



HILTI PLT300 DIGITAL LAYOUT TOOL Instructions

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Original operating instructions

Information about the documentation

About this documentation

- Read this documentation before initial operation or use. This is a prerequisite for safe, trouble-free handling and use of the product.
- Observe the safety instructions and warnings in this documentation and on the product.
- Always keep the operating instructions with the product and make sure that the operating instructions are with the product when it is given to other persons.

Explanation of symbols used

• Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used:

- **DANGER !**

Draws attention to imminent danger that will lead to serious personal injury or fatality.

- **WARNING !**





Draws attention to a potential threat of danger that can lead to serious injury or fatality.

- **CAUTION !**

Draws attention to a potentially dangerous situation that could lead to personal injury or damage to the equipment or other property.





- **Symbols in the documentation**

The following symbols are used in this document:

	Read the operating instructions before use.
	Instructions for use and other useful information
	Dealing with recyclable materials
	Do not dispose of electric equipment and batteries as household waste

- **Symbols in the illustrations**





The following symbols are used in illustrations:

	These numbers refer to the corresponding illustrations found at the beginning of these operating instructions
	The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text
	Item reference numbers are used in the overview illustrations and refer to the numbers used in the product overview section
	This symbol is intended to draw special attention to certain points when handling the product.

Product-dependent symbols


- **Symbols on the product**

The following symbols can be used on the product:

	The product supports wireless data transmission compatible with iOS and Android platforms.
	Hilti Li-ion battery type series used. Observe the information given in the section headed Intended use .
Li-Ion	Li-ion battery
	Never use the battery as a striking tool.
	Do not drop the battery. Never use a battery that has suffered an impact or is damaged in any other way.

Labels on the PLT 300

The following labels are applied to the PLT 300:

<div style="border: 2px solid black; padding: 5px; text-align: center;">  <p style="margin: 0; font-size: 0.8em;">LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT</p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <p style="margin: 0; font-size: 0.7em;">Wavelength: 500-540 nm Maximum output power: 1mW This product complies with IEC 60825-1: 2007 and 21 CFR 1040.10 and 1040.11 Except for deviations pursuant to Laser Notice NO.50, date June 24, 2007</p> </div>	<p style="margin: 0;">Laser radiation. Do not stare into the beam. Class 2 laser.</p>
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Product information

Hilti products are designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use. The type designation and serial number are printed on the rating plate.

- Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

- **Product information**

Type:	PLT 300
Generation:	01
Serial no.:	

Declaration of conformity

- We declare, on our sole responsibility, that the product described here complies with the applicable directives and standards. A copy of the declaration of conformity can be found at the end of this documentation. The technical documentation is filed here:
- Hilti Entwicklungsgesellschaft mbH | Tool Certification | Hiltistrasse 6 | D-86916 Kaufering, Germany

Safety

Safety instructions

Basic information concerning safety

In addition to the safety rules listed in the individual sections of these operating instructions, the following rules must be strictly observed at all times. The PLT 300 and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

- Never use the PLT 300 and PLC 300 without having received the appropriate instruction on their use or without having read these operating instructions.

- Always observe the operating instructions and warnings given in the applications displayed.
- Do not render safety devices ineffective and do not remove information and warning notices.
- Modification of the PLT 300 and PLC 300 or tampering with their parts is not permissible.
- To reduce the risk of injury, use only genuine Hilti accessories and ancillary equipment.
- Never point the PLT 300 or its accessories toward yourself or other persons.
- Keep laser tools out of reach of children.
- Check the accuracy of the PLT 300 before using it to make measurements.
- Use of setting-up / adjusting devices and equipment or operating procedures other than those specified in these instructions may lead to exposure to hazardous radiation.
- Due to the principle employed, the results of measurements may be negatively affected by the surrounding conditions. This includes, e.g. close proximity to equipment that generates powerful magnetic or electromagnetic fields, taking measurements from unsuitable surfaces and use of unsuitable reflectors.
- Measurements to plastic foam surfaces, e.g. polystyrene foam, to snow or to highly reflective surfaces, etc. may result in incorrect readings.
- Measurements taken to surfaces with low reflectivity in highly reflective surroundings may be inaccurate.
- Measurements taken through panes of glass or other objects may be inaccurate.
- The measurement may be incorrect if the conditions under which the measurement is taken change rapidly, e.g. due to people walking through the path of the laser beam.
- Do not point the PLT 300 or accessories toward the sun or other powerful light sources.
- Check the PLT 300 before taking important measurements or after it has been dropped or subjected to mechanical effects such as impact or vibration.
- When switching distance measuring mode from prism measurement to reflectorless measurement, make sure that no one can look into the lens of the PLT 300.
- The PLT 300 may not be used in the proximity of medical instruments.
- Use of the PLT 300 in the proximity of expectant mothers or persons with a cardiac pacemaker is not permissible.
- Operation of the PLT 300 in the proximity of military installations, airports or radio astronomy facilities is not permissible unless prior permission has been obtained.
- Keep the PLT 300 clean and dry at all times.

Proper preparation of the working area

- Secure the area in which you will be taking measurements. Make sure that the laser beam is not directed toward other persons or toward yourself while setting up the PLT 300.
- Check that the tripod stands securely and that the PLT 300 is firmly attached to the tripod by the mounting screw.
- Use the PLT 300 only within the defined application limits, i.e. do not take measurements from mirrors, stainless steel surfaces or polished stone, etc.
- Observe the accident prevention regulations applicable in your country.

Electromagnetic compatibility

Although the tool complies with the strict requirements of the applicable directives, Hilti cannot exclude the following possibilities:

- The tool may cause interference to other devices (e.g. aircraft navigation equipment).
- The tool may be negatively affected by powerful electromagnetic radiation, possibly leading to incorrect operation.

In these cases, or if you are otherwise unsure, confirmatory measurements should be made by other means.

Working safely with laser tools

The PLT 300 conforms to Laser Class 2 based on the IEC60825-1 / EN60825-1:2007 standard and complies with CFR 21 § 1040 (Laser Notice 50).

- Do not stare into the beam and do not direct the beam toward other persons. In the event of direct eye contact with the laser beam, close your eyes and move your head out of the path of the beam.
- Laser Class 2/Class II tools may be operated only by appropriately trained persons.
- Laser beams should not be projected at eye height.
- Precautions must be taken to ensure that the laser beam does not unintentionally strike highly reflective surfaces.
- Precautions must be taken to ensure that persons do not stare directly into the beam.
- The laser beam must not be allowed to project beyond the controlled area.
- Switch the laser tool off when it is not in use.
- When not in use, laser tools should be stored in a place to which unauthorized persons have no access.
- Have the PLT 300 and PLC 300 repaired only by Hilti Service. If the PLT 300 is opened improperly, laser radiation in excess of Class 2 may be emitted.

Careful use of battery-powered tools

- Do not expose batteries to high temperatures, the direct heat of the sun, and keep them away from fire. There is a risk of explosion.
- Do not disassemble, squash or incinerate batteries and do not subject them to temperatures over 80°C. This presents a risk of fire, explosion or injury through contact with caustic substances.
- Do not subject the battery to hard mechanical impacts and do not throw the battery.
- Batteries must be kept out of reach of children.
- Avoid ingress of moisture. Ingress of moisture may cause a short circuit, resulting in burning injuries or fire.
- Under abusive conditions, liquid may be ejected from the battery. Avoid contact with the liquid. If contact accidentally occurs, flush with water. If the liquid contacts the eyes, also seek medical attention. Liquid leaking from the battery may cause irritation or burns.
- Use only batteries of the type approved for use with the applicable tool. Use of other batteries or use of the batteries for purposes for which they are not intended presents a risk of fire and explosion.
- Store the battery in a cool and dry place. Never store the battery where it is exposed to direct sunlight or sources of heat, e.g. on heaters / radiators or behind glass.
- When not in use, keep the battery and the charger away from paper clips, coins, keys, nails, screws or other small metal objects that could cause a short circuit at the battery terminals or the charging contacts. Short-circuiting the contacts on a battery or charger may cause burning injuries or start a fire.
- Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).
- Recharge only with the charger specified by the manufacturer. A charger that is suitable for a certain type of

battery may present a risk of fire when used with other types of battery.

- Observe the special guidelines applicable to the transport, storage and use of Li-ion batteries.
- The battery must be insulated or removed from the tool before the tool is shipped or sent by mail. Leaking batteries may damage the PLT 300.

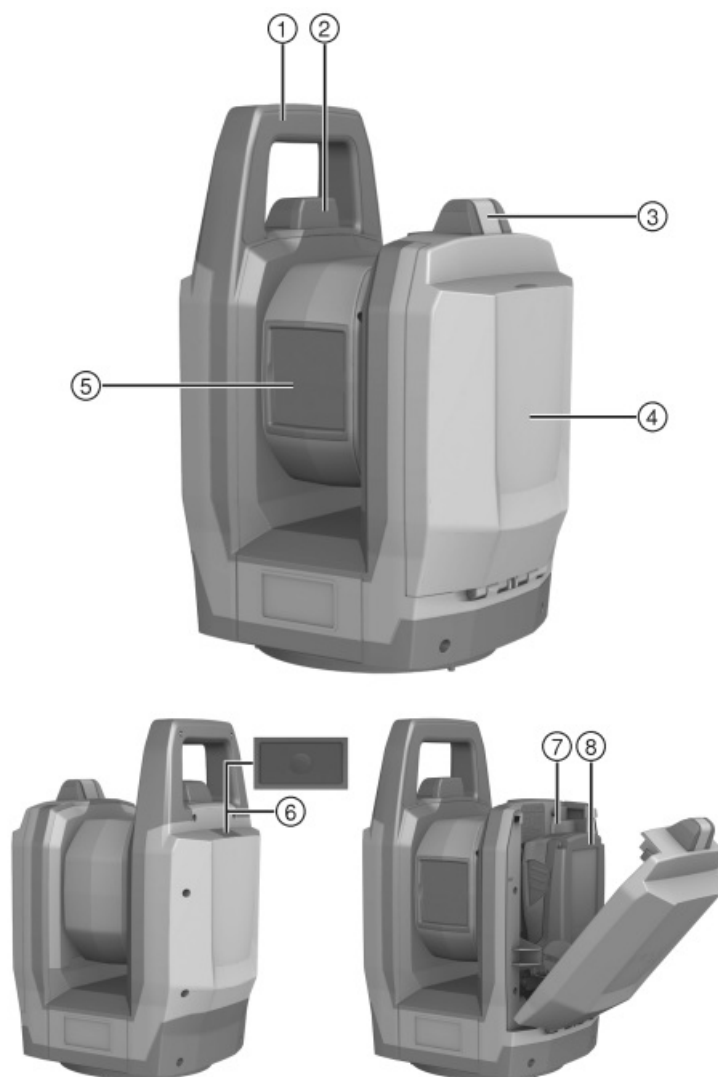
General safety rules

- Before beginning measuring work, check that the accuracy of the tools used is adequate for the requirements of the task.
- Do not operate the PLT 300 in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Tools and appliances create sparks which may ignite the dust or fumes.
- Wear personal protective equipment, always including protective glasses and protective gloves.
- Check the PLT 300 and PLC 300 before use for possible damage. Have any damage repaired by Hilti Service.
- Stay alert, watch what you are doing and use common sense when working with the PLT 300. Do not use the PLT 300 while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Operating and storage temperatures must be observed.
- When the PLT 300 or PLC 300 is brought into a warm environment from very cold conditions, or vice-versa, allow it to become acclimatized before use.
- Check the accuracy of the PLT 300 after it has been dropped or subjected to other mechanical stresses.
- When a tripod or wall mount is used, check that the PLT 300 is correctly and permanently mounted and that the tripod is standing securely on solid ground.
- Keep the laser exit window clean in order to avoid measurement errors.
- Maintain the PLT 300 carefully. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect operation of the PLT 300. If parts are damaged, have the parts replaced before use of the PLT 300. Poor maintenance is the cause of many accidents.
- Although the PLT 300 is designed for the tough conditions of jobsite use, as with other optical and electronic instruments (e.g. binoculars, spectacles, cameras) it should be treated with care.
- Although the PLT 300 is protected to prevent entry of dampness, it should be wiped dry each time before being put away in its transport container.
- As a precaution, check the previous settings or any adjustments you may have made.
- Fasten the battery compartment cover carefully so that the battery doesn't fall out. If battery contact is lost the PLT 300 will switch itself off, possibly leading to loss of data.

Description

Overview of the product

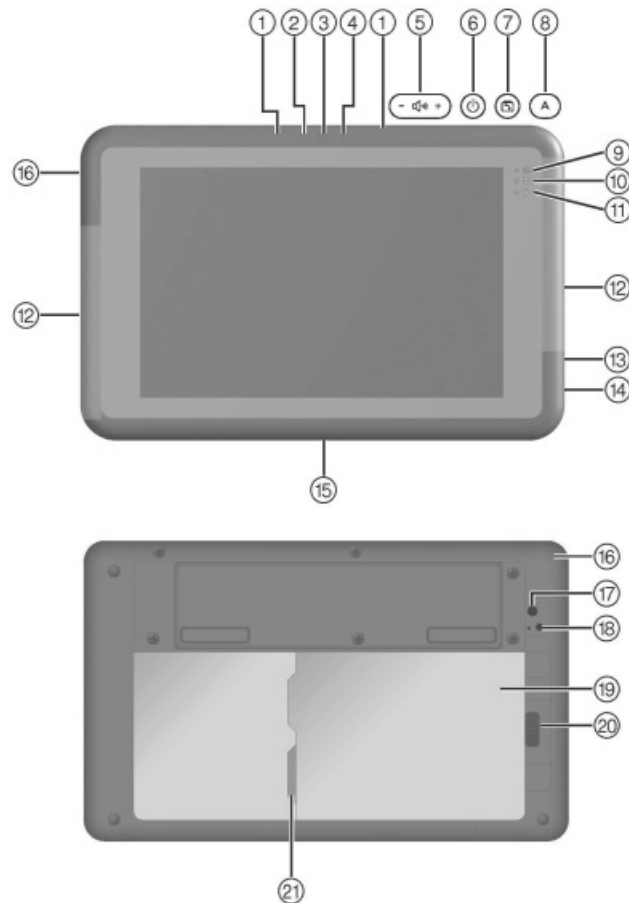
PLT 300 1



Key

1. Grip
2. WLAN antenna
3. Battery compartment catch
4. Battery compartment cover
5. Lens cover and laser exit aperture
6. On/off buttons
7. Battery compartment
8. Battery

PLC 300 2



Key

1. Microphone
2. Ambient light sensor
3. Front camera
4. Front camera status indicator
5. Volume control
6. On/off button
7. Display rotation lock button
8. System control button
9. Operating status indicator
10. Data storage status indicator
11. Battery status indicator
12. Wi-Fi antennas
13. Earphone socket
14. USB connector
15. Docking connector
16. Charging socket
17. Rear camera
18. Rear camera status indicator
19. Battery compartment
20. Battery compartment catch
21. micro SD card slot\

Intended use

The product described consists of the cordless PLT 300 layout tool and the PLC 300 cordless controller. The PLC 300 allows remote control of the PLT 300. Both components form a system. The layout tool is designed to be used for measuring distances and directions, calculating target positions in three dimensions and laying out given coordinates or values relative to a control line.

- Use only Hilti lithiumion batteries of the B 18 / B 22 series with this product.
- Use only Hilti battery chargers of the C 4/36 series to charge these batteries.

Wi-Fi antennas 3

A Wi-Fi antenna is located at each narrow side of the controller.

- When operating the controller, don't hold it at the sides where the Wi-Fi antennas are located as this reduces its transmitting and receiving performance.

A holder for the controller, which helps avoid degradation of Wi-Fi performance, is available as an accessory.

Data link to periphery devices

- The software Hilti PROFIS Layout Field is used on the PLC 300. The PC software Hilti PROFIS Layout Office, for processing and transferring data to other systems, is also available for use on PCs. Data can be exchanged between these two software products.
- Data from the PLC 300 can be transferred directly to USB data media.

Items supplied

- PLT 300, PLC 300, operating instructions.
- Other system products approved for use with this product can be found at your local Hilti Store or online at:
www.hilti.group | USA: www.hilti.com.

Technical data

Laser distance measurement

Wavelength	500 nm ... 540 nm
Laser color	Green
Laser class in accordance with IEC 60825-1	2
Maximum average power output	≤ 1.00 mW
Pulse duration	0.2 ns ... 10 ns
Pulse frequency	5 MHz ... 100 MHz
Beam divergence	0.2 mrad ... 20 mrad

Distance measuring accuracy (ISO 17123-5)

At 50 meters	3 mm
At 164 feet	1/8 in

Tracking (LED tracker)

Wavelength	800 nm ... 900 nm
Typical average radiation intensity at a distance of 20 cm (108 µs/109 Hz)	0.5 mW/cm ²
Maximum radiation intensity at a distance of 20 cm	46 mW/cm ²
Pulse duration	108 µs
Pulse frequency	100 Hz ... 165 Hz
Beam divergence (2θ1/2)	30°
Tracking range	1.5 m ... 50 m (4 ft – 11 in ... 164 ft)

Camera

Aperture angle	25°
Focal length	12 mm ... 60 mm (0.5 in ... 2.4 in)
Optical zoom	5x
Focus range	≥ 1 m (≥ 3 ft)
Resolution at maximum zoom (per 10 meters)	±1.0 mm
Resolution at maximum zoom (per 33 feet)	±0.04 in
Horizontal field of view	225°
Vertical field of view	360°
Image storage	VGA

Servo drive

Rotation speed	90 °/s
Telescope repositioning	2 s

Tripod mount

Thread	5/8 in
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Wireless communication between the PLT 300 and PLC 300

WLAN standard	IEEE 802.11a/b/g
Maximum emitted transmission power WLAN	16.9 dBm
WLAN-Frequency range	2,400 MHz ... 2,483.5 MHz

PLC 300 power source

Rated voltage	7.2 V
Capacity	7.1 Ah
Battery life	8 h
Charging time	4 h

Interfaces on the PLC 300

External data terminal	USB 3.0
Bluetooth version	4.0
Bluetooth frequency range	2.402 GHz ... 2.480 GHz
WLAN standard	IEEE 802.11a/b/g/n

Protection class

PLT 300	IP55
PLC 300	IP65

Ambient conditions for the PLT 300 and PLC 300

Operating temperature	–20 °C ... 50 °C (–4 °F ... 122 °F)
Storage temperature	–40 °C ... 63 °C (–40 °F ... 145 °F)

Weight with battery

PLT 300	5.3 kg (11.7 lb)
PLC 300	0.6 kg (1.3 lb)

Batteries for all countries except USA and Canada

	B 22/1.6 Li-Ion	B 22/2.6 Li-Ion (02)
Rated voltage	21.6 V	21.6 V
Capacity	1.6 Ah	2.6 Ah
Energy capacity	34.56 Wh	56.16 Wh
Weight	0.48 kg	0.48 kg
Battery life in the PLT 300	3 h	5 h

Batteries for USA and Canada

	B 18/1.6 Li-Ion	B 18/2.6 Li-Ion (02)
Rated voltage	21.6 V	21.6 V
Capacity	1.6 Ah	2.6 Ah
Energy capacity	34.56 Wh	56.16 Wh

	B 18/1.6 Li-Ion	B 18/2.6 Li-Ion (02)
Weight	0.48 kg (1.06 lb)	0.48 kg (1.06 lb)
Battery life in the PLT 300	3 h	5 h

First steps

Switching the PLT 300 and PLC 300 on

1. Switch the PLT 300 and PLC 300 on.
2. Start the PROFIS Layout Field application on the PLC 300.
3. Pay attention to the instructions and information shown in the display on the PLC 300 and to the additional information about the product to be found at: <http://qr.hilti.com/r4728599>.

Care and maintenance

Cleaning and drying

ATTENTION

Risk of damage The optical system may be damaged by touching the parts.

- Do not touch the glass surfaces with your fingers.

ATTENTION

Risk of damage The plastic parts may be damaged by chemical substances.

- Use only pure alcohol or water for cleaning.
 1. Blow any dust off the glass.
 2. Use only a soft, clean cloth to clean the tool.

Maintenance

To help ensure safe and reliable operation, use only genuine Hilti spare parts and consumables. Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local Hilti Center or online at: www.hilti.com.

Hilti Measuring Systems Service

Hilti Measuring Systems Service checks the tool and, if deviations from the specified accuracy are found, recalibrates it and checks it again to ensure conformity with specifications. The service certificate provides written confirmation of conformity with specifications at the time of the test. The following is recommended:

- Choose a suitable test/inspection interval in accordance use of the tool.
 - Have the product checked by Hilti Measuring Systems Service after exceptionally heavy use or subjection to unusual conditions or stress, before important work or at least once a year.
- Having the product checked by Hilti Measuring Systems Service does not relieve the user of his/her obligation to check the product before and during use.

Transport and storage

Transport

ATTENTION

Risk of damage Leaking batteries may damage the product.

- The battery must be insulated or removed from the product described before it is shipped or sent by mail.
- Use the Hilti shipping box or packaging of equivalent quality for transporting or shipping your equipment.

Storage

ATTENTION

Risk of damage Leaking batteries may damage the product.

- Remove the battery if the tool is to remain unused for a long period of time.
- Do not put the tool into storage when wet. Allow it to dry before putting it away.
- Always clean the tool, its transport container and accessories before putting them into storage.
- Check the accuracy of the equipment before it is used after a long period of storage or transportation.
- Observe the temperature limits when storing the equipment, especially in winter and summer (-40 °C to +63 °C (-40 °F to +145 °F)).

Disposal

WARNING

Health hazards Never dispose of the equipment carelessly or improperly!

- The burning of plastic components generates toxic fumes which may present a health hazard. Batteries may explode if damaged or exposed to very high temperatures, causing poisoning, burns, acid burns or environmental pollution.
- Careless disposal may permit unauthorized and improper use of the equipment. This may result in serious personal injury, injury to third parties and pollution of the environment.
- Dispose of defective batteries right away. Keep them out of reach of children. Do not disassemble or incinerate the batteries.
- Batteries that have reached the end of their life must be disposed of in accordance with the official regulations or returned to Hilti.

Most of the materials from which Hilti tools and appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can

be returned to Hilti for recycling. Ask Hilti Service or your Hilti representative for further information.

Manufacturer's warranty

- Please contact your local Hilti representative if you have questions about the warranty conditions.


FCC statement (applicable in US) / IC statement (applicable in Canada)

CAUTION




Interference to radio reception Use of the product in residential areas may cause interference to radio reception.

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference. In this case, users will be required to remedy the interference at their own expense.
- Changes or modifications not expressly approved by Hilti may restrict the user's authorization to operate the equipment.
- This device is in compliance with paragraph 15 of the FCC Regulations RSS210 of the IC Regulations.
- Operation is subject to the following two conditions:
 - This device shall cause no harmful interference.
 - This device must accept any interference received, including interference that may cause undesired operation.

Documents / Resources

	<p>HILTI PLT300 DIGITAL LAYOUT TOOL [pdf] Instructions PLT300 DIGITAL LAYOUT TOOL, DIGITAL LAYOUT TOOL, LAYOUT TOOL</p>
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References

-  [HILTI Country selector](#)
-  [Power Tools, Fasteners and Software for Construction - Hilti USA](#)
-  [Официальный сайт - Hilti Россия](#)