

# Power Supplies Data Sheet

Single, Dual, Triple and Quad Output

## **Broad Product Range**

Current: Up to 6 Amps Voltage: Up to 64 Volts Power: Up to 217 Watts





#### **Tools for Improved Debugging**

<ul> <li>Models with from 1 to 4 outputs.</li> </ul>	Flexible choice of outputs to meet your DUT needs.
Cutting edge Linear DC Power Supply Design.	Improved power supply specifications meets your low noise power needs.
<ul> <li>Ch1 and Ch2 support Constant Voltage and Constant Current Operation.</li> </ul>	Flexible voltage and current output configurations for a broader application coverage.
<ul> <li>Low acoustic fan noise with automatic fan speed control circuit.</li> </ul>	Minimise the fan "on time" and fan noise in the users work environment.
Remote Output On/Off Control (not programmable).	Turn the output On or Off from an external device.
<ul> <li>Only 210 mm Wide x 155 mm High x 306 mm Deep.</li> <li>Weight Approx. 7 kg.</li> </ul>	High power/high performance whilst take up the minimum of bench space.

#### **Models and Characteristics**

T3PS13206	Ch1	0-32 V / 0-6 A	Support for C.V. and C.C. Modes
T3PS23203	Ch1 / Ch2	0-32 V / 0-3 A	Support for C.V. and C.C. Modes
T3PS33203	Ch1 / Ch2	0-32 V / 0-3 A	Ch1 / Ch2 support for C.V. and C.C. Modes
	Ch3	5 V / 0-5 A	
T3PS43203	Ch1 / Ch2	0-32 V / 0-3 A	Ch1 / Ch2 support for C.V. and C.C. Modes
	Ch3	0-5 V / 0-1 A	
	Ch4	0-15 V / 0-1 A	

### **MULTIPLE OUTPUT LINEAR D.C. POWER SUPPLY**



Rear Panel

#### T3PSX3200 Series

- 1/2/3/4 Independent Isolated Output
- 4.3 Inch LCD Display
- Setting & Read Back Resolution 100 mV / 10 mA<sup>1)</sup>
- Output On/off
- Analog Control (Remote I/O)
   For Output ON/OFF
- Set View Function For Checking an Original V/I Setting During Output On
- Key Lock Function
- Tracking Series And Parallel Operation
- Smart Cooling Fan Achieving Low Noise

The T3PSX3200 Series is cutting edge, economical linear DC Power supplies. The T3PSX3200 Series features output power from 192 to 217 watts, up to four independent isolated output channels, high resolution, low noise, high reliability, and compact size.

The T3PSX3200 Series has a built-in digital panel control design to replace conventional control method. This unique design allows the T3PSX3200 Series linear DC power supply to provide users with more efficient functionalities, including set view and key lock to expe-

dite the operation process. The key lock function protects DUTs by preventing others from changing voltage and current parameters. Additionally, output key light facilitates users in clearly reading the operational status of the power supply.

#### **Applications**

- Laboratories and Educational Facilities
- Product Testing and Quality Assurance
- Service Operation and Post-Sales Support
- Product Development and Debugging

#### **Tracking Series and Parallel Operation**

In addition to independent output channels, the T3PSX3200 Series provides tracking series and parallel operation (For T3PS23203/T3PS33203/T3PS43203). The series and parallel connections allow power supplies to output 32 V / 6 A (Parallel Connection) and 64 V / 3 A (Series Connection).



Internal connection for tracking Series and Parallel operation via control panel

#### **Convenient Function**

The T3PSX3200 Series has a built-in set view and key lock to expedite the operation process. The key lock function protects DUTs by preventing others from changing voltage/current parameters.



The key lock function prevent DUTs from unnecessary damages caused by mis-operation.

#### Remote I/O for output On/Off function

The T3PSX3200 Series also provides the analog control (Remote I/O) function for external output On/Off control.



For controlling the output On/Off function through the specific pin assignment of remote control connector which is in rear panel.

#### **Ordering Information**

Model	T3PS13206	Single Channel, 192 W Linear DC Power Supply				
	T3PS23203	2 Channels, 192 W Linear DC Power Supply				
	T3PS33203	3 Channels, 217 W Linear DC Power Supply				
	T3PS43203	4 Channels, 212 W Linear DC Power Supply				
Accessories	Quick Start Guide x 1; Power Cord x 3					
	T3PS13206	Test Lead GTL-104 A x 1; GTL-105 x 1				
	T3PS23203	Test Lead GTL-104 A x 2				
	T3PS33203	Test Lead GTL-104 A x 3				
	T3PS43203	Test Lead GTL-104 A x 2; GTL-105 A x 2				

### **SPECIFICATIONS**

Model	T3PS43203				T3PS332	203		T3PS232	203	T3PS1320
Output Mode										
Number of Channel	01.11	0110	01.10	CLIA	OL II	0110	0110	OL II	0110	0111
	CH1 0 ~ 32 V	CH2 0 ~ 32 V	CH3 0 ~ 5 V	CH4 0 ~ 15 V	CH1 0 ~ 32 V	CH2 0 ~ 32 V	CH3 5 V	CH1 0 ~ 32 V	CH2 0 ~ 32 V	CH1 0 ~ 32 V
Voltage Current	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	0 ~ 5 V	$0 \sim 15 \text{ V}$ $0 \sim 1 \text{ A}$	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	5 A	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	$0 \sim 32 \text{ V}$ $0 \sim 3 \text{ A}$	0 ~ 32 V
Tracking Series Voltage	0 ~ 64 V	0 ~ 3 A	U~IA	0~1A	0 ~ 64 V	0~3A	J A	0 ~ 64 V	0 ~ 3 A	0 ~ 0 A
Tracking Parallel Current	0 ~ 6 A			_	0 ~ 6 A		_	0 ~ 6 A		_
Constant Voltage (					OVA			OVA		
	•									
Line Regulation	≤ 0.01 % -				0.000	\/ / I'		0.4)		
Load Regulation	_			$t \le 3 A$ ; $\le 0$	0.02 % + 5	mv (rating	current >	> 3 A)		
Ripple & Noise		is (5 Hz ~			1054)					
Recovery Time	≤ 100 µs	(50 % Load	Change,	minimum l	oad 0.5 A)					
<b>Constant Current C</b>	)peratior	1								
Line Regulation	≤ 0.2 % +			_						
Load Regulation	≤ 0.2 % +	3 mA							,	
Ripple & Noise	≤ 3 mArn	ns						,	,	,
<b>Tracking Operation</b>	(CH1, C	H2)								
Tracking Error	≤ 0.1 % +	10 mV of	Master (0	~ 32 V) No	Load, wit	h Load add	d load reg	ulation ≤ 10	00 mV)	
Parallel Regulation		01 % + 3 m .01 % + 3 n		current ≤ 3	3 A); ≤ 0.02	% + 5 mV	(rating cu	ırrent > 3 A)		
Series Regulation	Line: ≤ 0.0	01 % + 5 m	V							
Ripple & Noise	Load: ≤ 1	00 mV								
CH3 Operation For	(T3PS3	3203)								
Output Voltage	5.0 V, ± 5	%								
Output Current	5 A									
Line Regulation	≤ 3 mV									
<b>→</b>	≤5 mV									
	≥ 3 111V									
Load Regulation		(5 Hz ~ 1	MHz)							
Load Regulation Ripple & Noise		(5 Hz ~ 1	MHz)							
Load Regulation Ripple & Noise  Meter			MHz)							
Load Regulation Ripple & Noise  Meter  Voltage Resolution	1 mVrms		MHz)							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution	1 mVrms 100 mV <sup>1)</sup> 10 mA <sup>1)</sup>			30 mV); Cu	rrent ± (0.3	3% of read	ing +6 mA	A)		
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ±	(0.1 % of r	eading + 3	30 mV); Cu 30 mV); Cu						
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ±	(0.1 % of r	eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy  Insulation	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±	(0.1 % of r	eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±	(0.1 % of r (0.1 % of r	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±  20 MΩ or 30 MΩ or	(0.1 % of r	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±  20 MΩ or 30 MΩ or	(0.1 % of r (0.1 % of r above (DC above (DC	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond Operation Temp	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ±  Voltage ±  20 MΩ or 30 MΩ or  ition  0 ~ 40 °C	(0.1 % of r (0.1 % of r above (DC) above (DC)	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond Operation Temp Storage Temp	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±  20 MΩ or 30 MΩ or  ition  0 ~ 40 °C  -10 ~ 70	(0.1 % of r (0.1 % of r above (DC above (DC	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond Operation Temp Storage Temp Operating Humidity	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±  20 MΩ or 30 MΩ or  ition  0 ~ 40 °C  -10 ~ 70  ≤ 80 % RH	(0.1 % of r (0.1 % of r above (DC above (DC	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond Operation Temp Storage Temp Operating Humidity Storage Humidity	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ± Voltage ±  20 MΩ or 30 MΩ or  ition  0 ~ 40 °C  -10 ~ 70	(0.1 % of r (0.1 % of r above (DC above (DC	eading + 3 eading + 3							
Load Regulation Ripple & Noise  Meter  Voltage Resolution Current Resolution Setting Accuracy Readback Accuracy Insulation Chassis and Terminal Chassis and AC Cord Environment Cond Operation Temp Storage Temp	1 mVrms  100 mV <sup>1)</sup> 10 mA <sup>1)</sup> Voltage ±  Voltage ±  20 MΩ or 30 MΩ or 30 MΩ or ition  0 ~ 40 °C −10 ~ 70 ≤80 % RH ≤70 % RH	(0.1 % of r (0.1 % of r above (DC above (DC	eading + 3 eading + 3 500 V)		rrent ± (0.3	3 % of read	ing +6 mA			

<sup>&</sup>lt;sup>1)</sup> For a higher resolution (10 mV / 1 mA), please follow the setting procedure of the user manual on p 35. When using a higher resolution, the current or voltage adjustment may be limited by the knob sensitivity.

Specifications subject to change without notice.

### **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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