| Operating Humidity | 50°C/60%RH, 30°C/85%RH |
| Dimensions (W x H x D) | 435 x 88 x 360mm |
| Weight | $\leq 12\text{kg}$ |
| Shipping Package Dimensions | 495 x 170 x 490mm |
| Shipping Package Weight | $\leq 15\text{kg}$ |