

# Power Supplies Data Sheet

## Triple and Quad Output

### Broad Product Range

**Current: Up to 12 Amps**

**Voltage: Up to 120 Volts**

**Power: Up to 375 Watts**



### Tools for Improved Debugging

- 6 Models to choose from. ✔ More choice for better application coverage.
- Triple and Quad output models. ✔ Single and Dual output models available in our Single and Dual output model brochure.
- Programmable and non-programmable models available. ✔ Selection of bench or programmable / ATE instruments.
- All power supplies support Constant Voltage and Constant Current modes (C.V. and C.C. modes) ✔ Multiple independent modes per output supports a wider range of applications.
- All models support independent, series and parallel output modes. ✔ Support for the maximum output configuration flexibility.

### Models and Characteristics

T3PS3000	0-32V / 0-32V / 2.5V, 3.3V, 5V	0-3.2A / 0-3.2A / 0-3.2A	220 W	Programmable
T3PS33203	0-32V / 0-32V / 5V	0-3A / 0-3A / 0-5A	207 W	
T3PS33203P	0-32V / 0-32V / 1.8V, 2.5V, 3.3V, 5V	0-3A / 0-3A / 0-5A	207 W	Programmable
T3PS36006 <sup>(1)</sup>	0-30V / 0-30V / 0.1-5V	0-6A / 0-6A / 0-3A	375 W	
T3PS43203	0-32V / 0-32V / 0-15V / 0-5V	0-3A / 0-3A / 0-1A / 0-1A	212 W	
T3PS43203P	0-32V / 0-32V / 0-15V / 0-5V	0-3A / 0-3A / 0-1A / 0-1A	212 W	Programmable

1. See page 2 for additional specifications.

# SPECIFICATIONS

## Models and Specifications

	T3PS3000	T3PS33203	T3PS33203P	T3PS36006	T3PS43203	T3PS43203P
Number of Channels	3	3	3	3	4	4
Voltage Range Ch1:	0-32 V	0-32 V	0-32 V	0-30 V / 0-60 V	0-32 V	0-32 V
Ch2:	0-32 V	0-32 V	0-32 V	0-30 V / 0-60 V	0-32 V	0-32 V
Ch3:	2.5V, 3.3V, 5V $\pm$ 8%	5V $\pm$ 5% (fixed)	1.8V, 2.5V, 3.3V, 5V +/- 5%	0.1-5 V	0-15 V	0-15 V
Ch4:	-	-	-	-	0-5V	0-5V
Current Range Ch1:	0-3.2 A	0-3 A	0-3 A	0-6 A / 0-3 A	0-3 A	0-3 A
Ch2:	0-3.2 A	0-3 A	0-3 A	0-6 A / 0-3 A	0-3 A	0-3 A
Ch3:	0-3.2 A	0-5 A	0-5 A	0-3 A	0-1 A	0-1 A
Ch4:	-	-	-	-	0-1 A	0-1 A
Maximum Power	220 W	207 W	207 W	375 W	212 W	212 W
<b>Constant Voltage</b>						
Line Regulation						
Ch1 / Ch2:	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Ch3:	$\leq 0.01\% + 3 \text{ mV}$	$\leq 3 \text{ mV}$	$\leq 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Ch4:	-	-	-	-	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Load Regulation						
Ch1 / Ch2:	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 5 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Ch3:	$\leq 0.01\% + 3 \text{ mV}$	$\leq 5 \text{ mV}$	$\leq 5 \text{ mV}$	$\leq 0.01\% + 5 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Ch4:	-	-	-	-	$\leq 0.01\% + 3 \text{ mV}$	$\leq 0.01\% + 3 \text{ mV}$
Ripple & Noise						
Ch1 / Ch2:	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 350 \text{ uV rms}$ (5 Hz - 1 MHz)	$\leq 5 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 350 \text{ uV rms}$ (5 Hz - 1 MHz)
Ch3:	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 2 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 5 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)
Ch4:	-	-	-	-	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)	$\leq 1 \text{ mV rms}$ (5 Hz - 1 MHz)
Recovery Time (50% Load Change, minimum load 0.5 A)	$\leq 50 \text{ us}$	$\leq 100 \text{ us}$	$\leq 50 \text{ us}$	$\leq 100 \text{ us}$	$\leq 100 \text{ us}$	$\leq 50 \text{ us}$
<b>Constant Current</b>						
Line Regulation	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$
Load Regulation	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$	$\leq 0.2\% + 3 \text{ mA}$
Ripple & Noise	$\leq 3 \text{ mA rms}$	$\leq 3 \text{ mA rms}$	$\leq 2 \text{ mA rms}$	$\leq 3 \text{ mA rms}$	$\leq 3 \text{ mA rms}$	$\leq 2 \text{ mA rms}$
<b>Other</b>						
Series Tracking	0-64 V	0-64 V	0-64 V	0-120 V	0-64 V	0-64 V
Parallel Tracking	0-6.4 A	0-6A	0-6 A	0-12 A	0-6 A	0-6 A
Programmable	Yes	No	Yes	No	No	Yes
Technology	Linear	Linear	Linear	Switching	Linear	Linear
Product Style	D	B	A	C	B	A

### Notes

T3PS3000: Ch3 is switchable between 2.5V, 3.3V and 5V.

T3PS33203: Ch3 is a fixed 5V output.

T3PS33203P: Ch3 is switchable between 1.8V, 2.5V, 3.3V and 5V.

T3PS36006: Ripple & Noise  $\leq 50 \text{ mVpk-pk}$  (20Hz to 20 MHz). Ch1 and Ch2 can output 0-30V at 0-6A or 0-60V at 0-3A before applying series or parallel tracking.

# Form Factor



Product Style A

Dimensions: 213mm wide, 145mm high, 312mm deep. Weight 7.5kg Approx.



Product Style B

Dimensions: 210mm wide, 155mm high, 306mm deep. Weight 7kg Approx.



Product Style C

Dimensions: 255mm wide, 145mm high, 265mm deep. Weight 6kg Approx.



Product Style D

Dimensions: 225mm wide, 143mm high, 278mm deep. Weight 8kg Approx.

## PRODUCT OVERVIEW

The T3PS3XXXX and T3PS4XXXX Series are a range of triple and quad output power supplies offering a range of voltage and current levels up to 375 Watts.

All models offer series and parallel tracking mode whereby Ch1 and Ch2 outputs can function independently of one another, or in parallel or series mode. In independent mode the two outputs function completely independently of one another, as two separate outputs. In parallel mode the two outputs act as a single output giving the standard output voltage range but with the two output current values added together giving twice the output current. In series mode the two outputs again act as a single output but now outputting twice the voltage allowing higher voltages to be reached at the normal current level.

The Linear technology power supplies deliver exceptionally low Ripple & Noise, Line and Load regulation, fast load change recovery time, and are fully programmable down to 1mV or 1mA resolution (programmable models only). The advanced design of the switching technology power supplies offer the highest power density whilst reaching performance levels approaching that of a Linear power supply.

# Ordering Information

## Models and Characteristics

T3PS3000	0-32V / 0-32V / 2.5V, 3.3V, 5V	0-3.2A / 0-3.2A / 0-3.2A	220 W	Programmable
T3PS33203	0-32V / 0-32V / 5V	0-3A / 0-3A / 0-5A	207 W	
T3PS33203P	0-32V / 0-32V / 1.8V, 2.5V, 3.3V, 5V	0-3A / 0-3A / 0-5A	207 W	Programmable
T3PS36006	0-30V / 0-30V / 0.1-5V	0-6A / 0-6A / 0-3A	375 W	
T3PS43203	0-32V / 0-32V / 0-15V / 0-5V	0-3A / 0-3A / 0-1A / 0-1A	212 W	
T3PS43203P	0-32V / 0-32V / 0-15V / 0-5V	0-3A / 0-3A / 0-1A / 0-1A	212 W	Programmable

Each power supply comes complete with a power cord, connection leads and includes a 3 Year return to Teledyne LeCroy warranty.

### Notes

T3PS3000: Ch3 is switchable between 2.5V, 3.3V and 5V.

T3PS33203: Ch3 is a fixed 5V output.

T3PS33203P: Ch3 is switchable between 1.8V, 2.5V, 3.3V and 5V.

T3PS36006: Ch1 and Ch2 can output 0-30V at 0-6A or 0-60V at 0-3A before applying series or parallel tracking. In series tracking mode the T3PS36006 offers 0-120V at 0-3A, in parallel tracking mode the T3PS36006 offers 0-30V at 0-12A.

All power supplies support Constant Voltage and Constant Current modes.

# ABOUT TELEDYNE TEST TOOLS



## Company Profile

Teledyne LeCroy is a leading provider of oscilloscopes, protocol analyzers and related test and measurement solutions that enable companies across a wide range of industries to design and test electronic devices of all types. Since our founding in 1964, we have focused on creating products that improve productivity by helping engineers resolve design issues faster and more effectively. Oscilloscopes are tools used by designers and engineers to measure and analyze complex electronic signals in order to develop high-performance systems and to validate electronic designs in order to improve time to market.

The Teledyne Test Tools brand extends the Teledyne LeCroy product portfolio with a comprehensive range of test equipment solutions. This new range of products delivers a broad range of quality test solutions that enable engineers to rapidly validate product and design and reduce time-to-market. Designers, engineers and educators rely on Teledyne Test Tools solutions to meet their most challenging needs for testing, education and electronics validation.

## Location and Facilities

Headquartered in Chestnut Ridge, New York, Teledyne Test Tools and Teledyne LeCroy has sales, service and development subsidiaries in the US and throughout Europe and Asia. Teledyne Test Tools and Teledyne LeCroy products are employed across a wide variety of industries, including semiconductor, computer, consumer electronics, education, military/aerospace, automotive/industrial, and telecommunications.

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