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

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.

Note

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

2kW SMART Programmable DC Power Supplies

TSP 2kW Series Specifications

TSP 2kW Series Electrical Characteristics

Model	TSP4050	TSP5040	TSP10020	TSP20010	TSP3007	TSP5004
Channels	1					
Voltage Range [V]	0 ~ 40	0 ~ 50	0 ~ 100	0 ~ 200	0 ~ 300	0 ~ 500
◆ Accuracy	±(0.01% + 20mV)		±(0.01% + 200mV)			
◆ Resolution	10mV		100mV			
Current Range [A]	0 ~ 50	0 ~ 40	0 ~ 20	0 ~ 10	0 ~ 7	0 ~ 4
◆ Accuracy	±(0.01% + 20mA)				±(0.01% + 2mA)	
◆ Resolution	10mA				1mA	
Line Regulation	≤ 0.05% ± 1mV					
Load Regulation	≤ 0.05% ± 1mV					
Ripple & Noise @ 20MHz	≤ $2mV_{RMS}$	≤ $2mV_{RMS}$	≤ $3mV_{RMS}$	≤ $4mV_{RMS}$	≤ $5mV_{RMS}$	≤ $7mV_{RMS}$
	≤ $10mV_{P-P}$	≤ $12mV_{P-P}$	≤ $20mV_{P-P}$	≤ $30mV_{P-P}$	≤ $40mV_{P-P}$	≤ $65mV_{P-P}$
Efficiency @ full load	85%	85%	86%	86%	87%	87%
Advanced Functions						
◆ OCPL Mode	ON/OFF (Local and Remote)					
◆ Short Protection	Load resistance Limit = 0.001 ~ 9.999Ω (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 2kW Series Environmental and Physical Characteristics

Model	All Models on TSP 2kW series
Operating Temperature	0 ~ +40℃
Storage Temperature	-20 ~ +60℃
Operating Humidity	50℃/60%RH, 30℃/85%RH
Dimensions (W x H x D)	435 x 88 x 360mm
Weight	≤ 12kg
Shipping Package Dimensions	495 x 170 x 490mm
Shipping Package Weight	≤ 15kg