TELEDYNE TEST TOOLS
Everywhereyoulook™

# T3PS16081P / 30051P Programmable Linear DC Power Supplies

# Data Sheet

# T3PS16081P

# T3PS30051P

## Product Overview

T3PS30051P / T3PS16081P Programmable Linear DC Power Supply has a 2.8 inch TFT-LCD display, features remote computer control capability, and real time wave display, to deliver high performance and ease-of-use.

The T3PS16081P features a high precision programmable output capable of delivering up to 16 V, the T3PS30051P features a high precision programmable output capable of delivering up to 30 V and also includes a 4-wire sense function for more accurate voltage sourcing, especially for long leads or high resistance connections. There are additional output short and overload protect functions to assist in production and development applications.

## Main Features

- Single path high-precision programmable voltage output :

  T3PS16081P: 16 V/8 A, total power up to 128 W

  T3PS30051P: 30 V/5 A, total power up to 150 W
- Stable, reliable, Low ripple and noise : ≤ 350 uVrms/3 mVpp; < 2 mArms
- Fast transient response time: < 50 μs
- 5 digit Voltage, 4 digit Current Display, Minimum Resolution: 1 mV/1 mA
- Supports front panel timing output functions
- 2.8 inch true color TFT- LCD 240 *320 display
- 2 types of output modes : Two-wire output mode, 4-wire compensation output mode , Maximum compensation voltage 1V.
- 100/120/220/230 V compatible design to meet the needs of different power grids
- Intelligent temperature-controlled fanreduces noise
- Clear graphical interface, with the waveform display function
- Internal 5 groups of system parameter save/recall
- Includes PC software: Easypower, supports SCPI, LabView driver


# Design Features

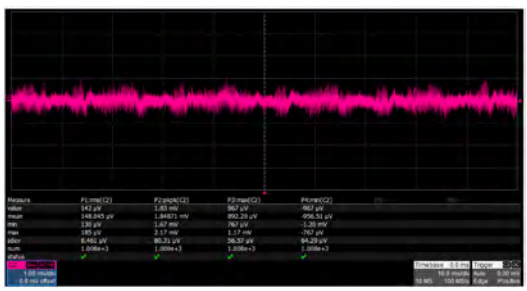
## High-resolution and high-precision output

The T3PS30051P / T3PS16081P power supply features a high measurement resolution of 1mV/1mA . This ensures accurate output even with very with small changes in voltage or current. This is impossible for a low resolution power supply.

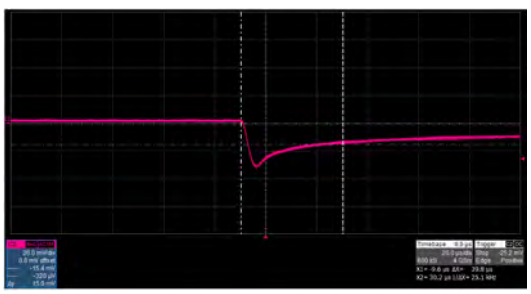
## 4-wire SENSE compensation mode function

In the 4-wire SENSE compensation output mode: By using a separate measurement circuit, the supply can more accurately compensate for any voltage drops due to high resistance connections or long cables. Maximum compensation voltage is 1V.

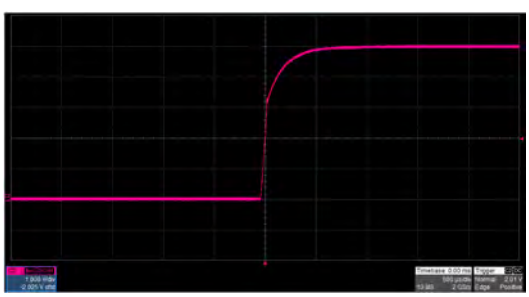
## Low ripple and noise



## Fast transient response time

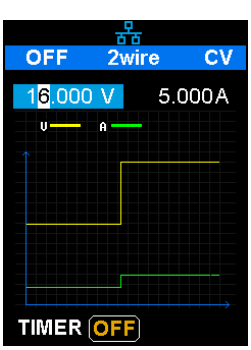


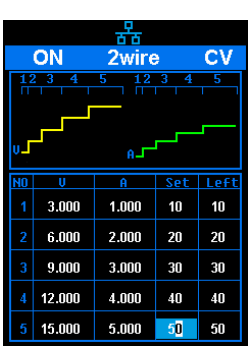
## Low voltage overshoot



## 0.01% Load Regulation & 0.2% Line Regulation


## Panel displays the timing output




## Save/Recall setting parameters

T3PS30051P / T3PS16081P programmable power supply can save or recall 5 groups of setting parameters in internal storage. You can easily recall the settings you need.


## Specifications

All the specifications are guaranteed when the instrument has been working for more than 30 minutes under the specified operating temperature. Unless otherwise noted, the specifications are applicable to all the channels of the specified model.

| Model | | T3PS16081P | T3PS30051P |
|---|---|---|---|
| DC Output<br>(0 ℃ to 40 ℃ ) | | Output Voltage: 0 to 16 V<br>Output Current: 0 to 8 A | Output Voltage: 0 to 30 V<br>Output Current: 0 to 5 A |
| Max Output Power | | 128W | 150W |
| Display | | 2.8 inch true color TFT-LCD<br>5 digit voltage/4 digit current | |
| Resolution | | 1mV/1mA | |
| Program Accuracy<br>(25 ± 5 ℃ ) | | Voltage: ±(0.03% of reading+10 mV) | |
| | | Current: ±(0. 3% of reading+10 mA) | |
| Readback Accuracy<br>(25 ± 5 ℃ ) | | Voltage: ±(0.03% of reading+10 mV) | |
| | | Current: ±(0. 3% of reading+10 mA) | |
| Temperature Coefficient per ℃ (Output Percentage + Offset) | | Voltage: ±(0.01% of reading+3 mV) | |
| | | Current: ±(0.01% of reading+3 mA) | |
| Constant Voltage Mode | Load Regulation | ≤ 0.01% + 2 mV | |
| | Ripple & Noise | ≤ 350 uVrms/3 mVpp (20 Hz to 20 MHz) | |
| | Recovery Time | < 50 μs (50% load change, minimum load 0.5 A) | |
| Constant Current Mode | Line Regulation | ≤ 0.2% + 3 mA | |
| | Load Regulation | ≤ 0.2% + 3 mA | |
| | Ripple & Noise | ≤ 2 mArms | |
| Locking Key | | Yes | |
| Memory Save/Recall | | 5 Sets | |
| Power Source | | AC 100 /120/220/230 V ± 10% 50/60Hz | |
| Standard Configuration Interface | | USB Device, LAN | |
| Insulation | | Case to Terminal ≥ 20 MΩ (DC 500 V)<br>Case to AC line ≥ 30 MΩ (DC 500 V) | |
| Operating Environment | | Outdoor Usage:<br>Elevation: ≤2000 m Environment Temperature 0 to 40 ℃ Relative Humidity ≤ 80%<br>Installation Level: Ⅱ Pollution Level: 2 | |
| Storage Environment | | Environment Temperature: -10 to 70 ℃ Relative Humidity ≤ 70% | |
| Dimension | | 154.6 (W) × 144.5 (H) × 280(D) mm | |
| Weight | | ≈5.5kg | |

## Ordering information

| Product information | Product No |
|---|---|
| Single path independent output, min resolution 1 mV/1 mA, USB Device & LAN, 2.8 inch LCD display | T3PS16081P, T3PS30051P |
| **Standard Accessories** | |
| USB Cable -1 | |
| Quick Start -1 | |
| Power cord -1 | |
| Output Test Cord -2 Sets | |

## Warranty

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# 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 expands on the Teledyne LeCroy product portfolio by adding a comprehensive range of test equipment solutions for its customers. The new range of product solutions deliver engineers with a broad range of quality test solutions that enables speed to market product validation and design.  More and more designers, engineers and lecturers are relying on Teledyne Test Tools to meet their testing, education and electronics validation needs with confidence and within budget.

## Location and Facilities

Headquartered in Chestnut Ridge, New York, Teledyne Test Tools and Teledyne LeCroy have 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.