TELEDYNE TEST TOOLS
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Quick Start Guide

T3EL15060P and T3EL50015P DC Electronic Load Quick Start Guide

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Table of Contents

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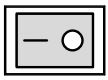
SAFETY INSTRUCTIONS

This chapter contains important safety instructions that you must follow during operation and storage. Read the following before any operation to insure your safety and to keep the instrument in the best possible condition.

Safety Symbols

These safety symbols may appear in this manual or on the instrument.

 WARNING	Warning: Identifies conditions or practices that could result in injury or loss of life.
 CAUTION	Caution: Identifies conditions or practices that could result in damage to the instrument or to other properties.
	DANGER High Voltage
	Attention Refer to the Manual
	Earth (ground) Terminal
	Frame or Chassis Terminal
	I Power On; connected to AC mains. O Power Off; disconnected from AC mains.

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Do not dispose electronic equipment as unsorted municipal waste. Please use a separate collection facility or contact the supplier from which this instrument was purchased.

Safety Guidelines

General Guideline

- Do not place any heavy object on the instrument.

CAUTION

- Avoid severe impact or rough handling that leads to damaging the instrument.
- Do not discharge static electricity to the instrument.
- Use only crimped wires, not bare wires, for the terminals.
- Do not block the cooling fan opening.
- Do not disassemble the instrument unless you are qualified.
- The equipment is not for measurements performed for CAT II, III and IV.

(Measurement categories) EN 61010-1:2010 specifies the measurement categories and their requirements as follows. The instrument falls under category II.

- Measurement category IV is for measurement performed at the source of low-voltage installation.
- Measurement category III is for measurement performed in the building installation.
- Measurement category II is for measurement performed on the circuits directly connected to the low voltage installation.
- 0 is for measurements performed on circuits not directly connected to Mains.

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Power Supply ⚠ WARNING	• AC Input voltage range: 100-120VAC/200-240VAC (90-132VAC/180-250VAC) • Frequency: 47-63Hz • Power: 90VA Max • To avoid electrical shock connect the protective grounding conductor of the AC power cord to an earth ground.
Cleaning	• Disconnect the power cord before cleaning. • Use a soft cloth dampened in a solution of mild detergent and water. Do not spray any liquid. • Do not use chemicals containing harsh material such as benzene, toluene, xylene, and acetone.
Operation Environment	• Location: Indoor, no direct sunlight, dust free, almost non-conductive pollution (Note below) • Temperature: 0°C to 40°C • Humidity: 0 to 85% RH • Altitude: <2000m (Pollution Degree) EN 61010-1:2010 specifies the pollution degrees and their requirements as follows. The instrument falls under degree 2. Pollution refers to "addition of foreign matter, solid, liquid, or gaseous (ionized gases), that may produce a reduction of dielectric strength or surface resistivity". • Pollution degree 1: No pollution or only dry, non-conductive pollution occurs. The pollution has no influence. • Pollution degree 2: Normally only non-conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation must be expected. • Pollution degree 3: Conductive pollution occurs, or dry, non-conductive pollution occurs which becomes conductive due to condensation which

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	is expected. In such conditions, equipment is normally protected against exposure to direct sunlight, precipitation, and full wind pressure, but neither temperature nor humidity is controlled.
Storage environment	• Location: Indoor • Temperature: -20°C to 70°C • Humidity: <90% RH
Disposal 	Do not dispose this instrument as unsorted municipal waste. Please use a separate collection facility or contact the supplier from which this instrument was purchased. Please make sure discarded electrical waste is properly recycled to reduce environmental impact.

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Power cord for the United Kingdom

When using the instrument in the United Kingdom, make sure the power cord meets the following safety instructions.

NOTE: This lead/appliance must only be wired by competent persons

WARNING: THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in this lead are coloured in accordance with the following code:

Green/ Yellow:	Earth
Blue:	Neutral
Brown:	Live (Phase)

As the colours of the wires in main leads may not correspond with the coloured marking identified in your plug/appliance, proceed as follows:

The wire which is coloured Green & Yellow must be connected to the Earth terminal marked with either the letter E, the earth symbol ⏚ or coloured Green/Green & Yellow.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Blue or Black.

The wire which is coloured Brown must be connected to the terminal marked with the letter L or P or coloured Brown or Red.

If in doubt, consult the instructions provided with the equipment or contact the supplier.

This cable/appliance should be protected by a suitably rated and approved HBC mains fuse: refer to the rating information on the equipment and/or user instructions for details. As a guide, a cable of 0.75mm^2 should be protected by a 3A or 5A fuse. Larger conductors would normally require 13A types, depending on the connection method used.

Any exposed wiring from a cable, plug or connection that is engaged in a live socket is extremely hazardous. If a cable or plug is deemed hazardous, turn off the mains power and remove the cable, any fuses and fuse assemblies. All hazardous wiring must be immediately destroyed and replaced in accordance to the above standard.

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GETTING STARTED

This chapter provides a brief overview of the T3EL, the package contents, instructions for first time use and an introduction to the front panel, rear panel and GUI.

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T3EL Introduction

The T3EL is an economic, standalone, high performance DC electronic load positioned to test a wide range of different power sources. The DC electronic load is fully programmable to simulate anything from basic static loads to complex dynamic loads. The T3EL is extremely robust and capable of molding to any test environment.

Overview

Model	Operating Voltage (DC)	Current	Power
T3EL15060P	1V-150V	6A (Low range) 60A (High range)	300W
T3EL50015P	2.5V-500V	1.5A (Low range) 15A (High range)	300W

Main Features

Performance	• High slew rates of up to 2.5A/µs (T3EL15060P) for a fast response speed • High resolution – 16 bit
Features	• 7 operating modes: CC, CV, CR, CP, CC+CV, CR+CV, CP+CV • Fully programmable with normal and fast sequences • Soft start • Dynamic mode • OCP, OVP and other protection features • Remote sense • Integrated meter

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Interface	• USB • External voltage or resistance control • Rear panel trigger in/out BNC • Analog external control

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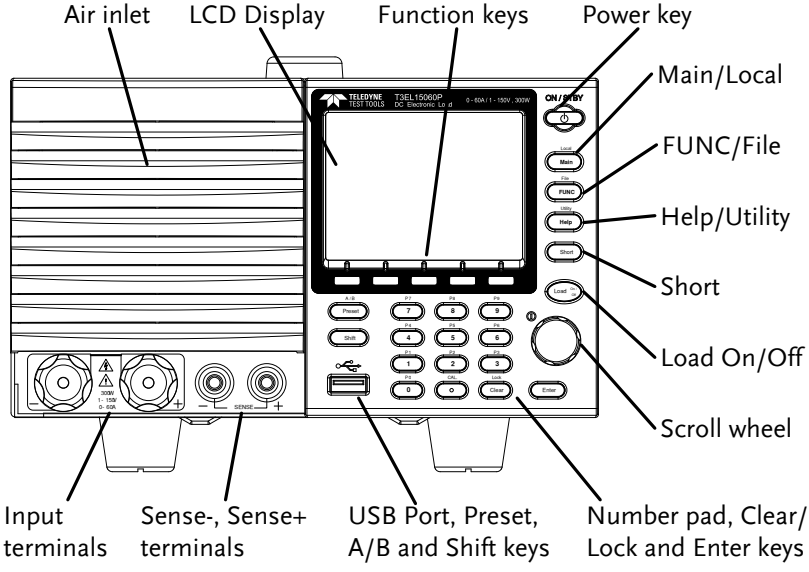
Appearance

T3EL Front Panel (T3EL15060P/T3EL50015P)



Air Inlet	The air inlet has a removable dust filter
LCD display	3.5 inch LCD display
Function keys	 The function keys directly correspond to the soft menu keys at the bottom of the display.
ON/STBY	 Turns the unit on or puts the unit into standby mode. Use the power switch on the rear panel to turn the unit off.

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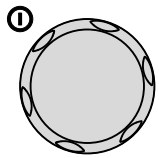
Main/Local	Main	Main: Sets the operating mode: CC, CV, CR, CP mode.
	Shift + Local / Main	Local (Shift + Main): Puts the instrument back into local mode from remote mode.
FUNC/File	FUNC	FUNC: Sets the program function, sequence function or other special functions.
	Shift + File / FUNC	File (Shift + FUNC): Accesses the file system.
Help/Utility	Help	Help: Access the help menu.
	Shift + Utility / Help	Utility (Shift + Help): Access the utility menu.
Short	Short	Pressing the Short key will simulate shorting the input terminals. The Short key will be lit when active.
Load on/off	Load On/Off	Turns the load on or off. The Load On/Off key will be lit when active.
Scroll wheel		Use the scroll wheel to navigate the menu system or to edit parameters.

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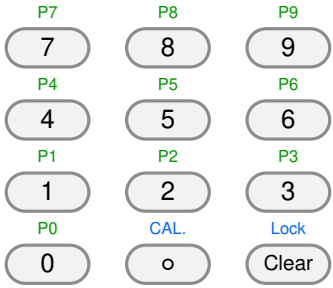
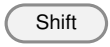
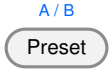
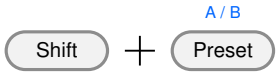
Enter		Press the Enter key to select highlighted menu items.
Number pad		Number pad: Used to enter numerical values. P0-P9 (Preset + Number keys): Loads one of 10 preset settings.
Clear/Lock		Clear: Clears the current parameter values. Lock (Shift + Clear): Locks the front panel keys and selector knob.
Shift		Shift: Used in conjunction with other keys to select secondary functions.
Preset	 	Used in conjunction with the number pad to save or load preset settings P0 to P9. The A/B function is used to manually switch from Level A to Level B when in CC or CR static mode.

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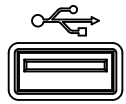
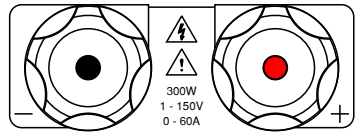
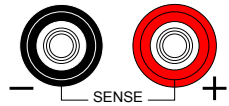
USB port		USB A port. Used for save and recall functions.
Front panel input terminals		Negative terminal. Positive terminal.
Sense terminals		Sensing ports for remote sense.

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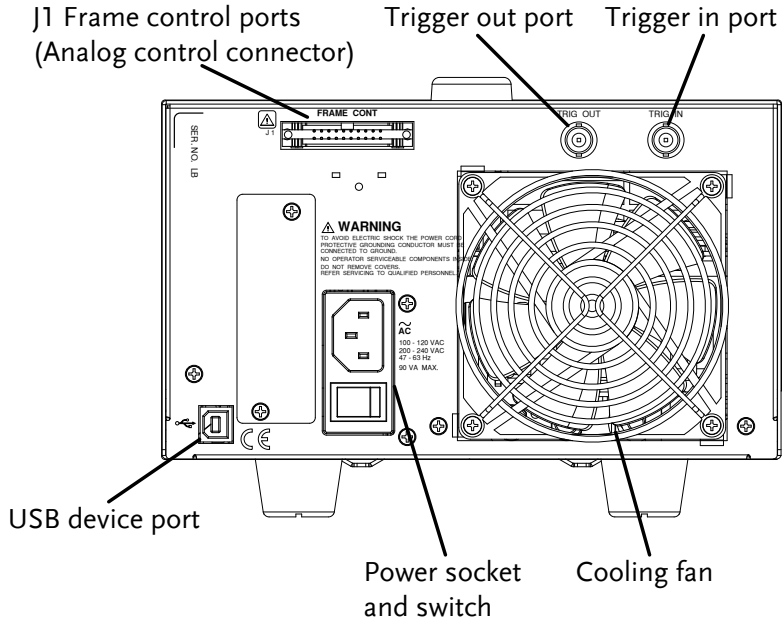
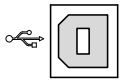
Rear Panel (T3EL15060P/T3EL50015P)

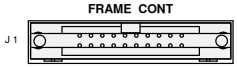


USB B — The USB B is used for remote control.



USB B port

J1 Frame control ports (Analog control connector)



The J1 connector is assigned to perform external control and monitoring.

Cooling fan — The exhaust fan is used to expel the heat from the unit. Please ensure there is at least 20cm distance between any object and the fan.

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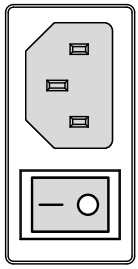
Power Socket



Power Socket:
100-120V, 200-240V
47-63Hz.

Power Switch

Turns the unit on/off.

USB A

USB A Slave port. USB 1.1/2.0

TRIG OUT

Trigger out BNC terminal:
Outputs a pulse signal during sequence or dynamic operation. The trigger signal has a 4.5V output with a pulse width of a least 2us and an impedance of 500Ω.

TRIG IN

Trigger input BNC terminal:
This terminal is used to externally resume sequences that have been paused. Pulled down internally to ground by a 100kΩ resistor.

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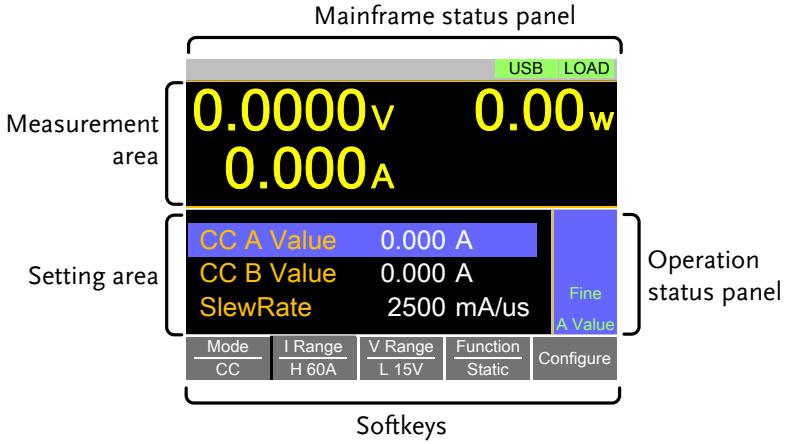
Display



Setting Area	The setting area is used to display and edit the settings for the current mode/function.
Measurement Area	Displays the voltage, current and power values.
Mainframe Status Panel	The mainframe status panel displays the status of the load, remote control and short function. When an icon is green it indicates that the function is off. When the icon is orange, the function is on.
Operation Status Panel	This status panel is used to display the status of the current mode.
Soft-keys	The soft-key menus are used to select different functions or parameters.

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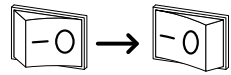
First Time Use Instructions

Use the procedures below when first using the T3EL, power up the instrument, restore the factory default settings and check the firmware version. Lastly, the Conventions section will introduce you to the basic operating conventions used throughout the user manual.

Power Up and Self Test

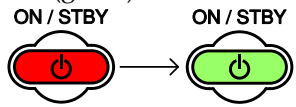
Steps

1. Insert the AC power cord into the power socket.
2. Turn the external power switch on. (O → —)



3. If the unit doesn't turn on, press the On/Standby key.

- The ON/STBY key will go from standby (red) to on (green).



4. The unit will show the splash screen and then load the settings from when the unit was last powered down.

Note

If the T3EL fails to start up properly or does not turn on, please see you local distributor.

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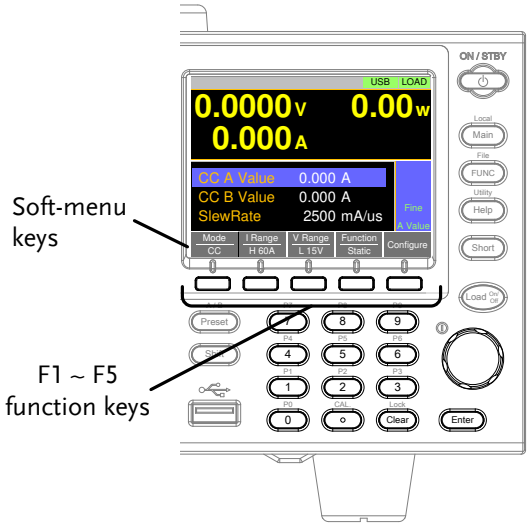
Conventions

The following conventions are used throughout the user manual. Read the conventions below for a basic grasp of how to operate the T3EL Series menu system using the front panel keys.

Soft Menu keys

The F1 to F5 function keys at the bottom of the display correspond directly to the soft-menu keys on top.



Select Sub Menu

Configure

Pressing this type of soft-menu key will enter a submenu.

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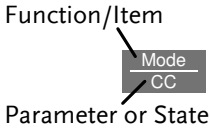
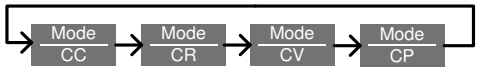
Toggle Parameter or State

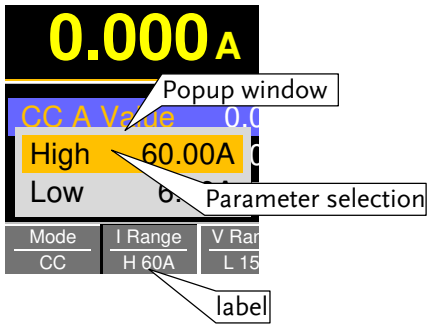


This type of soft-menu icon has the function/item on the top of the label and the selected setting or mode on the bottom of the label.

Repeatedly press the associated function key (F1-F5) to cycle through each setting. For example, repeatedly pressing the *Mode* soft-menu key will cycle through the CC, CR, CV and CP modes.



For some parameters, a popup window will also appear. Selection of the setting is the same. Repeatedly pressing the relevant function key (F1-F5) will cycle through each setting. The selection on the popup window will also be reflected on the label.



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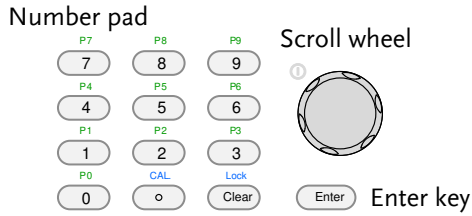
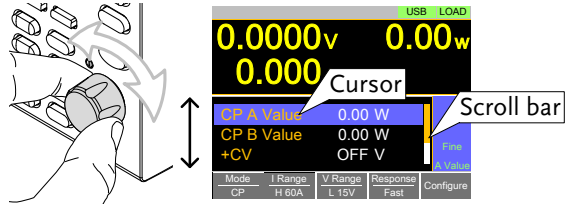
Parameter Input

The scroll wheel, Enter key and number pad can be used to edit parameter values.

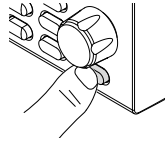


1. Use the scroll wheel to move the cursor to the desired parameter.

- A scroll bar is shown when there are additional parameters off-screen.



2. Press the Enter key to select the parameter. The parameter will become highlighted in white.



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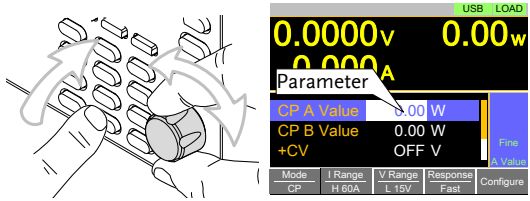
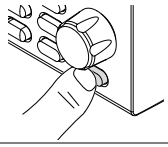
3. Then use the number pad* or scroll wheel** to edit the parameter value.



4. Press the Enter key again to finish editing the parameter value.



Clearing a Value*

*When editing a parameter with the number pad, pressing the Clear key will restore the parameter to the previous value.

Using the Scroll Wheel to Edit a Parameter**

**To edit a parameter using the scroll wheel, simply turn the scroll wheel. Clockwise increases the value, counterclockwise decrease the value.

Pressing the scroll wheel when a parameter is highlighted allows you to change the step resolution. There are two different step resolution methods: Step Mode and Cursor Mode.

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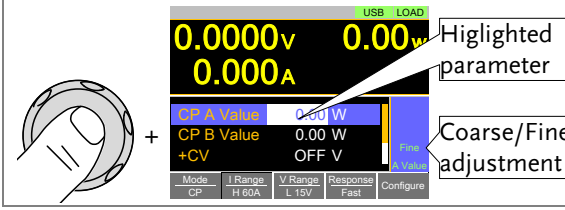
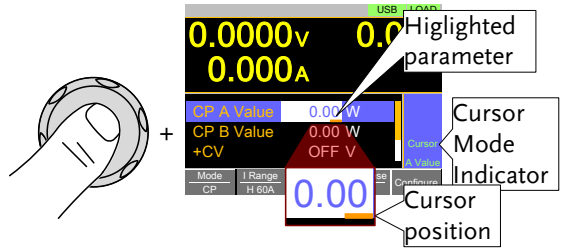
Step Mode: This is the default step resolution method and will only be available to use when it is applicable (Indicated by *Fine* or *Coarse* in the Operation Status panel).

When a parameter is highlighted (step 3 above) pressing the scroll wheel will toggle the step resolution between fine and coarse.



Cursor Mode: This method must first be enabled before it can be used. Pressing the scroll wheel when a parameter is highlighted allows you to set the step resolution by a digit value. An orange line will appear under the currently selected digit value. Repeatedly pressing the scroll wheel moves to the next digit.



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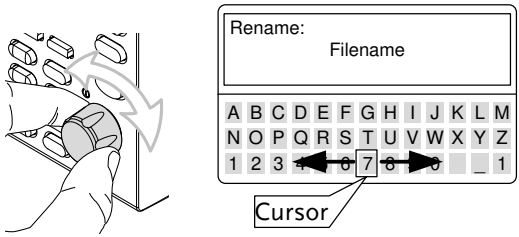
Entering Alphanumeric Characters

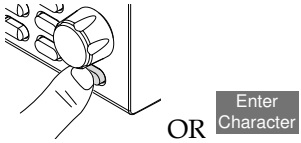
When renaming files, creating memos or notes, you will be required to enter alphanumeric characters when the character entry screen appears.

- Only alphanumeric characters as well as space [ ], underscore [_] and minus [-] characters allowed.

1. Use the scroll wheel to move the cursor to the desired character.



2. Press the Enter key or *Enter Character[F1]* to select a character.



3. To delete a character, press *Back Space[F2]*.

4. To save the file name or memo, press *Save[F3]*.

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APPENDIX

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T3EL Specifications

The specifications apply when the T3EL is powered on for at least 30 minutes to warm-up to a temperature of 20˚C to 30˚C, unless specified otherwise.

If operating with long cables, remote sense must be connected to the terminals.

Overall

Model	T3EL15060P		T3EL50015P	
Power	300W			
Range	Low	High	Low	High
Voltage	1-150V	1-150V	2.5-500V	2.5-500V
Current	0-6A	0-60A	0-1.5A	0-15A
Min. Operating Voltage(dc)	1V-6A	1V-60A	2.5V-1.5A	2.5V-15A

Static Mode

Model	T3EL15060P		T3EL50015P	
Range	Low	High	Low	High
Constant Current Mode				
Range	0-6A	0-60A	0-1.5A	0-15A
Setting Range	0-6.12A	0-61.2A	0-1.53A	0-15.3A
Resolution	0.2mA	2mA	0.05mA	0.5mA
Accuracy	(T[*1]) ± (0.1% of set + 0.1% of F.S) + Vin/500kΩ (Full scale of High range)	(T[*1]) ± (0.1% of set + 0.2% of F.S) + Vin/500kΩ (Full scale of High range)	(T[*1]) ± (0.1% of set + 0.1% of F.S) + Vin/500kΩ (Full scale of High range)	(T[*1]) ± (0.1% of set + 0.2% of F.S) + Vin/500kΩ (Full scale of High range)
Constant Resistance Mode				
Range	60S-0.002S(0.01666Ω-500Ω)(300W/15V)		6S-0.0002S(0.16666Ω-5kΩ)(300W/50V)	
	6S-0.0002S(0.1666Ω-5kΩ)(300W/150V)		0.6S-0.00002S(1.6666Ω-50kΩ)(300W/500V)	
Setting Range	60S-0.002S(0.01666Ω-500Ω)(300W/15V)		6S-0.0002S(0.16666Ω-5kΩ)(300W/50V)	
	6S-0.0002S(0.1666Ω-5kΩ)(300W/150V)		0.6S-0.00002S(1.6666Ω-50kΩ)(300W/500V)	

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Resolution (30000 steps)	0.002S(15V) 0.0002S(150V)		0.0002S(50V) 0.00002S(500V)	
Accuracy	(T^{*1}) ± (0.3% of set + 0.6S) + 0.002mS		(T^{*1}) ± (0.3% of set + 0.06S) + 0.002mS	
Constant Voltage Mode				
Range	1-15V	1-150V	2.5-50V	2.5-500V
Setting Range	0-15.3V	0-153V	0-51V	0-510V
Resolution	0.5mV	5mV	1mV	10mV
Accuracy	(T^{*1}) ± (0.1% of set + 0.1% of F.S) (Full scale of Low range)	(T^{*1}) ± (0.1% of set + 0.1% of F.S) (Full scale of High range)	(T^{*1}) ± (0.1% of set + 0.1% of F.S) (Full scale of Low range)	(T^{*1}) ± (0.1% of set + 0.1% of F.S) (Full scale of High range)
Input Current Variation *2	12mV		40mV	
Constant Power Mode				
Range	0W-30W (6A)	0W-300W (60A)	0W-30W (1.5A)	0W-300W (15A)
Setting range	0W-30.6W	0W-306W	0W-30.6W	0W-306W
Resolution	1mW	10mW	1mW	10mW
Accuracy	(T^{*1}) ± (0.6 % of set + 1.4 % of f.s (Full scale of H range)) + $Vin^2/500k\Omega$			

*1: If the ambient temperature is over 30 ˚C or below 20 ˚C, then T = ± |t-25˚C| x 100ppm/˚C x Set. If the ambient is in the range of 20 ~ 30˚C, then T = 0 (t is the ambient temperature)

*2: With respect to a change in the current of 10% to 100% of the rating at an input voltage of 1V(during remote sensing).

Dynamic Mode

Model	T3EL15060P		T3EL50015P	
Range	Low	High	Low	High
General				
T1 & T2	0.05ms - 30ms / Res : 1us 30ms - 30s / Res : 1ms			
Accuracy	1us / 1ms ± 200ppm			
Slew Rate (Accuracy 10%)	0.001 - 0.25A/us	0.01 - 2.5A/us	0.25mA - 62.5mA/us	2.5mA - 625mA/us
Slew Rate Resolution	0.001A/us	0.01A/us	0.25mA/us	2.5mA/us
Slew Rate Accuracy of Setting*1	±(10% + 15us)			
Constant Current Mode				

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Current	0-6A	0-60A	0-1.5A	0-15A
Setting range	0-6.12A	0-61.2A	0-1.53A	0-15.3A
Current Resolution	0.2mA	2mA	0.05mA	0.5mA
Current Accuracy	±0.8% F.S.			
Constant Resistance Mode				
Resistance	60S-0.002S(0.01666Ω-500Ω)(300W/15V)		6S-0.0002S(0.16666Ω-5kΩ)(300W/50V)	
	6S-0.0002S(0.1666Ω-5kΩ)(300W/150V)		0.6S-0.00002S(1.6666Ω-50kΩ)(300W/500V)	
Setting Range	60S-0.002S(0.01666Ω-500Ω)(300W/15V)		6S-0.0002S(0.16666Ω-5kΩ)(300W/50V)	
	6S-0.0002S(0.1666Ω-5kΩ)(300W/150V)		0.6S-0.00002S(1.6666Ω-50kΩ)(300W/500V)	
Resistance Resolution	30000 Steps			
Resistance Accuracy	(T*1) ± (1% of set + 0.6S) + 0.002mS		(T*1) ± (1% of set + 0.06S) + 0.002mS	

*1: Time to reach from 10 % to 90 % when the current is varied from 2 % to 100 % (20 % to 100 % in L range) of the rated current.

Measurement

Model	T3EL15060P		T3EL50015P	
Range	Low	High	Low	High
Voltage Readback				
Range	0-15V	0-150V	0-50V	0-500V
Resolution	0.5mV	5mV	2mV	20mV
Accuracy	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of Low range)	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of High range)
Current Readback				
Range	0-6A	0-60A	0-1.5A	0-15A
Resolution	0.2mA	2mA	0.05mA	0.5mA
Accuracy	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg + 0.2% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg + 0.1% of F.S) (Full scale of High range)	(T*1)±(0.1% of rdg + 0.2% of F.S) (Full scale of High range)

*1: If the ambient temperature is over 30 °C or below 20 °C, then T = ± |t-25°C| x 100ppm/°C x Set. If the ambient is in the range of 20 ~ 30°C, then T = 0 (t is the ambient temperature)

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Protective

Model	T3EL15060P	T3EL50015P
Over Power Protection (OPP)		
Range	3-315W	
Resolution	10mW	
Accuracy	±(2%set + 1.5%F.S)	
Status	Load off or limit selectable	
Over Current Protection (OCP)		
Range	0.3A-63A	0.075A-15.75A
Resolution	2mA	0.5mA
Accuracy	±(2%set + 0.25%F.S)	
Status	Load off or limit selectable	
Over Voltage Protection (OVP)		
Turns the load off at 105% of the rated voltage.		
Under Voltage Protection (UVP)		
Turns off the load when detected.		
High voltage range	0.005V~153V or Off	0.01V~510V or Off
Low voltage range	0.0005V~15.3V or Off	0.001V~51V or Off
Over Temperature Protection (OTP)		
Status	Turns off the load when the heat sink temperature reaches 85 °C	
Rated Over Power Protection (ROPP)		
Value	330W	
Accuracy	±2% of rated power	
Status	Load OFF	
Rated Over Current Protection (ROCP)		
An ROCP message will be produced when the input current range is greater than 110% of the rated operating current range (I range).		
Accuracy	±2% of rated current	
Status	Load OFF	
Reverse Voltage Protection(RVP)		
	By diode. Turns off the load when an alarm occurs.	

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General

Model	T3EL15060P		T3EL50015P	
Range	Low	High	Low	High
Short Circuit				
Current(CC)	≒6A	≒60A	≒1.5A	≒15A
Voltage(CV)	≒0V	≒0V	≒0V	≒0V
Resistance(CR)	≒0.1666Ω	≒0.01666Ω	≒1.666Ω	≒0.1666Ω
Input Resistance (Load Off)	≒500kΩ(Typical)			

Remote Sensing

Voltage that can be compensated: 2V for a single line

Sequence Function

Normal Sequence	
Operation mode	CC, CR, CV, or CP
Maximum number of steps	1000
Step execution time	1 ms – 999 h 59 min 59s
Time resolution	1 ms (1 ms ~ 1 min)/100ms (1 min ~ 1 h)/1s (1 h ~ 10 h)/10 s (10 h~ 100 h)/1 min (100 h ~ 999 h 59 min)
Fast Sequence	
Operation mode	CC or CR
Maximum number of steps	1000
Step execution time	25us - 600ms
Time resolution	1us (25us-60ms) / 10us (60.01ms-600ms)

Other

Elapsed Time Delay	Measures the time from load on to load off. On/Off selectable.
Auto Load Off Timer	Automatically turns off the load after a specified time elapses.
	Can be set in the range of 1 s to 999 h 59 min 59 s or off

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Rear Panel BNC Connector	
TRIG OUT	Trigger output: Approx. 4.5 V, pulse width: Approx. 2 μs, output impedance: Approx. 500 Ω
	Outputs a pulse during sequence operation and switching operation.
TRIG IN	When a sequence is paused, the pause will be released when a high level TTL signal is applied for 10 us or longer. Pulled down the internal circuit to GND using 100kΩ.
Communication	
USB	Standard

Analog External Control

External Voltage Control	
	Operates in CC, CR, CP, or CV mode
	0 V to 10 V correspond to 0 % to 100 % of the rated current (CC mode), rated voltage (CV mode), or rated power (CP mode).
	0 V to 10 V correspond to maximum resistance to minimum resistance (CR mode)
External Resistance Control	
	Operates in CC, CR, CP, or CV mode
	0 Ω to 10 kΩ correspond to 0 % to 100 % or 100 % to 0 % of the rated current (CC mode), rated voltage (CV mode), or rated power (CP mode).
	0 Ω to 10 kΩ correspond to maximum resistance to minimum resistance or minimum resistance to maximum resistance (CR mode)
Current Monitor Output	
	10 V f.s (H range) and 1 V f.s (L range)
Load on/off Control Input	
	Turn on the load with low (or high) TTL level signal
Range Switch Input	
	Switch ranges L, H using a 1-bit signal*2
Alarm Input	
	Activate alarm with low TTL level signal input
Load on Status Output	
	On when the load is on (open collector output by a photocoupler)
Range Status Output	
	Outputs range L, H using 1-bit signal*3 (open collector output by a photocoupler)

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Alarm Status Output	
	On when OVP, OCP, OPP, OTP, UVP, RVP, or when an external alarm input is applied (open collector output by a photocoupler)
Short Signal Output	
	Relay contact output (30 VDC/1 A)

*1: Valid only when the front panel settings is H range.

*2:

	RANGE CONT 0
H range	1
L range	0

*3:

	RANGE STATUS 0
H range	OFF
L range	ON

*4: The maximum applied voltage of the photocoupler is 30 V; the maximum current is 8 mA.

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ABOUT TELEDYNE TEST TOOLS

TELEDYNE TEST TOOLS
Everywhereyoulook™

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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